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Index

ORAL COMMUNICATIONS

Usefulness of NEWS and NEWS-c in predicting dismal outcomes in acute medical unit: a lesson from CoViD-19 pandemic	1
S. Accordinò, M. Cazzaniga, C. Canetta	
Efficacy and safety of anti SARS-CoV-2 monoclonal antibodies treatment in the real world	1
D.C. Bartolomeo, S. Cappello, F. Ventrella	
Incidental pheochromocytoma: is it really silent? A case series	1
G. Bertola, S. Giambona, R. Bianchi, R. Ruiz Luna, S.A. Berra	
The mesentery as an uncommon site of involvement of IgG-related disease, a rare autoimmune disorder	1
M. Bertoni, A. Giani, S. Tozzini, M.E. Di Natale	
Risk of venous and arterial thromboembolic events in women with advanced breast cancer treated with CDK 4/6 inhibitors: a systematic review and meta-analysis	2
E. Bolzacchini, F. Pomerò, M. Fazio, C. Civitelli, G. Fabro, D. Pellegrino, M. Giordano, A. Squizzato	
The perfect storm: a case of STEC-HUS in a 62-year-old man	2
D. Bottazzo, S. Carlucci	
A case of internal jugular vein thrombosis	2
A. Briozzo, S. Marengo, F. Vitale, M. Coppo, F. Ferrando, D. Vetri, G. Ferranti, C. Norbiato	
Nine-year efficacy and safety of azathioprine treatment in the maintenance of steroid-free remission in inflammatory bowel disease patients	2
C. Cassieri, R. Pica, P. Crispino, M. Zippi, E.V. Avallone, P.G. Lecca, G. Brandimarte, P. Paoluzi, P. Vernia, E.S. Corazzari	
Helmet CPAP in severe CoViD-19: an experience in an internal medicine ward	3
F. Cei, E.M. Madonia, M. Rosselli, S. Brancati, M. Filippelli, L. Staglianò, S. Beatrice, C. Sambalino, V. Messiniti, L. Collodoro	
Prevalence of pulmonary embolism in 40 patients with SARS-CoV-2 interstitial pneumonia. PREMOVID study	3
M.M. Ciammaichella, D. Pignata, R. Maida, L. Di Rezzo, S.P. Pirillo	
Disease knowledge and self-care in patients with chronic venous leg ulcers: preliminary short-term results of a randomized controlled study	3
R. Comoretto, C. Ranzato, M. Foletto, S. Peruzzo, F. Beghin, E. Faggian, C. Moreal, N. Guidone, F. Masiero, M. Martinato	
Acute renal infarction: a diagnostic challenge	3
D. D'Ambrosio, M. D'Agostino, V. Vatiero, S. Damiano, S. Giovine, F. Ievoli	
Tossicità da colchicina in pazienti con insufficienza renale: prestiamo la dovuta attenzione?	3
E. De Cristofaro, M. Miccoli, J.L. Zoino, R. Cornacchia, G. Prampolini, P.G. Giuri, D. Cunzi, P. Manini, R. Imbarlina, A. Negro	
Primary Nursing e piani assistenziali standard: impatto sulle cure mancate	4
A. Dragonetti	
Determinants of subclinical atrial fibrillation in a cohort of moderate-to-severe CoViD19	4
L. Falsetti, L. Montillo, A. Raponi, M. Buzzo, F. Ricconi, M. Sampaolesi, G. Moroncini, C. Nitti, T. Gentili, A. Salvi	
Casirivimab-imdevimab combination therapy for inpatients with early diagnosis of hospital-acquired CoViD-19: a single center experience	4
A. Faraone, T. Picchioni, E. Lovicu, G. Scocchera, S. Sbaragli, M. Bettucchi, A. Lo Forte, A. Crociani, P. Carrai, A. Fortini	
Short term prognosis of patients with stable pulmonary embolism is better defined with dependency score than with the ESC classification	4
P. Fenu, C. Sole, M. Cei, N. Mumoli, F. Cei	
Remote monitoring CoViD-19 patients, a telemedicine experience from Lodi (Italy)	5
S. Forlani, D. Archi, M.C. Casale, C. Caruso, M.P. Ferraris, S. Paglia, S. Protti	
Prevalence of community-onset sepsis in internal medicine wards: a prospective, multicenter study	5
A. Fortini, A. Faraone, S. Meini, M. Bettucchi, B. Longo, B. Valoriani, S. Forni	
Post-stroke detection of subclinical paroxysmal atrial fibrillation in patients with ESUS: proposal of a new predictive score based on a real world experience	5
E. Grifoni, G. Baldini, M. Baldini, G. Pinto, E.M. Madonia, I. Micheletti, E. Cosentino, S. Giannoni, M. Fonderico, L. Masotti	
The role of pneumococcal urinary antigen in CoViD-19 pneumonia: if you know it, you don't avoid it	5
L. Maddaluni, L. Graziani, F. Luise, A. Farese, F. Pieralli	
CoViD-19 and T2 diabetes mellitus: a frightening couple	6
A. Maffettone, F. Rossi, F. Scarano, R. Parrella, G. Fiorentino, V. Esposito, V. Sangiovanni, A. Di Sarno, S. Di Fraia	

Index

Clinical characteristics and predictors of death among 163 consecutively hospitalized patients with CoVID-19 in Mestre-Venice: a retrospective study	6
S. Mareso, E. Vettore, A. Martini, A. Frascati, F.M. Sciacca, E. Sabbadin, E. Reni, A. Cecchinato, F. Serafini, F. Presotto	
Antibody responses after a double dose of SARS-CoV-2 mRNA vaccine	6
F. Mastroianni, G. Righetti, T. Girone, D. Fasano, A. Chiaromonte, P. Guida, N. Scialpi, G. Labarile, F. Digirolamo, E.V. De Nicolò	
Screening of irritable bowel syndrome in emergency-urgency unit: clinical-diagnostic implications	6
G. Minervini, P. Crispino, C. Cassieri, M. Zippi, R. Pica, V. Di Iorio, R. Dalessandri, D. Colarusso	
Quando le complicità mascherano la diagnosi	7
G. Miranda Agrippino, M. Zavagli, S. Fruttuoso, G. Emmi, D. Mannini, M. Fabbri, S. Iandelli, F. Ferretto, L. Fani, F. Piani	
Diagnostic accuracy of stroke mimic prediction scales in a Stroke Area	7
F. Moroni, V. Vannucchi, C. Vinci, A. Konze, A. Giuello, F. Iovi, S. Bianchi, M. Lanigra, G. Landini	
Sequela a lungo termine dopo ospedalizzazione per CoVID-19 severa: uno studio prospettico di coorte	7
F. Murano, M. Bellan, F. Ceruti, A. Baricich, F. Patrucco, P. Zeppego, C. Gramaglia, P.E. Balbo, M. Pirisi	
Il dilemma MDRO: solo un dibattito epidemiologico o un reale problema clinico? Uno studio di coorte in un reparto di Medicina Interna	7
O. Para, L. Caruso, E. Blasi, C. Pertici, G. Fedi, C. Nozzoli	
Use of predictive scores for the gastrointestinal bleeding: differences under treatment with DOACs	7
A. Paglia, M. Franzoso, L. Podvojska, D. Gerardi, F. Covello, F. Parente	
To be or not to be...intensive: Internal Medicine unit role during and after CoVID-19 pandemic	8
F. Pietrantonio, E. Alessi, M. Rainone, S. Aluigi, E. Onesti, G. Marino, G. Laurelli, A. Di Berardino, M. Pascucci, E. Cipriano	
Gastrointestinal involvement in systemic sclerosis: pathogenetic role of gut microbiome, cytokines and adipokines	8
E. Pigatto, M.G. Schiesaro, M. Caputo, M. Beggio, P. Galozzi, F. Cozzi, P. Sfriso	
Efficacy and safety of P2Y12 inhibitors plus aspirin versus aspirin alone for acute treatment and secondary prevention of non-cardioembolic minor ischaemic stroke and high-risk TIA: a systematic review and meta-analysis	8
F. Pomerio, E. Galli, M. Bellesini, L. Maroni, A. Squizzato	
Organizational system for chronic diseases: experimental project in Azienda Socio Sanitaria (ASL) 2 Liguria	8
R. Rapetti, L. Carofiglio, M. Pistone, S. Visca, A. Piacenza, M. Cirone, M. Damonte Prioli	
Influence of fascial and soft tissue treatment on respiratory efficiency and chest mobility	9
T. Serini, D. Emedoli, A. Palazzolo, M. Tuvinielli, A. Aceranti, S. Vernocchi	
Management of COPD patients in the Internal Medicine Operative Units	9
C. Stabile, O. Para, F. Tangianu, F. Nasso, M. Silingardi, A. Valerio, R. Costorella, R. Tosatto, G. Gussoni, D. Cinquepalmi	
3CHF score performance in predicting short-term events in a cohort of elderly subjects admitted for acute heart failure	9
N. Tarquinio, L. Falsetti, A. Fioranelli, G. Viticchi, D. Iannone, C. Scalpelli, A. Pansoni, M. Burattini	
Acute respiratory distress syndrome in CoVID-19: correlations between clinical and histopathologic patterns	9
M.A. Wu, G. Lopez, L. Carsana, J. Montomoli, T. Fossali, D. Ottolina, C. Cogliati, E. Catena, M. Nebuloni, R. Colombo	
IL-6 and PCR, possible predictors of CoVID-19 pneumonia	10
I. Zagni, F.P. Bonfante, E. Zanardini, P. Carleo	
POSTERS	
A blue man standing	11
A. Abenante, N. Borsani, E. Nicolini, B. Pennella, F. Zuretti, B. Castiglioni, F. Dentali	
Legal complaint against physicians due to CoVID-19	11
A. Aceranti, S. Vernocchi, D. Margariti, R. Milano	
An atypical case of AL amyloidosis	11
A. Achilli, M. Ippolito, R. Losacco, C.A.M. Lo Iacono, T. Ianni, F. Martino, A. Alfano, D. Filoni, C. De Angelis	
Potenziale ruolo della Radiofrequency Echographic Multi Spectrometry nella valutazione dello stato osseo in donne anziane con diabete di tipo 2	11
A. Al Refaie, M. De Vita, S. Catapano, F.G. Tramonte, L. Baldassini, M.D. Tomai Pitinca, C. Caffarelli, S. Gonnelli	
Allopurinol hypersensitivity syndrome: a case report	12
M. Alessandri, A. Amendola, V. Cusumano, A. D'Errico, V. De Crescenzo, F. Marzi, C. Nizzi, M. Manini	

Index

Impegno renale e sclerosi sistemica. Descrizione di un caso clinico	12
A. Ambrosio, C. Naclerio, P. D'Angiò, P. Sabatini, F. Bruno, G. Avallone, G. Gigliotti	
A "hoarse" anemia: a case report	12
G. Argiolas, G. Meloni, S. Murgia	
Stroke and pulmonary embolism in moderate CoVID-19	12
D. Arioli, S. Varini, S. Fabbri, C. Maffei, S. Cirino, M. Angelini, A. Verardo, E. Romagnoli, E. Violi, L. Brugioni	
An unusual manifestation of EBV infection in an immunocompetent patient	13
S. Aspite, M. Quarta, F. Moroni, N. Palagano, C. Vinci, F. Pallini, V. Vannucchi, G. Landini	
Diffuse liver infiltration of small cell lung cancer causing acute liver failure	13
S. Aspite, F. Pallini, L. Bertini, C. Vinci, N. Palagano, V. Vannucchi, G. Landini	
Severe hypertransaminasemia in a pregnant woman with SARS-CoV-2 infection	13
T.M. Attardo, D. Dalla Gasperina, A. Ostinelli, M. Dalle Fratte, F. Castelletti, G. Fichera, M.A. Comi, C. Dedionigi, A. Tuzi, F. Dentali	
Safety profile of Pfizer-BioNTech CoVID-19 vaccine in patients with rheumatic disease: preliminary assessment	13
M. Atteno, M. Raimondo, S. Mangiacapra, F. Cannavacciuolo, M. Nunziata, V. Iorio, N. Iuliano, L. Tibullo, M. Mastroianni, M. Amitrano	
Sweet syndrome induced by adenovirus vector CoVID-19 vaccine	13
G. Balbi, A. Hoxha, A. Sechi, E. Pezzolo, D. Zardo, V. Lever, G. Scanelli	
Sindrome di Gitelman	14
L. Barbieri, A. Ilario, A. Savoia, P. Parrella, I. Ventre	
Is it possible to predict early the outcome of CoVID-19 patients? Prognostic value of lactate	14
D.C. Bartolomeo, M. Pipino, F. Ventrella	
Don't awake a sleeping HBV	14
R. Battaglia, M. Alessandri, A. Amendola, V. Cusumano, V. De Crescenzo, A. D' Errico, F. Marzi, C. Nizzi, M. Manini	
CoVID-free ground glass pattern	14
C. Benatti	
A big surprise: <i>Mycobacterium avium complex</i> infection of abdominal wall	14
C. Benatti	
Spontaneous iliopsoas hematoma: a warning for CoVID-19	15
A. Benvenuto, A.M. Carella, M. Conte, C. Florio, M. Di Pumpo, A. Giancola, G. Ciavarrella, T. Marinelli	
Tocilizumab treatment in CoVID-19 ventilated patients: a single center experience	15
D. Bergamo, E. Peila, P. Pasquino	
Sacubitril valsartan: dati preliminari di efficacia in una popolazione di pazienti complessi	15
V. Bernardis, M. Balbi	
Nuove tralettorie organizzative in Medicina Interna	15
S.A. Berra, N. Montano, C. Cogliati, F. Colombo, S. Perlini	
COMETA project: the meeting of clinical practice and metabolomic in the fight against CoVID	16
L. Bertini, L. Pelagatti, V. Vannucchi, P. Turano, C. Luchinat, V. Ghini, G. Meoni, G. Landini	
Diagnosi differenziale di ipoglicemia: non dimentichiamoci delle malattie rare	16
M. Bertoli, E. Labella, M. Beltrame, M. Bigliocca, F. Caldera, P. Giarda, F. Bobbio, M. Campanini	
L'assistenza infermieristica nello scompenso cardiaco in stadio avanzato: criteri di definizione del fine vita. Una revisione della letteratura	16
M. Bertolino, M. Lehmann	
Appropriateness of use and complications of PICC and Midline catheter in CoVID-patients: an observational retrospective cohort study of Azienda Sanitaria Locale Biella (ASL BI)	16
F. Bertoncini, M. Biancato, G. Busca, M. Casarotto, C. Gatta	
Organizzazione per intensità di cure di reparti CoVID multidisciplinari: dati preliminari dello studio	17
A. Bini, F. Serra, A. Parente, E. Ortolani, V. Cecchetti, G. Imperoli	
CoVID e surreni: una relazione pericolosa!	17
A. Bini, F. Serra, E. Ortolani, A. Parente, V. Cecchetti, G. Imperoli	
Coagulopathy and CoVID	17
C. Bologna, P. Madonna, M. Lugarà, F. Mazzella, E. Pone, M. Naddeo, P. Rabitti	
Olanzapine versus haloperidol in CoVID patients	17
C. Bologna, M.G. Coppola, G. Oliva, M. Lugarà, P. Tirelli, P. Madonna, E. Pone	

Index

Diagnosing the cause of pulmonary hypertension: when imaging is misleading and necroscopy necessary	17
D. Bottazzo, E. Barban, G. Vescovo	
L'aria a volte inganna	18
A. Bovero, I. Persico, A. Calzi, L. Briatore, D. Mela, P. Artom, R. Goretti	
Colite ischemica: una possibile complicanza dell'infezione da SARS-CoV-2	18
A. Brazzi, F. Ferrari, D. Lamanna, V. Tanganelli, V. Damiani, A. De Palma, G. Cati, T. Balestracci, M. Alessandri	
Be a woman in CoVID-19 pandemic	18
R.F.P. Bufo, R.R. Gargano, A. Paglia, F. Ventrella	
Serum lactate dehydrogenase level may predict residual functional impairment in patients with previous CoVID-19	18
R.F.P. Bufo, U. Tupputi, L. Caccetta, G. Distaso, N.A. D'Alessio, F. Ventrella	
Safe dose thrombolysis nell'embolia polmonare del paziente CoVID: case report	18
M. Buzzo, F. Riccomi, L. Montillo, L. Falsetti, S. Contucci, T. Gentili, C. Nitti	
Unusual back pain	19
P. Cabras, M. Pala, E. Pinna, P. Pisano, M. Stabilini, A. Caddori	
IL-6 is a warning signal for pneumomediastinum in non-invasively ventilated CoVID-19 patients	19
E. Calcagno, L. Pelagatti, V. Vannucchi, M. Giampieri, N. Palagano, L. Bertini, S. Aspite, F. Pallini, C. Scerra, G. Landini	
Can aldosterone increase Interleukin-6 levels in CoVID-19 pneumonia?	19
P. Campana, M. Conte, M.E. Palaia, T. Cante, L. Ferrante, L. Petraglia, D. Leosco, V. Parisi	
Case report. La mucosite durante chemio/radioterapia: utilizzo di una nuova modalità di trattamento	19
T. Campanelli, C. Gasparoli, G. Casavecchia, R. Mencarelli, L. Roberti, P. Longo, M.L. Iadarola	
Multifocal pyomyositis in decompensated DM and SARS-COV-2 pneumonia: a diagnostic challenge	20
G. Campi, N. Palagano, M. Giampieri, S. Aspite, C. Vinci, M. Finocchi, E. Calcagno, V. Vannucchi, B. Cimolato, G. Landini	
L'arteriopatia ostruttiva periferica come marcatore di malattia cardiovascolare: esperienza nei reparti di Medicina Interna della Campania	20
F. Cannavacciuolo, M. Nunziata, S. Mangiacapra, M. Raimondo, M. Atteno, N. Iuliano, V. Iorio, M. Mastroianni, L. Tibullo, M. Amitrano	
Porpora trombocitopenica immunitaria da SARS-CoV-2	20
I. Carbone, C. Marone	
Infezione periprotetica tardiva	20
I. Carbone, C.A.M. Lo Iacono, C. Marone	
Improving simulated postprandial glycemia and hyperinsulinemia in healthy subjects with agri-food waste products: pilot study	21
G. Caruso, M. D'Avino, G. Annunziata, T. Ciarambino, G. Buonomo, M. Sorrentino, G.C. Tenore	
Polyphenolic extracts from poplar propolis for the remission of symptoms of uncomplicated upper respiratory tract infection	21
G. Caruso, M. D'Avino, C. Esposito, M. Olibet, B.A. Ferravante, G.C. Tenore, M. Daglia	
Tasso di mantenimento di teriparatide (studio TERRA): confronto tra il farmaco originale e il biosimilare	21
M. Casella, F. Magalini, A. Becciolini, E. Di Donato, D. Santilli, F. Mozzani, M. Riva, A. Ariani	
In-hospital utilization of pre-hospital device for CPAP to manage acute respiratory failure in CoVID-19 pneumonia: findings from a single center	21
M. Castellini, A. Bazza, M. Betti, A. Ferraresi, M. Giorgi-Pierfranceschi	
Is it possible to predict early the outcome of CoVID-19 patients? Prognostic value of lactate dehydrogenase	22
A. Castrovilli, R.R. Gargano, M. Carbone, F. Ventrella	
Is it possible to predict early the outcome of CoVID-19 patients? Prognostic value of glycated haemoglobin	22
A. Castrovilli, M. Carbone, F. Ventrella	
Sindrome di Evans in corso di infezione da CoVID-19	22
A. Cattaneo, A. Faricciotti, F. Caccavale, A. Vismara	
A case of dementia in a young woman	22
R. Cattaneo, B. Nardo, A. Mazzone	
Un modello di presa in carico dei pazienti con esiti cronici da CoVID-19	22
M. Cavalleri, E. Bernero, G. Ferraioli	
Acute kidney injury in CoVID-19: an overlooked complication?	23
F. Cei, G. Pinto, L. Chiarugi, M.S. Montini, R. Lavecchia, S. Dolenti, D. Di Stefano, T. Gurrera, I. Sellerio, M.M. Gucci	

Index

Health surveillance program for CoViD-19 in hospital	23
F. Celani, A. Nuzzaco, M. Formoso, V. Guglielmi, M. Ferrulli, V. Del Buono, M. Vinci, R. Savino, L. Barba, F. Mastroianni	
Alterazioni a lungo termine della funzionalità polmonare in pazienti ospedalizzati per CoViD-19: uno studio di coorte prospettico	23
F. Ceruti, F. Murano, M. Bellan, M. Pirisi	
L'efficacia della CPAP nel paziente con scompenso cardiaco acuto e polmonite da CoViD-19	23
M. Chiappalone, M.C. Tringali, D. La Rosa, N. Laganà, S. Tomeo, G. Bagnato, F. Napoli, A.G. Versace	
The DAMA (disable advanced medical assistance) project: a virtuous path for disabled people	23
P. Chiapponi, R. Boseggia, A. Cesati, A.M. Daino, P. Novati	
Severe hyponatremia refractory to therapy in patient with SARS-CoV2 infection	24
C. Ciacci, A. Vetrano, M. Landi, C. Minatore, A. Schiano	
Correlative analysis between radiographic score and P/F in 30 patients with SARS-CoV-2 interstitial pneumonia. CODIPAF study	24
M.M. Ciammaichella, D. Pignata, R. Maida, L. Di Rezze, S.P. Pirillo	
A complex case of CoViD-19	24
S.A. Ciampi, A. Longo, I.D. Schmitt, B. Farneti, G. Semeraro, A. Musto, S. Minniti	
Gender differences and CoViD-19: a multicenter observational study	24
T. Ciarambino, F. Pietrantonio, S. Rotunno, A. Fiorentini, R. Cipriani, G. Campagna, G. Straface, E. Pistella, F. Rosiello, F. Lorenzi	
Gender differences in ischemic stroke intra-hospital mortality	25
T. Ciarambino, E. Barbagelata, C. Politi	
Valutazione della risposta anticorpale post-vaccinazione SARS-CoV-2 in operatori sanitari	25
V. Cioffi, P. Grasso, M.G. Bellorno, P. Ceccarelli, A. Di Santo, G. Coscia, M. Di Resta, G. Ranaldo	
Trasformazione digitale nella ASL di Frosinone	25
R. Cipriani, C. Basile, S. Pillon, S. Carli, P. D'Alessandro	
CoViD-19 comorbidities and preventive measures	25
C. Clementi, M. Rocchetti, G. Gimignani	
Complessità diagnostica delle polmoniti nei pazienti comorbidi e fragili in pandemia CoViD-19	25
E. Cogoni, C. Pisano, E. Pinna, D. Dessì, L. Pittau, G. Manca, E. Maccioni, V. Corriga, A. Marongiu, A. Caddori	
Sartorializzazione della terapia nei pazienti comorbidi e fragili affetti da polmonite da SARS-CoV-2	26
E. Cogoni, C. Pisano, E. Pinna, D. Dessì, L. Pittau, G. Manca, E. Maccioni, M. Serri, R.M. Mereu, A. Caddori	
New biotechnologies: the importance of biofilm management and wound bed preparation to promote tissue repair in the management of the diabetic foot. Case report	26
R. Colella	
Osteopontin role and intima media thickness in patients with systemic lupus erythematosus	26
B.M. Colombo, F. Montecucco, F. Carbone	
Nursing care and quality of life of caregivers in Alzheimer's disease: a literature review	26
R. Comoretto, E. Monaco, E. Ceccarello, D. Gregori, M. Martinato	
Livello di conoscenza degli studenti infermieri sulla corretta esecuzione dell'emocoltura: uno studio cross-sectional	27
D. Comparcini, V. Simonetti, M. Tomietto, C.A.M. Papappicco, R. Iacovelli, L. Tornari, L. Tesei, G. Cicolini	
Pneumomediastinum and pneumothorax in CoViD-19 patients: a case series	27
M.G. Coppola, M. Lugarà, P. Madonna, A. Guida, P. Tirelli, C. Bologna, A. De Sena, G. Oliva, E. Pone, V. Nuzzo	
Acute intestinal ischemia in a CoViD-19 young patient: a case report	27
M.G. Coppola, G. Vespere, M. Lugarà, P. Madonna, C. De Luca, F. Granato Corigliano, M.V. Guerra, A. Ferraro, C. Peirce, E. Pone	
The nutritional status of patients with heart failure: role in short-term prognosis after hospital recovery	27
P. Crispino, C. Cassieri, M. Zippi, G. Minervini, N. La Banca, D. Colarusso, R. Pica	
The "cancer related fatigue" in patients with gastric cancer: the results of a meta-analysis	28
P. Crispino, M. Zippi, V. Di Iorio, C. Cassieri, G. Minervini, R. Pica, C. Di Lucchio, D. Colarusso	
Iperensione portale idiopatica non cirrotica: inquadramento e analisi della casistica in un centro epatologico di terzo livello	28
A. Curto, F. Marra, M.T. Savo, L. Caruso, O. Para	
Prosthetic valve endocarditis caused by <i>Corynebacterium afermentans</i>	28
M. D'Agostino, D. D'Ambrosio, V. Santillo, M.D. Concilio, S. Auletta, A. Petrillo, F. Ievoli	

Index

A case of extrapulmonary tuberculosis	28
M. D'Agostino, D. D'Ambrosio, V. Vatiero, S. Damiano, A. Benincasa, S. Giovine, F. Ievoli	
Actinomyces bacteremia secondary to pseudomembranous necrotizing oral-tracheobronchial and invasive pulmonary aspergillosis in a patient with CoViD-19	29
D. Dalla Gasperina, T.M. Attardo, B. Bellini, G. Bassanese, G. Bonoldi, C. Cerutti, S. Speroni, R. Diprizio, L. Sardo Infirri, F. Dentali	
A fortuitous detection of composite heterozygous S/C sickle cell disease	29
D. D'Ambrosio, M. D'Agostino, S. Auletta, M.D. Concilio, G. De Falco, F. Ievoli	
Studio osservazionale sulle pancreatiti acute nelle Medicine toscane: dati preliminari	29
V. De Crescenzo, A. D'Errico, L. Abate, A. De Palma, S. Faenzi, I. Lamberti, V. Maestripieri, M. Mattei, L. Monsacchi, M. Manini	
Is it really a case of Takotsubo syndrome?	29
M.T. De Donato, M. Renis	
Pathophysiology of thromboembolic risk in SARS-CoV-2 pneumonia	30
P. De Luca, A. De Luca, M. Carella, V. Sollazzo, A. Benvenuto	
"Proarrhythmic" role of CoViD-19	30
P. De Luca, A. De Luca, M. Carella, V. Sollazzo, A. Benvenuto	
Quando la clinica inganna: un caso di sepsi a partenza dai tessuti molli	30
A. De Palma, C. Di Blasi Lo Cuccio, F. Ferrari, D. Lamanna, M. Alessandri	
Criptococcosi invasiva: se l'immunodeficienza rimane misconosciuta	30
S. De Pauli, V. Bonasia	
Valutazione dello stato dell'osso in giovani donne affette da anoressia nervosa mediante la tecnologia REMS (radiofrequency echographic multi spectrometry)	30
M. De Vita, A. Al Refaie, S. Catapano, F.G. Tramonte, M.D. Tomai Pitinca, C. Caffarelli, S. Gonnelli	
Arterial hypertension and diabetes mellitus in CoViD-19 patients: what is known by gender differences	31
V. Delli Paoli, F. Ciaburri, T. Ciarambino, G. Caruso, A. Maffettone, A. Ilardi, M. D'Avino	
Aderenza terapeutica alle linee guida nella pancreatite acuta in Medicina Interna: dati preliminari dallo studio SOPAMI (Studio Osservazionale PANcreatiti Medicina Interna)	31
A. D'Errico, V. De Crescenzo, A. Luigi, I. Lamberti, A. De Palma, L. Monsacchi, S. Faenzi, V. Maestripieri, M. Marta	
Hypopituitarism and immunodeficiency	31
L. Di Capua, F. Cannavacciuolo, V. Apuzzi, M. Nunziata	
A case report of bronchiectasis	31
L. Di Capua, F. Cannavacciuolo, V. Apuzzi, M. Nunziata	
The problem of differential diagnosis between acute exacerbation of Echinococcus infection and polycystic kidney syndrome	32
R. Di Donato	
CoViD-19 infection presenting as Guillain Barré syndrome	32
R. Di Stefano, S. Misceo, I. Tartaglia, C. Trotta, A. Venturelli, G. Garofalo	
Differences between SARS-CoV-2 pandemic first and second waves: survey on hospitalized CoViD-19 patients	32
F. D'Onofrio, G. Righetti, T. Girone, G. Larizza, P. Guida, F. Mastroianni	
Organizzare l'assistenza in un Ospedale da campo: l'esperienza al CoViD Hospital OGR di Torino	32
A. Dragonetti	
Iatrogenic sprue-like enteropathy	33
M. Dugnani, F. Lunati, G. Cornaglia, F.A. Bobbio, M. Campanini	
Side effects of ertapenem in a blind patient. A case report	33
E. Eugeni, F. Gaggia	
Just a (gall)stone: a case of Bouveret syndrome with negative ultrasound scan	33
E. Eugeni, F. Gaggia	
Incidence and outcomes of subclinical atrial fibrillation in a cohort of moderate-severe CoViD-19 admitted in a subintensive Internal Medicine unit	33
L. Falsetti, L. Montillo, M. Scarponi, C. Ferrini, M. Sampaolesi, F. Ricconi, G. Moroncini, V. Zaccone, C. Nitti, A. Salvi	
Trombocitopenia trombotica immune associata a vaccino anti-SARS-Cov-2 (Vaxzevria)	33
A. Faricciotti, F. Caccavale, A. Cattaneo, B. Omazzi, R. Lamagna, A. Marra, A. Artoni, A. Vismara	
Retrospective analysis of clinical and laboratory findings of a cohort of CoViD-19 patients treated with remdesivir	34
D. Fasano, L. Rizzi, G. Vurchio, A. De Luca, F. D'Onofrio, G. Righetti, T. Girone, V. Longobardo, F. Mastroianni	

Index

Cold agglutinine haemolytic anemia, immune thrombocytopenia and CoViD-19 infection: a casual relationship?	34
M. Fei, F. Zerbini, C. Caria, P. Dellacà, F. Lombardini, A. Caddori	
Un caso di infezione delle vie urinarie da Salmonella non tifoide	34
F. Ferrari, A. Brazzi, A. De Palma, D. Lamanna, C. Di Blasi Lo Cuccio, F. Valleggi, M. Alessandri	
Anemizzazione severa in ematoma dei muscoli retti dell'addome con fistolizzazione vescicale in corso di terapia con EBPM in paziente con IRC e storia di TVP recidivanti	34
F. Ferretto, S. Fruttuoso, S. Iandelli, M. Zavagli, G. Miranda Agrippino, L. Burberi, F. Piani	
Incidenza della bradicardia in una coorte di pazienti ospedalizzati per polmonite CoViD-19 correlata durante la seconda ondata: uno studio prospettico	35
C. Ferrini, A. Raponi, M. Scarponi, M. Buzzo, M. Sampaolesi, F. Riccomi, L. Falsetti, V.G. Menditto, G. Moroncini, C. Nitti	
Trombosi e sanguinamenti: tutta colpa di una capretta?	35
C. Ferrini, L. Montillo, M. Scarponi, M. Sampaolesi, M. Buzzo, F. Riccomi, S. Contucci, L. Falsetti, T. Gentili, C. Nitti	
In transit thrombosis in CoViD-19 patient	35
M. Finocchi, V. Vannucchi, G. Campi, B. Cimolato, A. Pesci, M. Quarta, M. Giampieri, E. Calcagno, R. Di Teodoro, G. Landini	
Differences in EHRMG score items between Internal Medicine and Cardiology: a retrospective cohort study	35
A. Fioranelli, N. Tarquinio, L. Falsetti, F. Guerra, A. Dello Russo, A. Urbinati, G. Stronati, A. Pansoni, G. Viticchi, M. Burattini	
Clinical and echocardiographic phenotypes in AHF subjects admitted to Internal Medicine and Cardiology: a retrospective cohort study	36
A. Fioranelli, N. Tarquinio, L. Falsetti, F. Guerra, A. Urbinati, A. Dello Russo, G. Stronati, A. Pansoni, G. Viticchi, M. Burattini	
Severe bacterial complications of COVID-19 pneumonia treated with corticosteroids: description of two cases	36
P. Fortini, V. Vannucchi, B. Cimolato, L. Lupo, M. Finocchi, L. Bertini, N. Palagano, M.C. Vinci, A. Pesci, G. Landini	
La Delirium Room: un'assistenza infermieristica a suoni e colori. A case report	36
S. Francioni, S. Garofalo	
Non la solita embolia polmonare del post-operatorio...	36
S. Fruttuoso, S. Bracci, S. Iandelli, M. Zavagli, G. Miranda Agrippino, F. Ferretto, M. Briganti, L. Fani, F. Piani	
Heart failure management: a FADOI survey among Campanian Internal Medicine wards	37
F. Gallucci, M.G. Coppola, T. Ciarambino, V. Iorio, E. Marrone, C. Mastrobuoni, C. Romano, P. Morella	
Microvascular involvement in long-term CoViD-19: usefulness of nailfold videocapillaroscopy	37
F. Gallucci, A. Abate, R. Buono, E. Marrone, D. Morelli, A. Parisi, C. Romano, P. Morella	
Differenze cliniche e prognostiche fra la seconda e la terza ondata dell'infezione da SARS-CoV-2 in pazienti ricoverati in Medicina Interna	37
L. Giannini, J. Romani, M. Palazzi, T. Sansone, C. Bazzini, T. Riccioni, F. Parolini, M. Frugoli, V. Maestripieri, G. Panigada	
Predittori di mortalità intraospedaliera in pazienti con polmonite da SARS-CoV-2 ricoverati in Medicina Interna	37
L. Giannini, M. Palazzi, J. Romani, T. Riccioni, V. Maestripieri, T. Sansone, C. Bazzini, M. Frugoli, F. Parolini, G. Panigada	
Geriatric Nutritional Risk Index in a group of elderly patients hospitalized for SARS-CoV-2 pneumonia: a retrospective study about correlation with intra-hospital mortality rate and length of hospitalisation	38
A. Giannolo, F. Burberi, A. Bribani	
Pandemic: wave 2! Re-organization in CoViD-free General Medicine	38
M. Girardi Migliorisi	
Midline and deep vein thrombosis in CoViD patient with CPAP	38
R. Giustina	
Una causa rara di addominalgia e anemia	38
P. Gnerre, G. Puglisi, E. Schiavetta, L. Roffredo, G.E. Grassi, A. Daniele, F. Gallo, V. Merlo, F. Grande, R. Giuso	
Un caso di anemia emolitica autoimmune e piastrinopenia (sindrome di Evans) associata a linfoma non Hodgkin: un possibile trigger disimmune?	38
G. Governato, A. Figliomeni, A. Bertocchi, G. Bertoncini, M. Boccia, F. Finizola, D. Lertora, X. Rosada, L. Mori	
AKI da necrosi tubulare acuta in corso di polmonite interstiziale da SARS-CoV-2 in paziente con IRC in storia di GMN post-infettiva	39
S. Iandelli, M. Zavagli, S. Fruttuoso, S. Bracci, G. Miranda Agrippino, F. Ferretto, M.P. Briganti, L. Fani, F. Piani	
An infected kidney cyst?	39
T. Ianni, F. Martino, C. De Angelis, D. Filoni, A. Achilli, M. Ippolito, R. Losacco, C.A.M. Lo Iacono	
Cutaneous purpura following CoViD-19 vaccination	39
F. Ievoli, M. D'Agostino, A. Petrillo, I. Del Prete, A. Benincasa, D. D'Ambrosio	

Index

Immune response in CoViD-19 and cardiovascular risk factors	39
M. Insalata, U. Tupputi, M. Pipino	
Correlazione fra parametri ematici ed ecografia toracica nel monitoraggio del paziente CoViD-19 sub-acuto	39
M. Iozzia, R. Terenzi, F. Di Mare, M. Pratesi, A.A. Fabbri, I. Petri, E. Leolini, F. Burberi, G. Tavernese, A. Bribani	
Nuove linee guida vs Charcot	40
M. Ippolito, A. Achilli, R. Losacco, T. Ianni, F. Martino, C. De Angelis, D. Filoni, A.R. Alfano, C.A.M. Lo Iacono	
Cerebellar ataxia, an unusual symptom of CoViD pneumonia in an elderly patient	40
N. Iuliano, L. Tibullo, M. Nunziata, V. Iorio, S. Mangiacapra, M. Raimondo, M. Atteno, M. Amitrano	
A rare case of visceral Leishmaniasis and CoViD-19 co-infection. Misdiagnosis in the CoViD era?	40
N. Iuliano, L. Tibullo, I. Valeria, M. Nunziata, S. Mangiacapra, F. Cannavacciuolo, M. Atteno, M. Raimondo, M. Amitrano	
Citomegalovirus, l'insidia dell'immunocompromesso: un case report	40
D. Kalaja, N. Fallani, C. Casini, M. Stabile, A. Thneibat, A. Minetti, E. Salvaneschi, F. Portesan, I. Ponassi, A. Bellodi	
Monoclonal antibody therapy for high-risk Coronavirus (CoViD-19) patients with mild to moderate disease presentation: an encouraging experience in Frosinone Hospital	41
F. La Marra, R. Lucchetti, M. Fenicchia, A. Giorno, F. Lolli, M. Tritta, A. Iadecola, K. Casinelli, F. Ferrante, R. Cipriani	
Autoimmune hepatitis type 1: a danger hidden by a common case of ASH-related liver cirrhosis	41
R. Laboragine, G. Cuccorese	
Stress and sweat: cholinergic stimuli for the development of a particular form of non-allergic urticaria	41
R. Laboragine	
Terapia combinata con IgG ev e octreotide in malattia di von Willebrand acquisita ed angiodisplasie intestinali	41
M.C. Leone, A. Casali, D. Arioli, E.M.C. Tesini, M. Granito, A. Muoio, L. Depietri, A. Ghirarduzzi	
Embolia polmonare tardiva in infezione SARS-CoV-2 paucisintomatica	41
M.C. Leone, A. Casali, N. Bellesia, A. Muoio, M. Granito, L. Dyrmo, A. Ghirarduzzi	
A particular case of ascites, lymphocytopenia and SIADH	42
M. Lillu, E. Cambula, S. Melis, M.N. Mura, D. Firinu, A. Scuteri	
CoViD-19: persistence of symptoms and lung alterations after 3-6 months from hospital discharge	42
A. Lo Forte, A. Torrigiani, S. Sbaragli, A. Crociana, P. Cecchini, G. Innocenti Bruni, A. Faraone, A. Fortini	
Insomnia and obstructive sleep apnea syndrome in the elderly. Comparison of clinical-metabolic aspects	42
C.A.M. Lo Iacono, M. Ippolito, T. Ianni, A.R. Alfano, D. Filoni, C. De Angelis, R. Losacco, A. Achilli, F. Martino, M. Cacciafesta	
New inflammatory markers and non-dipping pattern in the hypertensive elderly patient: a case-control study	42
C.A.M. Lo Iacono, A. Achilli, D. Filoni, R. Losacco, F. Martino, C. De Angelis, I. Carbone, M. Cacciafesta	
CoViD-19 misdiagnosis: a case report	43
F. Lolli, G. Cadau, A. Iori, L. Anticoli Borza, L. Maresca, M. Mastandrea, M. Forlino, I. Uccella, C. D'Ambrosio, B. Venturi	
A case of adult glucose-6-phosphate-dehydrogenase deficiency (G6PDd)	43
F. Lolli, L. Quattrocchi, L. Maresca, A. Iori, G. Cadau, L. Anticoli Borza, M. Mastandrea, M. Forlino, C. D'Ambrosio, B. Venturi	
An unconventional tumor	43
R. Losacco, A. Achilli, M. Ippolito, T. Ianni, F. Martino, A.R. Alfano, C. De Angelis, D. Filoni, C.A.M. Lo Iacono	
Just a lower back pain? No, a rare case of Bing-Neel syndrome	43
I. Lotesoriere, M.C. Pasquini, F. Cattina, E. D'Adda, R. Assandri, A. Grassini, A. Inzoli, M. Grassi	
The important role of Internist in the recognition of ANCA-associated vasculitis in an ordinary Internal Medicine ward	44
R. Lucchetti, A. Cioci, F. La Marra, S. Proia, G. Sottosanti, M.C. Tomaello, M. Fenicchia, R. Cipriani	
From bad to worse: two cases of spondylodiscitis complicated by psoas abscess	44
L. Lupo, S. Aspite, E. Calcagno, M. Finocchi, P. Fortini, N. Palagano, C. Vinci, G. Campi, V. Vannucchi, G. Landini	
Autoimmune haemolytic anaemia behind systemic lupus erythematosus: unmasking "the great imitator"	44
L. Maddaluni, G. Fedi, C. Pestelli, G. Degl'Innocenti, O. Para, F. Bacci, C. Nozzoli	
Treatment and secondary prophylaxis of venous thromboembolism with anti-Xa in patients with severe hereditary thrombophilia	44
P. Madonna, A. Guida, G. Papa, S. Mangiacapra, M. Amitrano, A. Tufano	
Un complesso caso di ipercalcemia in un'anziana	44
V. Maestriperri, L. Giannini, F. Parolini, M. Frugoli, G. Panigada	
GLP1-RA/basal insulin vs basal bolus in CoViD-19 type 2 diabetes in patients	45
A. Maffettone, T. D'Errico, G. Italiano, M. Rinaldi, A. Di Sarno, F. Rugiada, L. Maresca, L. Amato, O. Maiolica, S. Di Fraia	

Index

Paraneoplastic neuromyelitis optica spectrum disorder (NMOSD) associated with metastatic lung adenocarcinoma: a case report	45
C. Maiorca, M.A. Papassifachis, D. Tramontano, S. Bini, C. Caramazza, L. Fochetti, J. Tola, M. Fontana, P. Lucia	
Trombosi venosa profonda dell'arto superiore nei pazienti neoplastici: nostra esperienza	45
S. Mangiacapra, F. Cannavacciuolo, M. Nunziata, M. Raimondo, V. Iorio, N. Iuliano, M. Atteno, M. Mastroianni, L. Tibullo, M. Amitrano	
Una CID che non quadra: importanza del follow-up in pazienti con coagulopatia di origine apparentemente indeterminata	45
S. Mangiacapra, F. Cannavacciuolo, M. Nunziata, M. Raimondo, E. Allegoric, M. Mastroianni, C. De Stefano, M. Amitrano	
Pustolosi acuta esantematica generalizzata: un raro caso clinico	46
M. Mangiafico, A. Caff, P. Noto, P. Grassi, R. De Pasquale	
Il passaggio di consegna infermieristica con implementazione del metodo SBAR: studio osservazionale	46
M. Marchetti, I. Stacchietti, R. Rocchi, S. Caporicci, F. Di Sabatino	
Long-CoViD e remdesivir: un acceleratore di guarigione anatomica (ecografica) con riduzione della sintomatologia e miglioramento della qualità della vita	46
C. Marone, I. Carbone, D. Martolini, E. Pistella, C. Santini	
Multiple sclerosis and glioblastoma: a diagnostic-therapeutic challenge	46
E. Marrone, C. Romano, F. Gallucci, R. Muscherà, G. Di Monda, A. Parisi, P. Morella	
The impact of the CoViD 19 pandemic on cancer	47
E. Marrone, C. Romano, F. Gallucci, U. Valentino, D. Morelli, A. Abate, F. Cinque, C. Mastrobuoni, P. Morella	
Il processo del consenso informato: uno studio osservazionale trasversale	47
M. Martinato, T. Cazzola, R.I. Comoretto, E. Masetto, L. Pisano, D. Gregori	
La qualità della vita dei caregiver dei malati oncologici: uno studio osservazionale trasversale	47
M. Martinato, E. Baracco, R.I. Comoretto, N. Guidone, E. Faggian, D. Gregori	
Long-CoViD in a hub Hospital: a new model for diagnosis of post-acute CoViD-19 syndrome. An interim analysis	47
A. Martini, S. Mareso, E. Vettore, A. Tavernese, A. Frascati, M. Marobin, M. Bernhart, M.G. Procacci, F. Serafini, F. Presotto	
Superficial lymphadenopathies: the central role of the Internist and bedside ultrasound in the instrumental diagnostics process	47
F. Martino, T. Ianni, R. Losacco, M. Ippolito, A. Achilli, C. De Angelis, D. Filoni, C.A.M. Lo Iacono	
Campylobacter jejuni bacteraemia in a patient on low dose steroid treatment	48
F. Marzi, M. Alessandri, A. Amendola, R. Battaglia, V. Cusumano, V. De Crescenzo, A. D'errico, C. Nizzi, M. Manini	
Multifocal extramedullary plasmocytoma of the bone: a rare presentation of multiple myeloma	48
F. Marzi, M. Alessandri, A. Amendola, R. Battaglia, V. Cusumano, V. De Crescenzo, A. D'Errico, C. Nizzi, M. Manini	
Monoclonal antibody treatment of CoViD-19: the experience of the Internal Medicine at the SS Trinità Hospital, Cagliari	48
M.A. Marzilli, S. Pretti, S. Marongiu, R. Piras, S. Rundeddu, A. Caddori	
Comorbidità preesistenti in pazienti ricoverati in reparto CoViD a bassa intensità di cura	48
R. Mascianà, L. Loiacono, F. Longo, F. Nasso	
Is it possible to predict early the outcome of CoViD-19 patients? Prognostic value of Troponin-I (Tn-I)	49
T. Mastrofilippo, S. Cappello, F. Ventrella	
Sinus bradycardia in patients with severe CoViD-19	49
T. Mastrofilippo, L. Caccetta, F. Ventrella	
Impact of SARS-CoV-2 vaccination on a population of healthcare professionals	49
F. Mastroianni, F. D'Onofrio, G. Lenoci, A.M. Moramarco, M. Fortunato, F. Carbone, C. Derosa, S. Lattarulo, L. Balducci, G. Bellanova	
Coagulopatia nel paziente cirrotico: caccia aperta al microbiota	49
A. Mazziari, M. De Fano, E. Puxeddu	
Una febbre solitaria	49
L. Menicacci, V. Scotti, G. Falchetti, E. Caldini, M. Vaudo, E. Romano, V. Rosellini, M. Mattei, A. Casini, A. Morettini	
Simultaneous presentation of thyroid storm and diabetic ketoacidosis: the case report of a young woman, finally diagnosed with polyglandular autoimmune syndrome type 3	50
A. Migliarini, L. Ciotti, C. Lomonaco, C. Caramazza, C. Maiorca, T. Frontera	
Prevalence of gastro-intestinal functional disorders in patients with eating disorders: a meta-analysis	50
G. Minervini, C. Cassieri, M. Zippi, V. Di Iorio, P. Crispino, I.V. Caruso, P. Roberta, D. Colarusso	
Managing edoxaban overdose in patients with posternale acute kidney injury: a case report	50
C. Miraglia, P.I. Virdis, G. Bologna, C. Marosi, N. Uliano, R. Fiorini	

Index

Ultrasound in CoViD-19 not only for the lung: work-up of a case of acute kidney injury	50
L. Moretti, A. Crucitti, A. Cotellucci, L. Annarumma, E. Allemand, P.Villari, C. Rovito, S. Amadasi, S. Polo	
Acute peripheral arterial thrombosis and Takotsubo cardiomyopathy in a patient with CoViD-19 infection	51
E. Mormina, N. Laganà, N. Mumoli, D. La Rosa, M. Chiappalone, M.C. Tringali, A. Amato, A.G. Versace	
Livelli aumentati di ICOS e ICOS-L sono associati a ipertensione arteriosa polmonare in pazienti con connettivopatie	51
F. Murano, M. Bellan, F. Ceruti, S. Tonello, R. Minisini, R. Pedrazzoli, D. Sola, G. Patti, P.P. Sainaghi, M. Pirisi	
Non ce n'è CoViD!	51
M. Naddeo, G. De Felice, M. Fittipaldi, C. Bologna, P.G. Rabitti	
It just looked like CoViD	51
P. Novati, R. Arienti, A. Sguazzotti, S. Berra	
Post-CoViD neurological sequelae	52
A. Nucera, M.R. Vazzana, M. Papa	
Neurological involvement in CoViD-19 infection, data from a small community Hospital	52
A. Nucera, M.R. Vazzana, M. Papa	
“L'aria che toglie l'aria” in un caso di polmonite CoViD-19	52
M. Nunziata, S. Mangiacapra, F. Cannavacciuolo, L. Tibullo, M. Raimondo, V. Iorio, N. Iuliano, M. Attenu, M. Mastroianni, M. Amitrano	
Hypercalcemia and chronic renal failure: a case of tertiary hyperparathyroidism	52
M. Nunziata, L. Tibullo, P. Varrella, M. Mastrianni, S. Mangiacapra, N. Iuliano, V. Iorio, M. Amitrano	
Predicting CoViD-19 hospitalized patients' outcome with homocysteine	52
G. Oliva, G. Ponti, M. Manfredi, T. Ozben, M. Lugara, M. Coppola, A. Maffettone, A. Tomasi	
Sugar might taste bitter with alcohol	53
N. Palagano, V. Vannucchi, S. Aspite, C. Vinci, M. Finocchi, P. Fortini, L. Lupo, G. Campi, L. Pelagatti, G. Landini	
One thing, two ways	53
N. Palagano, V. Vannucchi, S. Aspite, C. Vinci, P. Fortini, M. Finocchi, L. Lupo, L. Pelagatti, L. Bertini, G. Landini	
Multi-parameter (muscle ultrasound, bioimpedance analysis and antropometry) assessment of sarcopenia in patients admitted to an Internal Medicine ward	53
P. Pasquero, M. Fadda, A. Marchisio, I. Furnari, A. De Francesco, M. Porta	
A strange case of mixed hyperbilirubinemia	53
V. Pedini, F. Penitenti, F. Sartori, R. Ghirardi	
Constrictive pericarditis as a linking between heart failure and congestive liver disease	54
V. Pedini, F. Sartori, F. Penitenti, M. Pagani	
An exotic host and a complex clinical syndrome: a novel diagnosis of AIDS complicated by talaromycosis	54
L. Pelagatti, V. Vannucchi, L. Bertini, F. Moroni, S. Aspite, E. Calcagno, C. Vinci, F. Ristori, M. Quarta, G. Landini	
Be gentle, pneumomediastinum is behind the corner: the need of gently ventilation in non-invasively ventilated patients during SARS-CoV-2 pandemic	54
L. Pelagatti, V. Vannucchi, E. Calcagno, L. Bertini, V. Vanni, M. Giampieri, G. Campi, M.L. Imbalzano, B. Cimolato, G. Landini	
Multiple strokes as complications of SARS-CoV-2 interstitial pneumonia	54
F. Penitenti, V. Pedini, F. Sartori, R. Ghirardi	
Severe hyponatremia as small cell lung cancer prime manifestation	55
F. Penitenti, F. Sartori, V. Pedini, R. Ghirardi	
Rischio di diffusione di SARS-CoV-2 in Medicina Interna	55
A. Perciaccante, C. Negri, F. Fiammengo	
Non sempre è uno scompenso cardiaco	55
I. Persico, A. Bovero, P. Artom, D. Mela, A. Calzi, L. Briatore, R. Goretti	
Fattori prognostici per la negatività del tampone rinofaringeo per SARS-CoV-2	55
C. Pestelli, L. Caruso, G. Fedi, G. Pestelli, S. Guidi	
The connection between rheumatoid factor, heart and cancer: a real life scenario	55
G. Pestelli, L. Caruso, C. Pestelli, S. Guidi, G. Fedi, I. Liguori, T. Fintoni, O. Para, C. Nozzoli	
Enema of aloe vera gel for achieving remission in active ulcerative proctosigmoiditis: a randomized, double-blind, placebo-controlled trial	56
R. Pica, C. Cassieri, H. Unim, P. Paoluzi, P. Crispino, A. Cocco, D. De Nitto, N. Paoluzi, M. Zippi	

Index

A case report of fearsome infection from CoViD-19 that after the lungs also affected the heart!	56
G.A. Piccillo, A. Busà, E.G.M. Mondati	
The unforgettable our last year...myocarditis as a dangerous complication of a case of bilateral interstitial pneumonia CoViD-19-related in a 90-year-aged patient...	56
G.A. Piccillo, A. Busà, E.G.M. Mondati	
Ematoma spontaneo del muscolo iliopsoas come complicanza di terapia anticoagulante con enoxaparina in paziente con polmonite interstiziale SARS-CoV-2: case report	56
L. Piccioli, F. Burberi, A. Maccarone, I. Petri, A. Bribani	
Changes in admissions to Internal Medicine for acute respiratory infections during 2015-2020 and burden of the SARS-CoV-2 pandemic	57
P. Piccolo, V. Tommasi, D. Manfellotto	
Efficacia di un intervento di educazione terapeutica sul self care dei pazienti con scompenso cardiaco: uno studio randomizzato controllato multicentrico	57
A. Pichetto Fratin, F. Bertoncini, C. Pignolo, M. Casarotto, C. Gatta	
La fidelizzazione alle nuove realtà assistenziali negli operatori sanitari coinvolti in prima linea nella lotta al Coronavirus	57
L. Pierboni, N. Celli, L. Severini, P. Bagli, M. Montalti, R. Triani, A. Galeotti	
SARS-CoV-2 infection and cardiovascular disease: analysis of hospitalized patients in high intensity care unit	57
F. Pietrantonio, A. Ciamei, M. Delli Castelli, J. Di Lorenzo, F. Montagnese, C. Di Iorio, A. Anzidei, M. D'Agostino, G. Bertani, F. Rosiello	
Tocilizumab for patients with severe respiratory failure in SARS-CoV-2-related interstitial pneumonia	58
G. Pinto, E.M. Madonia, F. Cei, A. Valoriani, V. Vannucchi, B. Cimolato, J. Romani, L. Giannini, M. Palazzi, E. Grifoni	
What if we remove a tablet?	58
M. Pizzaguerra, B. Davi, L. Bertin, G. Bertinieri, C. Pignolo, M. Casarotto, C. Gatta, A. Croso	
Non solo CoViD: la sindrome di Hamman Rich	58
G. Pizzenti, S. Rotunno, F. Lasaracina, V. Della Chiara, A. De Vito, M. Cassol	
Acute paraparesis: anti HU neuropathy	58
M. Ponte, N. Celli	
Association between non-O blood group and the risk of venous thromboembolism due to oral contraceptive therapy	59
A. Poretto, L. Spiezia, G. Turatti, M. Marobin, E. Borella, E. Campello, P. Simioni	
Un caso di gangrena di Fournier in paziente diabetico in terapia con canaglifozin	59
G. Prampolini, A. Negro	
CoViD-19 and complications: pectoral hematoma, a rare condition	59
B. Presciuttini, D. Benazzi, V. Antonicelli, M. Pagani	
Dal Moschovitz all' "ematoma panmidollare" fino alla protesi d'anca bilaterale...il ruolo chiave dell'Internista	59
E. Radighieri, G. Masoni, N. Bellesia, M.C. Leone, A. Casali, A. Ghirarduzzi	
Neutralizing monoclonal antibodies for outpatients with mild or moderate CoViD-19: our clinical experience	59
V. Ramazzotti, A.M. Schimizzi, F. Verri, R. Grinta, M. Candela	
Predisposizione ed attuazione della campagna vaccinale per CoViD-19 presso l'Azienda Ospedaliera beneventana	60
G. Rinaldo, M. Di Resta, P. Zangani, P. Di Santo, A. Di Santo, F. D'Agostino	
Dolore toracico al DE: rivalutiamo gli scores	60
F. Riccomi, M. Sampaolesi, S. Contucci, T. Gentili, C. Nitti, G. Moroncini, A. Salvi	
The antisynthetase syndrome as a diagnostic challenge: a case report	60
G. Righetti, G. Della Corte, G. Larizza, M. Fornaro, D. Renna, F. Iannone, F. Mastroianni	
The impact of gender differences on the efficacy/safety of pharmacological therapy in SARS-CoV-2 infection	60
G. Righetti, A. Scarafino, F. D' Onofrio, P. Guida, D. Fasano, F. Mastroianni	
CoViD-19: prevalence of interstitial pneumonia's lung ultrasound signs in asymptomatic and mildly symptomatic patients - Case study from a CoViD Territorial Center	61
L.V. Rigoni, C. Terranova, E. Durante, P. Novati	
Caso di insufficienza cardiaca e respiratoria	61
D.G. Riva, S. Perossi, U. Pozzetti, S. Cerri	
Lemierre syndrome: a "forgotten disease" at the time of CoViD-19 pandemic	61
S. Rizzardo, L. Delle Donne, S. Lorenzini, S. Cozzio	
Occult HBV-infection: between a too much forgotten diagnosis and the importance of a correct anamnesis	61
L. Rizzi, D. Fasano, G. Vurchio, M. Manicone, A. Genovese, G. Larizza, V. Longobardo, F. Mastroianni	

Index

Non solo CoViD	62
M.B. Rizzo, M. Campisi, G. Iraci, L. Prato, G. Monaco, G. Raspa, M. Sapienza	
Un insolito caso di ipoalbuminemia	62
E. Romagnoli, E. Violi, D. Arioli, L. Brugioni	
Antibiototerapia intralesionale come adiuvante nel trattamento degli accessi addominali in soggetti immunocompromessi	62
F. Ruscelli, F. Piani, M. Corciulo, M. Roberto, C. Borghi	
FUO in polisierosite da CoViD 19	62
M.G. Sama, F. Landi, M. Vastola, C.N. Fazio, R. Del Toro, M. Lisi	
Una rara localizzazione di TVP associata al CoViD 19	62
M.G. Sama, M. Vastola, F. Landi, L. Martella, S. Maisano, A. Fiorini, F. Palmese	
What is known in male gender, comorbidity and age during CoViD-19 pandemia?	63
G. Sansone, T. Ciarambino, G. Menna, M. Giordano	
Glucose-6-phosphate dehydrogenase deficiency: a diagnosis without anamnestic data	63
F. Sartori, F. Penitenti, V. Pedini, R. Ghirardi	
Splenic abscess: a time bomb to be diagnosed quickly	63
F. Sartori, V. Pedini, F. Penitenti, R. Ghirardi, M. Pagani	
Peripheral nervous system affection in SARS-CoV-2 infection: a case of post-CoViD acute inflammatory demyelinating polyradiculoneuropathy with bilateral facial nerve palsy	63
A. Scarafino, A. Petruzzellis, V. Felica, S. Tagliente, E. Vecchio, P. Mancino, E. Caputo, G. Righetti, F. Mastroianni	
JAK2-related myeloproliferative neoplasm with eosinophilia and extensive tissue involvement: a case report	64
C. Scarsi, P. Setti, S. Dasso, N. Fallani, M. Stabile, L. Pelanconi, C. Traverso, D. Cerminara, M. Strozzi, F. Ferrando	
Remdesivir for the treatment of adult with CoViD-19: our clinical experience	64
A.M. Schimizzi, V. Ramazzotti, C. Fischetti, C. Polloni, A. Balloni, E. Borioni, S. Cacciagù, E. Tomassetti, M. Candela	
The long-CoViD: a multidisciplinary approach to understand the impact of pandemic	64
A.M. Schimizzi, M. Vargas, M.G. Oriani, P. Spinaci, I. Capecci, A. Bartoli, F. Santi, A. Brizzi, A. Focosi, M. Candela	
Altered mental status in a woman with CoViD-19: a case of SARS-CoV-2 related encephalitis	64
G. Scocchera, A. Faraone, A. Lo Forte, P. Carrai, T. Picchioni, A. Crociani, S. Sbaragli, M. Bettucchi, S. Contri, A. Fortini	
Una complicanza inaspettata	64
V. Scotti, L. Menicacci, G. Falchetti, E. Caldini, M. Vaudo, E. Romano, V. Rosellini, M. Mattei, A. Casini, A. Morettini	
CoViD-19 associated invasive pulmonary aspergillosis: case report	65
F.S. Serino, L. Di Donato, C. Guarente, L. Brollo	
Diagnostic challenge of early cardiac amyloidosis in multiple myeloma: a case report	65
F.S. Serino, L. Di Donato, C. Guarente, L. Brollo, M. Scanferlato, G. De Michele	
Guillain-Barrè syndrome-associated SIADH with Reset Osmostat causing severe and untreatable hyponatremia	65
P. Setti, C. Scarsi, N. Fallani, S. Dasso, M. Stabile, L. Pelanconi, C. Traverso, D. Cerminara, M. Strozzi, F. Ferrando	
Gestione infermieristica delle stomie: uno studio multicentrico	65
V. Simonetti, D. Comparcini, M. Tomietto, C.A.M. Papappicco, R. Pizzichillo, L. Tornari, L. Tesei, G. Cicolini	
Effect of Annurca apple polyphenols on <i>claudicatio intermittens</i>	66
G.C. Tenore, G. Caruso, T. Ciarambino, A. Ilardi, F. Capasso, F. Ciaburri, G. Vitolo, M. D'Avino	
Utilità della ultrasonografia <i>point-of-care</i> (POCUS) nella diagnosi differenziale della piastrinopenia in setting internistico	66
F. Tesi, M. Iozzia, A. Bribani	
Anziani e politerapia. Un caso clinico di piastrinopenia grave su cui riflettere	66
F. Tesi, M. Iozzia, A. Bribani	
De Quervain's subacute thyroiditis: an illustrious unknown	66
L. Tibullo, M. Atteno, M. Nunziata, P. Varrella, M. Raimondo, I. Puca, G. Antignani, M. Amitrano	
Progressive multifocal leukoencephalopathy: an unknown case of AIDS	66
L. Tibullo, F. Cannavacciuolo, S. Leone, D. Masiello, M. Amitrano	
Global vision and clinical reasoning in complexity: an endangered competency in Internal Medicine in the CoViD era. Case series in an Internal Medicine unit CoViD-free	67
D. Tirota, F. Girelli, V. Mazzeo, D. Cangini, M. Tassinari, E. Console, P. Muratori	

Index

Impianto di pacemaker permanente in paziente iperteso con severa disonia in corso di trattamento con lenalidomide per mieloma multiplo	67
G. Torin, A. Bresolin, S. Rizzati, A.P. Sacco, L. Schiavon, S. Cuppini, A. Mazza	
Il ruolo della telemedicina nella gestione dell'ipertensione durante la pandemia SARS-CoV-2: studio pilota in un centro dell'ipertensione	67
G. Torin, A. Bresolin, C. Rossetti, L. Schiavon, S. Cuppini, A. Mazza	
Rettorragia in paziente con RCU: riacutizzazione o manifestazione CoViD-correlata?	67
M.C. Tringali, M. Chiappalone, D. La Rosa, C.O. Aragona, V. Viapiana, F. Napoli, F. Mamone, F. Bellone, A.G. Versace	
Trombosi venosa porto-mesenterica da <i>Bacteroides fragilis</i> e CoViD-19	68
M. Uccelli, E. Di Timoteo, F. Parisi, F. Castelli	
Gestione dell'emergenza CoViD-19: esperienza della Medicina Interna dell'Ospedale di Sanremo (IM)	68
M. Uccelli, E. Di Timoteo, S. Bernardi, G. Berta, A. Borra	
An atypical case of rapidly progressive interstitial lung disease	68
A. Uliana, R. Carraro	
Correlation between HRCT Severity Score and CO-RADS in 30 patients with SARS-CoV-2 interstitial pneumonia. HISECOR study	68
A. Ulissi, M.M. Ciammaichella, D. Pignata, S.P. Pirillo, L. Di Rezze	
Correlation Charlson Comorbidity Index - HRCT Severity Score. CHAVES Study	69
A. Ulissi, M.M. Ciammaichella, D. Pignata, L. Di Rezze, S.P. Pirillo	
Utilizzo di bezlotoxumab nella gestione della colite da <i>Clostridium difficile</i>: descrizione di 2 casi clinici	69
C.A. Usai, F. Bandiera	
Desametasone in pazienti con ARDS moderato-severa da CoViD-19: dosaggio elevato vs dosaggio standard	69
C.A. Usai, A. Merella, G. Merella, R. Manetti, F. Bandiera	
Join to improve: a multidisciplinary approach to hip fracture	69
S. Vaggi, P. Castello, S. Porcile, A. Zaino	
Is it possible to predict early the outcome of CoViD-19 patients? Prognostic value of erythrocyte sedimentation rate	69
R. Valerio, M. Insalata, F. Ventrella	
Lung and mediastinal lymph nodes involvement in patients recovered from CoViD-19	70
R. Valerio, U. Tupputi, F. Ventrella	
Fever, anemia, thrombocytopenia, kidney failure and neurological changes: acquired thrombotic thrombocytopenic purpura (aTTP) in a CoViD-19 patient	70
V. Vannucchi, L. Pelagatti, F. Pallini, G. Campi, C. Vinci, V. Vanni, N. Palagano, A. Pesci, B. Cimolato, G. Landini	
Thyroid dysfunction in CoViD-19 moderate-to-critical patients: an endocrine complication due to SARS-CoV-2?	70
M. Varallo, I. Muller, T. Re, A. Daturi, V. Savojardo, S. Porretti, S. Accordino, M. Salvi, M. Arosio, C. Canetta	
Una polmonite molto complessa	70
E. Vaverka, B. Maggì, S. Corbi, E.K. Tyndall, C. Mancusi, M. Vincenzi, S. Beccaria	
Behavioural and psychological symptoms in dementia, often reversible conditions	70
M.R. Vazzana, A. Nucera, M. Papa	
A gym for the Hospitalist	71
D. Venuti, P. Castello, A. Bonanni	
Prevention and not just cure	71
D. Venuti, S. Porcile, S. Vaggi	
Patologia IgG4 correlata: una possibile causa di febbre di origine sconosciuta	71
V. Verdiani, E. Mariancini, M. Pellegrini	
Diagnostic algorithm in CoViD-19 pulmonary outcomes	71
S. Vernocchi, A. Aceranti, T. Serini, O. Grassi, G. Bergamo	
An early complication in patient with CoViD19 pneumonia	72
A. Vetrano, A. Iorio, E. Trombetti, M. Capasso, S. Romano	
Severe thrombocytopenia in patient with SARS-CoV-2 infection	72
A. Vetrano, L. Errico, T. Maisto, M. Verde, L. Ferrara	
Pandemia da SARS-CoV-2: il "bicchiere mezzo pieno". Arricchimento professionale nella gestione dei supporti meccanici per la ventilazione non invasiva	72
A. Villa, M. Redaelli, L. Bonacina, C. Gabiati, D. Montori, E. Calabrò, M. Nivuori, A. Pedrolì, L. Serati, A. Brucato	

Index

Differenze nella gestione dell'infezione da SARS-CoV-2 tra la prima e la seconda ondata: studio osservazionale	72
A. Villa, L. Bonacina, C. Picchi, D. Montori, E. Calabrò, A. Comi, A. Pedroli, M. Brenna, E. Bizzi, A. Brucato	
Severe vitamine B12 deficiency	73
M.C. Vinci, F. Moroni, S. Aspite, N. Palagano, V. Vannucchi, E. Calcagno, M. Giampieri, G. Cambi, V. Vanni, G. Landini	
Ischemia-induced renal failure as a presenting manifestation of a case of abdominal PAN	73
P.I. Viridis, C. Miraglia, R. Fiorini, C. Marosi, G. Bologna	
A rare case report of Stenotrophomonas maltophilia community pneumonia	73
G. Vurchio, V. Longobardo, D. Fasano, L. Rizzi, F. Mastroianni	
Ischemic cholangiopathy: a challenging diagnosis	73
I. Zagni, P. Carleo, F.P. Bonfante	
A case of respiratory failure due to co-infection with SARS-CoV-2 and Mycoplasma pneumoniae	73
M. Zavagli, S. Iandelli, S. Fruttuoso, S. Bracci, G. Miranda Agrippino, F. Ferretto, M.P. Briganti, L. Fani, F. Piani	
Endoscopic loop-assisted resection for an ulcerated large colic lipoma causing rectorrhagia	74
M. Zippi, P. Crispino, C. Cassieri, N. Paoluzi, R. Pica	

ORAL COMMUNICATIONS

Usefulness of NEWS and NEWS-c in predicting dismal outcomes in acute medical unit: a lesson from CoViD-19 pandemicS. Accordino¹, M. Cazzaniga², C. Canetta¹¹High Care Internal Medicine Unit, Foundation IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milano; ²Emergency Department, Alessandro Manzoni Hospital, Lecco, Italy**Background and Aim:** Early warning scores have been strongly recommended in acute hospital settings to detect patients at risk of clinical deterioration. NEWS had optimal performances in Acute Medical Units (AMUs) for different endpoints. During CoViD-19 pandemic a modified version of NEWS (NEWS-c), including age in addition to vital signs, was proposed but not validated. Aim of our study is to compare prognostic powers of NEWS and NEWS-c considering as outcomes transfer to intensive care units (ICUs), in-hospital mortality and deaths within 72h in non CoViD-19 patients.**Materials and Methods:** All consecutive patients admitted to an AMU from Dec-17 to Nov-19 have been included, collecting data regarding NEWS-c and NEWS on admission and performing AU-ROCs for both scores.**Results:** 2162 patients were considered, mean age 77.3±14.3, 49.3% male. The median values of NEWS-c and NEWS were 5 (IQR 3-7) and 2 (IQR 1-4) respectively, with higher values in non-survivor patients and in the ones transferred to ICUs (p<0.0001). Considering in-hospital mortality the AUROCs were 0.77, 95% CI 0.73-0.80 for NEWS-c and 0.75, 95% CI 0.71-0.79 for NEWS, p=0.0011. Less differences were found in predicting deaths within 72h (0.79, 95% CI 0.75-0.84 for NEWS-c and 0.78, 95% CI 0.73-0.83 for NEWS, p=0.008) and transfers to ICUs (0.64, 95% CI 0.58-0.70 for NEWS-c and 0.67, 95% CI 0.62-0.72 for NEWS, p=0.03).**Conclusions:** NEWS has confirmed its good performances in providing early warning of dismal outcomes while NEWS-c has shown a better discrimination power to predict overall in-hospital mortality.**Efficacy and safety of anti SARS-CoV-2 monoclonal antibodies treatment in the real world**D.C. Bartolomeo¹, S. Cappello¹, F. Ventrella¹¹S.C. Medicina Interna, P.O. "Tatarella", Cerignola, ASL FG, Italy**Background and Aim:** Anti SARS-CoV-2 neutralizing monoclonal antibodies (nmAB) is one of the treatment strategies which have been investigated in several studies with promising results. Although not approved by the EMA, temporary distribution has been authorized in Italy by AIFA. Aim of our study was to assess treatment efficacy by considering adverse reactions, subjective clinical improvement and evolution of the disease.**Materials and Methods:** Trasversal study on 29 patients, with CoViD-19 confirmed by testing positive for SARS-CoV-2 RNA- and comorbidities predisposing to severe disease, come to our Internal Medicine, from 04/01/21 to 05/19/21, for IV nmAbs infusion treatment. The following items were considered: immediate adverse reactions; by phone questionnaire, secondary reactions 24-48h after the infusion with regard to uncommon side effects (frequency 1%) reported in the datasheet and the clinical state at 7 and 30 days after therapy.**Results:** Of the 29 patients, none had immediate and late periprocedural reactions; 24 hours after treatment: 5 patients (17.2%) reported headache, 3 (10.3%) general discomfort, 1 (3.4%) diarrhea, 2 (6.8%) fever. At 7 days, 100% of patients reported clinical improvement. Evaluated at 30 days 75.8% of the sample, clinical recovery were found for all; viral nucleic acid test turned negative in an average time of 16.04±5.65 days.**Conclusions:** Our data, although conditioned by the small number of patients, show anti SARS-CoV-2 nmAbs efficacy in improving symptoms and preventing progression to severe CoViD-19 in patients with predisposing comorbidities.**Incidental pheochromocytoma: is it really silent? A case series**G. Bertola¹, S. Giambona¹, R. Bianchi¹, R. Ruiz Luna¹, S.A. Berra¹¹UO Medicina I, ASST Rhodense, Garbagnate Milanese (MI), Italy**Background:** Pheochromocytoma (PH) is a rare tumour, arising from adrenal medulla. Hypertension (H) is the hallmark of PH, often associated with other symptoms of catecholamine release. Nevertheless, about 50% of PHs comes to clinical attention as incidentally discovered adrenal masses (IAMs). Our aim is to evaluate if incidental PHs are truly asymptomatic.**Materials and Methods:** We present a case series of surgically confirmed PHs in our outpatient clinic from 2006 to 2019.**Results:** 11 cases (4 F and 7 M) of PH were observed; all of them came to clinical attention as IAMs (3.8% of our series of IAMs). Average pts age was 60.5 yrs vs 65.7 in other IAMs (NS). H was present in 6 cases. In other 4 cases at least 1 other symptom of catecholamine excess was evident (headache, palpitations, chest pain, sweating, atrial fibrillation). Average tumour diameter was 51.8 mm vs 24.5 in other IAMs (p<0.05). Average unenhanced density on CT was 31.1 HU vs 5.6 in other IAMs (p<0.01). Inhomogeneous mass was evident in all cases on post-contrast CT. T2 weighted hyperintensity was observed in all pts who underwent to MRI. Positive MIBG uptake was observed in 90% of pts. Average Ur metanephrine: 2821.5 g/24h vs 138.5 in other IAMs (p<0.05). Average Ur normetanephrine: 8956.8 g/24h vs 445 in other IAMs (NS). We found a weak correlation between the degree of symptoms and the metanephrine-normetanephrine secretion.**Conclusions:** IAM is a frequent presentation of PH, however in many cases a careful anamnesis can reveal a history of H and/or other previously neglected symptoms.**The mesentery as an uncommon site of involvement of IgG-related disease, a rare autoimmune disorder**M. Bertoni¹, A. Giani¹, S. Tozzini², M.E. Di Natale¹¹SOC Medicina Interna 2, Ospedale Santo Stefano di Prato; ²SOC Anatomia Patologica Empoli-Prato, Italy**Background:** Immunoglobulin G4 (IgG4)-related disease (IgG4-RD) is a rare autoimmune disorder involving 1 or multiple organs, most commonly the pancreas, lacrimal and salivary glands. However, IgG4-related sclerosing mesenteritis (SM) involving the small-bowel mesentery is rare. Given that IgG4-related SM usually mimics the imaging characteristics of mesenteric malignancies, its preoperative diagnosis remains challenging. Herein, we report a rare case of IgG-related SM.**Description of the case:** A 73-year-old woman was admitted to our hospital for fever and colicky abdominal pain in the right hypochondrium. The findings on contrast medium computed tomography showed a swelling of the mesentery root with vascular structures surrounded by slightly contrast-impregnated tissue and blurred and irregular margins. Positron emission tomography showed an area of inhomogeneous and intense hypermetabolism of the mesentery root. The hallmark histopathological features along with elevated levels of IgG4 (145mg/dL) and imaging findings were indicative of IgG-related SM. The patient was treated surgically. Postoperative histopathological examinations exhibited

tissue infiltration with lymphocytes and IgG4-positive plasma cells, as well as fibrosis. Prednisolone therapy was started in order to prevent recurrence of such disease. There were no clinical signs of exacerbation within 1-year follow-up when IgG4 levels returned to normal values.

Conclusions: This case highlights the mesentery as an uncommon site of involvement of IgG-related disease and allows us to advance our knowledge of IgG-related SM.

Risk of venous and arterial thromboembolic events in women with advanced breast cancer treated with CDK 4/6 inhibitors: a systematic review and meta-analysis

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Background and Aim: Cyclin-dependent kinase inhibitors (CDKs) may increase the risk of thrombotic events of endocrine therapy (ET) in women with hormone-sensitive, HER2-negative advanced breast cancer (ABC). Aim of our systematic review is to estimate the risk of venous and arterial thromboembolism in women with ABC treated with CDKs in phase III randomized controlled trials (RCTs).

Methods: Studies were identified by electronic search of MEDLINE and EMBASE database until December 2020. Differences in thrombotic outcomes among groups were expressed as pooled odds ratio (OR) and corresponding 95% confidence interval (CI), which were calculated using both a fixed-effects and a random-effects model. Statistical heterogeneity was evaluated using I² statistic.

Results: We included 7 phase III RCTs (4415 patients) and 3 follow-up papers. Reporting of thrombotic events was at high risk of bias. Women with ABC treated with CDKs and ET had a threefold increased risk of venous thromboembolic event (VTE) compared to ET plus placebo arm [OR 3.11 (95% CI 1.42, 6.82; I²=0%)]. Analysis with data from the follow-up papers confirmed the increased risk of VTE [OR 5.59 (95% CI 2.34, 13.34; I²=0%)]. Women with ABC treated with CDKs and ET had a non-significant increased risk of arterial thromboembolic event compared to ET plus placebo arm [OR 1.22 (95% CI 0.47, 3.18 I²=0%)].

Conclusions: CDKs in combination with ET are associated with a threefold higher risk of VTE in comparison to endocrine therapy alone in women with ABC, while the risk of arterial events is non-significantly increased.

The perfect storm: a case of STEC-HUS in a 62-year-old man

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Background: The haemolytic-uremic syndrome caused by STEC infection is a serious, uncommon disease that mainly affects infants. In the literature there are few cases described in adults.

Description of the case: Patient 60-year-old went to the emergency department for onset of worsening exertional dyspnea, diffuse edema and oliguria. Medical history: COPD, cluster headache, active smoker, previous potus and drug use. Blood chemistry tests showed: microangiopathic haemolytic anemia with thrombocytopenia, negative DIC profile and Coombs test (direct and indirect), severe acute renal failure with dysionias. In the first two days of hospitalization the patient was treated with plasma exchange, and contextual steroid therapy. Suspicion of thrombotic thrombocytopenic purpura (TTP) was excluded from ADAMTS-13 levels >90% with absence of anti-ADAMTS-13 Ab. Subsequently, the search for Shiga Toxin 1 was positive, leading us to the diagnosis of typical uraemic-haemolytic syndrome. During the hospitalization, numerous investigations have been initiated, including an extensive immunological screening and genetic investigations for atypical HUS. Clinical improvement was seen with supportive therapy.

Conclusions: The development of thrombotic microangiopathy is a life-threatening condition, an early and rapid differential

diagnosis between TTP, DIC, STEC-HUS and aHUS is necessary in order to start the most appropriate treatment as early as possible.

A case of internal jugular vein thrombosis

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Background: Lemierre's syndrome is a disease caused by *Fusobacterium necrophorum*, a Gram-negative anaerobic bacterium of the oral microbial flora. Sporadic cases caused by Methicillin Resistant *Staphylococcus Aureus* (MRSA) and *Klebsiella pneumoniae* have been described too. Main symptoms include oropharyngeal infection with septic internal jugular vein (IJV) thrombosis and septic pulmonary emboli. Mortality rate is estimated between 5 and 18%. Hospitalization in Intensive Care Unit (ICU) is a frequent occurrence.

Clinical case: 24-year-old woman with history of occasional drug abuse, arrived to the Emergency Department for dyspnea and abdominal pain; she referred fever and pharyngitis for a month. Computed Tomography (CT) showed IJV thrombosis and multiple bilateral cavitated lung nodules. Blood culture was positive for *Fusobacterium necrophorum*. No ORL infections were detected. Patient was admitted to the ICU and broad-spectrum antibiotic therapy with piperacillin/tazobactam and clindamycin was started. Due to respiratory failure and pleural empyema she underwent IOT and chest drainage; thoracic surgery was required too. Antibiotic therapy was implemented with linezolid and continued for 8 weeks. Low-molecular-weight heparin at anticoagulant dose was administered until IJV recanalization, then continued at prophylactic dosage. Patient experienced an important clinical, laboratoristic and radiological improvement.

Conclusions: The clinical case describes Lemierre's syndrome with classic presentation (IJV thrombosis and septic pulmonary emboli), without ORL infective focus detected.

Nine-year efficacy and safety of azathioprine treatment in the maintenance of steroid-free remission in inflammatory bowel disease patients

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Background and Aim: Azathioprine (AZA) is widely used for induction and maintenance of remission in steroid dependent patients with inflammatory bowel disease (IBD). We investigated its efficacy and safety in maintaining steroid-free remission in steroid dependent IBD patients nine year after the institution of treatment.

Methods: Data from consecutive IBD outpatients referred in our Institution, between 1985-2018, were reviewed and all patients treated with AZA were included.

Results: Out of 3182 consecutive IBD, AZA was prescribed to 470 patients, 260 (55.3%) were affected by Crohn's disease (CD) and 210 (44.7%) by ulcerative colitis (UC). Two hundred and twenty-one patients with a follow-up <108 months were excluded from the study. Two hundred and forty-nine patients were evaluated, 139 (55.9) with CD and 110 (44.1%) with UC. One hundred and forty-one (56.9%) were male. Nine year after the institution of treatment, 122 (49%) patients still were in steroid-free remission (81 CD vs 41 UC, 58.2% and 37.3%, p=0.0014), 71 (28.5%) had a relapse requiring retreatment with steroids (29 CD vs 42 UC, 20.9% and 38.2%, p=0.0030), 56 (22.5%) discontinued the treatment due to side effects (29 CD vs 27 UC, 20.9% and 24.5%). Loss of response from 1st to 9th year of follow-up was low, about 21%.

Conclusions: Nine year after the onset of treatment about 50% of patients did not require further steroid courses. The maintenance of steroid-free remission was significantly higher in CD than in UC patients. The occurrence of side effects leading to the withdrawal of AZA treatment has been low.

Helmet CPAP in severe CoVID-19: an experience in an internal medicine ward

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Background: To face the large number of cases of CoVID-related ARDS, CPAP was widely used, despite the absence of evidence and guideline recommendations. This study aims to document the dimension of the use of CPAP as a first-line treatment and its effectiveness.

Methods: We included all the patients that met NIH criteria for severity; those admitted in ICU were excluded, as those required NIV for other indications. Helmet CPAP was delivered when oxygen supply with VM at 50% of Fio2 failed to maintain target spO2 (94-98%) and respiratory rate (<24 acts per minute), alternated to HFNC at the same Fio2 or non-rebreathing reservoir masks. End-points were in-hospital mortality and the necessity of another ventilation technique (NIV or IMV).

Results: 319 patients were included. Median age was 71 (68-80), 189 were male, 80 died; 174 at admission had a PaO2/Fio2 suggestive for ARDS, with an increased risk of death (OR 2, 1,2-3,4, p=0,01). CPAP was delivered to 147 patients, with a median duration of 8 days (5-11). 59 patients need another ventilation technique (35 NIV, 24 IMV). Of patients treated only with CPAP, 15 died; of those treated with other techniques, 31. In a univariate analysis of the ARDS subgroup, a complete cycle of CPAP results in a lower risk of death (OR 0,72 0,32-1,7) and the failure of CPAP in a higher (OR 4,9, 2-11, p <0,001).

Conclusions: CPAP was widely used as first-line treatment and was effective in one-half of cases; other ventilation techniques rescued another half of the patients. However, mortality rate was high (20%) even in non-ventilated patients.

Prevalence of pulmonary embolism in 40 patients with SARS-CoV-2 interstitial pneumonia. PREMOVID study

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Background and Aim: The authors evaluated the prevalence of pulmonary embolism in 40 patients with SARS-CoV-2 related interstitial pneumonia, of which 20 with areas of "ground glass" and 20 with areas of "crazy paving". The "PREMOVID" study, acronymic deriving from "PREvalence of pulmonary embolism in CoVID-19", carried out a retrospective analysis on 40 patients enrolled with CoVID-19 pneumonia. The diagnosis was confirmed by the radiological picture (CT-CXR), by the positivity of the molecular swab for SARS-CoV-2. The "PREMOVID" study has the following objectives: 1) verify any relationships existing between the cases of pulmonary embolism in patients with areas of "ground glass" and areas of "crazy paving"; 2) verify the statistical significance found by applying the Chi-square.

Materials and Methods: The Chi-square test was used to compare the frequency of PE in the two groups of 20 patients with "ground glass" and "crazy paving" areas.

Results: In total there are 8 (20%) cases of PE. In the Crazy group the percentage of patients with PE is significantly higher than in the Ground Glass group.

Conclusions: The "PREMOVID" study demonstrated a statistically significant correlation between the number of cases of pulmonary embolism detected and the "crazy paving" tomographic variant. It is hypothesized that the "crazy paving" variant may be the trigger of pulmonary embolism.

Disease knowledge and self-care in patients with chronic venous leg ulcers: preliminary short-term results of a randomized controlled study

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Background and Aim: In Italy, the phenomenon of chronicity and multi-pathology is increasing in patients over 75 years old. The incidence of venous leg ulcers (VLU) is also increasing. Healthcare professionals can (and must) offer education to patients with chronic vascular diseases to stimulate their compliance and to promote understanding of the importance of adequate self-care to prevent complications and to better manage their condition. This study aims to assess whether a very simple educational intervention can improve the self-care and disease knowledge of patients with VLU.

Methods: Patients attending the vulnological clinic were randomly assigned to two groups: the intervention group (receiving written additional information), and the standard of care group (control group). All subjects filled in two questionnaires at baseline and after two weeks (t1): "VeLUSSET" and "Educational interventions in patients with venous ulcers in the legs" (EI), measuring levels of self-care and disease knowledge, respectively.

Results: 29 subjects were enrolled. At t1, the mean Veluset score increased from 227 to 271 for the intervention group (p<0.001) and from 200 to 213 for the control group (p=0.33). For the EI questionnaire, at t1 the mean score increased from 6.3 to 11.5 for the intervention group (p<0.001) and from 5.8 to 6.9 for the control group (p=0.28).

Conclusions: Results show that a simple intervention could be useful for improving patient education, increasing both self-care and disease knowledge.

Acute renal infarction: a diagnostic challenge

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Description of the case: A 37-year-old previously healthy male presented to the ED of our hospital for intense abdominal pain. Laboratory analysis showed an elevated WBC and LDH counts, abdominal CT displayed an hypodense area in the left superior polar renal parenchyma suspected for pyelonephritis. The patient was treated with levofloxacin and analgesics, blood cultures and urinalysis were negative, his GFR remained normal and we performed a contrast-enhanced abdominal CT, with evidence of double renal arteries originating from the aorta and thrombosis of left superior polar branch causing an acute renal infarction (ARI). He was started on enoxaparin, 100 mg twice daily, and examined for the possible source of emboli or a thrombophilic state. Echocardiography and a 72-hour continuous ECG monitoring were normal. The results of laboratory tests for thrombophilic states revealed a MTHFR C677T homozygous mutation. He was discharged on the tenth day with good clinical status.

Conclusions: ARI is a rare condition with four identifiable groups: - thromboemboli originating from the heart or aorta; - renal artery injury; - hypercoagulability disorders; - idiopathic. Abdominal pain and increased level of LDH are a typical finding. In differential diagnosis renal colic and acute pyelonephritis must be excluded. Many patients were managed conservatively. In our case this condition might be favoured by the abnormal renal vascularization and hyperhomocysteinemia. Further studies should focus on etiology and prognosis of ARI.

Tossicità da colchicina in pazienti con insufficienza renale: prestiamo la dovuta attenzione?

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Premesse: Colchicina raramente può causare danno sistemico. Quali sono i fattori predisponenti a tossicità severa?

Descrizione del caso clinico: Maschio, 80 aa, autonomo. Cardiopatia ipocinetica, policitemia vera, IRC stadio III-IV, miocardite

idiopatica 5 mesi prima. 40 gg prima pericardite acuta in colchicina 0,5 mg x 2/die. Al ricovero riscontro di versamento pericardico cospicuo: potenziato ASA. Comparsa di ipotensione, disgeusia, diarrea, calo di 10 kg, incapacità a mantenere la stazione eretta. Ipotesi diagnostiche: diarrea iatrogena e/o infettiva e/o da MICI, eteroplasia, malattia sistemica granulomatosa o da accumulo. CoViD-19, PCT, markers oncologici, Cl. difficile, coprocoltura, E. coli enterotossici, Yersinia e parassiti intestinali, ACE, Mantoux, quantiferon, funzionalità tiroidea, autoimmunità, IF sierica, quantiferon, catene leggere, culturali su urine, sangue e feci, HBV-HCV-HIV: negativi. Calprotectina fecale modicamente aumentata, VES marcatamente aumentata. TAC torace-addome (splenomegalia, aspetto reticolare polmonare), PET 18-FDG (captazione colon "in toto" e nodulo tiroideo "caldo"), BOM (ndr). Sformatissima crioglobulinemia, polineuropatia sensitivo-motoria (EMG). Escluse amiloidosi, sarcoidosi, TBC. EGDS-colonscopia: agli istologici esteso danno da farmaci. Il paziente migliora con sospensione della colchicina, anche a EMG, e terapia di supporto, riprendendo gradualmente la sua autonomia. Una rara tossicità da colchicina in paziente con IRC stadio III ha simulato patologia sistemica. Altri fattori predisponenti (insufficienza epatica, interazione con altri farmaci) non erano presenti.

Primary Nursing e piani assistenziali standard: impatto sulle cure mancate

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Background e Obiettivi: L'introduzione del modello assistenziale Primary Nursing (PN) e dei piani assistenziali standard comporta importanti conseguenze sul processo di assistenza infermieristica. Questo studio si pone l'obiettivo di stimare l'impatto sulle cure mancate confrontandole con quelle messe in evidenza in uno studio condotto nel 2018 nel Dipartimento Area Medica dell'Ospedale San Giovanni Bosco di Torino.

Materiali e Metodi: È stato condotto uno studio osservazionale con disegno a metodo misto in due fasi: quantitativa e qualitativa. **Risultati:** Nei piani standard le cure mancate più frequentemente presenti sono: cura del cavo orale; risultano invece incrementate le attività di informare/educare l'assistito sul suo problema di salute nell'ottica dell'autogestione e il supporto emotivo.

Conclusioni: Si evince un miglioramento in riferimento alla deambulazione, alla mobilitazione della persona assistita e all'educazione alla dimissione. La cura del cavo orale e l'assistenza al bisogno di eliminazione rimangono aspetti critici. Gli infermieri facilitatori riferiscono che l'implementazione del PN e dei piani assistenziali standard ha migliorato l'assistenza riducendo le cure mancate. Emerge inoltre che gli infermieri tendono a non documentare la pianificazione, l'esecuzione e la valutazione delle attività infermieristiche svolte. Le cure mancate sono un fenomeno ancora in parte presente, ma l'implementazione del PN e dei piani assistenziali standard è risultata strategica per ridurle.

Determinants of subclinical atrial fibrillation in a cohort of moderate-to-severe CoViD19

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Background and Aims: Subclinical atrial fibrillation (SCAF) is defined as a fast, asymptomatic and self-terminating arrhythmic event, often diagnosed by long-term monitoring. We observed a high SCAF prevalence in moderate-to-severe CoViD-19. We aimed to assess the determinants of SCAF in this cohort.

Methods: All the consecutive patients affected by moderate-to-severe CoViD-19 admitted in a subintensive CoViD-19 unit were enrolled; each patient was submitted to continuous ECG monitoring for 7 days; for each subject, we collected - at the admission - age, sex, BMI, history of heart failure, history of hypertension, history of COPD, LUSS score, 12-leads ECG (calculating intervals and

assessing the most common alterations), BNP, Troponin I and PaO₂/FiO₂.

Results: We obtained 34 consecutive patients; 4 patients were excluded for pre-existing atrial fibrillation; SCAF was observed in 20% of the sample; age, sex, BMI, history of heart failure, hypertension and COPD, all the ECG intervals (PR, QRS and ST), ECG alterations (atrioventricular blocks, intraventricular blocks, hypertrophy or ischemia), BNP, Troponin I and PaO₂/FiO₂ did not result statistically associated with SCAF. Patient developing SCAF had a higher LUSS score resulted significantly associated to SCAF (LUSS in no-SCAF: 15.36±5,38; LUSS in SCAF: 20,0±4,27; p=0,027), even after Bonferroni correction.

Conclusions: SCAF has a high prevalence in CoViD-19 and seems to be correlated more to the disease severity than to the "classical" risk factors for atrial fibrillation. Larger cohorts are required to validate our observations.

Casirivimab-imdevimab combination therapy for inpatients with early diagnosis of hospital-acquired CoViD-19: a single center experience

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Background: Inpatients with hospital-acquired (HA) CoViD-19 have mortality rates above 30%. Subjects with early diagnosis of HA-CoViD-19 and risk factors for disease progression are suitable for treatment with anti-SARS-CoV-2 neutralizing monoclonal antibodies (MAB). We assessed the outcome of patients with HA-CoViD-19 treated with the casirivimab-imdevimab MAB cocktail.

Methods: Retrospective study of patients admitted between October 25, 2020 and April 30, 2021, and diagnosed with early HA-CoViD-19 during hospital stay, by PCR on nasopharyngeal swab. The patients who received combination treatment with casirivimab 1200mg and imdevimab 1200mg were compared with patients treated with standard care.

Results: Of 34 patients included in the study, 11 (mean age, 73.1; 9 males) received MAB treatment. The 23 patients in the standard care group were matched for age, sex and comorbidity index with the MAB treatment group. All MAB-treated patients had at least one risk factor for progression to severe disease, and none required oxygen therapy. The MAB cocktail was infused an average of 48.7 hours after symptom onset. During follow-up, no MAB-treated patients required supplemental oxygen for CoViD-19 compared with 14 (60.9%; p 0.0007) untreated patients. There were no deaths at 28 days in the MAB treatment group, compared with 9 (39.1%; p 0.0172) in the standard care group. No serious adverse events related to MAB infusion were recorded.

Conclusions: Casirivimab-imdevimab treatment appears safe and might prevent disease progression in high-risk inpatients with early diagnosis of HA-CoViD-19.

Short term prognosis of patients with stable pulmonary embolism is better defined with dependency score than with the ESC classification

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Background: Defining prognosis in hemodynamically stable pulmonary embolism (PE) with the ESC classification is hazardous because it doesn't sufficiently take into account comorbidities. We aimed to test the ability of two dependency indexes (BRASS and Braden) to predict short-term events in PE.

Methods: Patients admitted for PE were recruited, with the exclusion of those with cardiovascular instability. BRASS, Braden, and ESC scores were reported, along with personal data. Primary and secondary outcomes were in-hospital and 90-days mortality.

Results: 119 patients were included, 48 were males. The median age was 79 (69-86). 17 died during hospitalization, and further 10 at 90 days. Median BRASS was 8 (IQR, 4-10), Braden 19 (IQR,

15-22). The BRASS was significantly higher and the Braden significantly lower in both in-hospital and 90-days dead patients ($p < 0.001$). AUC for in-hospital mortality for BRASS was 0.72 (0.63-0.8, value > 18), for Braden 0.77 (0.68-0.85, value ≤ 14); at 90 days AUC for BRASS was 0.77 (0.69-0.85), and for Braden 0.74 (0.65-0.82). The correlation index between BRASS and Braden was -0,8 (95% CI, -0.86, -0.72). Conversely, the ESC risk assessment system has a mode of 2 ($n=58$) and failed to identify high-risk patients ($p=0.44$).

Conclusions: Two dependency indexes, the BRASS and the Braden predicted well PE short-term mortality, were strongly correlated, and work better than ESC classification.

Remote monitoring CoVID-19 patients, a telemedicine experience from Lodi (Italy)

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Background and Aims: Starting from February 2020 it was clear that early identification of SARS-CoV-2 infected patients and their isolation was the key to block the spread of the new disease. The aim of the study is to identify strengths and weaknesses of a telemedicine program.

Methods: In order to avoid the hospitalization we enrolled 543 patient on telemedicine service. Monitored patients were required to submit twice a day to the dedicated platform their oximetry, HR, RR, body temperature, systolic blood pressure and their symptoms. Every set of data generated a color coded score viewed real-time by the HPs who performed a phone call and decided to run phone tests for a new color coded score that induced to apply corrective actions: new call, home examination or emergency intervention network activation.

Results: On 453 patients 87% healed and 6.4% were hospitalized, 11,79% needed oxygen therapy. The mean time spent in the telemonitoring program was 24.21 days. Malaise was the most common and persistent symptom, followed by cough, lack of appetite and myalgia.

Conclusions: Telemonitoring is a safe, low budget and patient-friendly alternative to hospitalization for mild CoVID-19 patients. Relying on elementary instrumentation entrusted to fragile patients, for an effective telemonitoring program, especially during an outbreak, is essential a sound training of health professionals who can train unskilled operators. It also needs a strong collaboration with the general practitioner and the emergency division team.

Prevalence of community-onset sepsis in internal medicine wards: a prospective, multicenter study

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Background and Aim: Few data are available on the validity of "Sepsis-3" criteria in identifying patients with sepsis in Internal Medicine wards (IMWs). This study was aimed to assess the validity of "Sepsis-3" criteria in identifying patients with community-onset sepsis in IMWs and to evaluate the prevalence of these patients in IMWs.

Methods: Multicenter, prospective, observational, cohort study, carried out in 22 IMWs of Tuscany (Italy). All patients admitted to each of the study centers over a period of 21-31 days were evaluated within 48 hours; those with clinical signs of infection were enrolled. The main outcome was in-hospital mortality.

Results: 2,839 patients were evaluated and 938 (33%) met the inclusion criteria. Patients with sepsis diagnosed according to "Sepsis-3" were 522, representing 55.6% of patients with infection and 18.4% of all patients hospitalized; they were older than those without sepsis (79.4 ± 12.5 vs 74.6 ± 15.2 years, $p < 0.001$). In-hospital mortality was significantly higher in patients with sepsis compared to others (13.8% vs 4.6%; $p < 0.001$). "Sepsis-3" criteria

showed greater predictive validity for in-hospital mortality than "Sepsis-1" criteria (AUROC=0.71; 95%CI, 0.66-0.77 vs 0.60; 95%CI 0.54-0.66; $p=0.0038$).

Conclusions: "Sepsis-3" criteria are able to identify patients with community-onset sepsis in IMWs, whose prevalence and in-hospital mortality are remarkably high. Medical departments should adapt their organization to the needs of care of these complex patients.

Post-stroke detection of subclinical paroxysmal atrial fibrillation in patients with ESUS: proposal of a new predictive score based on a real world experience

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Background and Aim: Subclinical paroxysmal atrial fibrillation (AF) is one of the main occult causative mechanisms of ESUS (Embolic Stroke of Undetermined Source). Aim of this study was to identify AF predictors, and to develop a score to predict the probability of AF detection in patients with ESUS.

Methods: We retrospectively analyzed data of ESUS patients who undergone prolonged (2 weeks) electrocardiographic monitoring with an external event recorder. Patients with and without AF detection were compared. Variables associated to AF with odds ratio > 1.9 at multivariate analysis were attributed a proportional weight and used to develop a predictive score.

Results: Eighty-two patients, 48 females, mean age \pm SD 72 ± 10 years, were included. In 36 patients (43.9%) at least one episode of AF was detected. The frequency of age ≥ 75 years, arterial hypertension and NIHSS (National Institutes of Health Stroke Scale) score ≥ 8 was significantly higher in patients with AF compared to those without. NIHSS score ≥ 8 was the only independent variable associated with AF detection. We derived the E₂AF score (Empoli ESUS-AF score) (NIHSS ≥ 8 5 points, arterial hypertension 3 points, age ≥ 75 years 2 points, age 65-74 years 1 point, history of coronary or peripheral artery disease 1 point, left atrial enlargement 1 point, posterior lesion 1 point, cortical or cortical-subcortical lesion 1 point), whose predictive power in detecting AF was good, with an AUC of 0.746 (95%CI 0.638-0.836).

Conclusions: The E₂AF score seems to have a good predictive power for detecting AF. External validations are required.

The role of pneumococcal urinary antigen in CoVID-19 pneumonia: if you know it, you don't avoid it

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Background: CoVID-19 pneumonia has a bacterial co-infection rate about 3-5% at the admission to hospital care. The aim of our study is to assess the utility of pneumococcal urinary antigen (Ag) test in the diagnosis of bacterial pulmonary co-infection in CoVID-19 pneumonia and its support in the decision about antibiotic therapy.

Materials and Methods: We searched in NIH and PubMed for a revision of literature about the characteristics of pneumococcal urinary Ag test and the respiratory co-infection rate in CoVID-19 pneumonia. We analyzed 1268 cases of pneumonia admitted at the hospital: 703 CoVID-19 pneumonia and 565 community-acquired pneumonia. We compared positivity test rate in these two groups, the presence of clinical features suggestive for bacterial co-infection and antibiotic treatment rates.

Results: There was no statistical significant difference rate of positive test between the two groups (p -value=0.6): 703 CoVID-19 pneumonia, 10,8% ($N=76$) positive and 89,2% ($n=627$) negative; 565 community-acquired pneumonia, 9,9% ($n=56$) positive and 90,1% (509) negative. Positive test wasn't always correlated with sign/symptoms of bacterial co-infection; the rate of antibiotic treatment was higher in community-acquired pneumonia group than in CoVID-19 pneumonia one.

Conclusions: In conclusion, we support the use of pneumococcal Ag test in CoViD-19 pneumonia patients with sign/symptoms suggestive for bacterial co-infection. A positive test in this subgroup of patients must be considered as diagnostic for pneumococcal pneumonia and antibiotic treatment must be started.

CoViD-19 and T2 diabetes mellitus: a frightening couple

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Background and Aim: We evaluated the effect of CoViD-19 on the therapy of type 2 diabetic CoViD-19 inpatients (T2DM) during a 3-month period (between November 2020 and February 2021).

Materials and Methods: We evaluated 432 in-patients all affected with CoViD-19 pneumonia and T2DM. They were 337 male (78%) and 95 female (22%) with mean age 70±5 yrs and HbA1c 9±0.7%. Their diabetic therapy, along with antibiotic and steroid therapy was always switched to a basal bolus regimen whether they used at home oral, insulin or insulin therapy.

Results: The T2DM CoViD-19 pneumonia inpatients had a BMI 28±3 kg/sm and an average of total insulin daily dosage (TDD) at hospitalization of 54±7 IU/day and at discharge of 77±8 IU/day. Initially at hospitalization we performed an i.v insulin infusion protocol to achieve blood glucose values <200 mg/dl for at least 48 hrs in 195 pts (45%). The switch to basal bolus insulin therapy was made on the 3rd day of hospitalization. The major amount of insulin was administered before lunch and supper (both covering 40% of TDD) with 20% of TDD at night as basal. The major cause of this increase (40%) of TDD is in part due to the inflammatory state and partly to steroid therapy. We didn't detect any hypoglycemia.

Conclusions: We were forced to use an enormous amount of insulin, both iv and on basal bolus regimen to achieve a slight blood glucose control. The need to further evaluate for inpatients the use of other drugs (GLP1-RA?) combined to insulin regimen seems appropriate.

Clinical characteristics and predictors of death among 163 consecutively hospitalized patients with CoViD-19 in Mestre-Venice: a retrospective study

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Background and Aim: Information regarding the predictors of outcome in patients with CoViD-19 remains scarce. We aimed to analyze the clinical and biochemical characteristics and predictors of death in patients hospitalized for CoViD-19.

Materials and Methods: We retrospectively analyzed 163 patients consecutively admitted for severe CoViD-19 between 9/2020 and 12/2020 in the CoViD area of the Internal Medicine Department, Ospedale dell'Angelo, Mestre. Survival was evaluated at 28 days from admission.

Results: Forty-two over 163 CoViD-symptomatic patients died because of complications of infection (25,7%). Patients who died were significantly older (82 [76-86] vs 71 [54-80] years, $p<0.001$), had more cardiovascular comorbidities ($p<0.01$), higher signs of inflammation at admission (PCR13 [6-17] vs 7 [3-15] mg/dL, $p<0.01$; IL-6 63 [20-137] vs 21 [10-51] ng/L, $p=0.001$; D-dimer 1.0 [0.6-1.7] vs 0.7 [0.4-1.3] ng/mL, $p<0.05$), worse respiratory function at admission (P/F179 [115-268] vs 271 [210-342], $p<0.001$) and on day three (P/F110 [92-167] vs 225 [145-285], $p<0.001$), and wider organ involvement (creatinine 1.4 [0.8-2.0] vs 1.0 [0.8-1.2] mg/dL, $p=0.001$; hsTnI 33 [20-123] vs 12 [6-24] pg/mL, $p<0.001$; BNP 270 [120-556] vs 77 [132-187] pg/mL, $p<0.001$). At multivariate logistic regression analysis BNP (OR:1.01, CI:1.003-1.017) and P/F on day three (OR 0.969, CI: 0.948-0.991) were independently associated with an increased risk of death.

Conclusions: Our analysis may help clinicians in identifying patients with higher risk of death who deserve further clinical and research efforts.

Antibody responses after a double dose of SARS-CoV-2 mRNA vaccine

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Background and Aim: Vaccination against SARS-CoV-2 started in Italy in January 2021. First, healthcare personnel were vaccinated. Immunization of subjects should lead to a reduction in the clinical manifestations of the disease. Aim of the study was to evaluate the antibody response after the administration of two doses of the BNT162b2 SARS-CoV-2 mRNA vaccine.

Materials and Methods: We determined antibody levels at baseline (before second dose of vaccine) and 3 weeks after the second dose of the BNT162b2 SARS-CoV-2 mRNA vaccine in 92 (middle age 44±12) health care workers (35 male 38%, and 57 female). Written informed consent was obtained for all study participants.

Results: Antibody responses was of 452 U/mL±2744 (median 36, interquartile range 9-99) vs 3154±4389 (median 1957, interquartile range 1242-3238) $p<0.001$ (average increase of 2702±2554). Excluding 3 cases with baseline value>1000 the response was 63±92 (median 35, interquartile range 8-78) vs 2693±2410 (median 1912, interquartile range 1241-3136) $p<0.001$ (average increase of 2630±2369). According to multivariate regression analysis: baseline is inversely associated with age ($p<0.001$) but not with sex ($p=0.393$); post sampling is inversely associated with age ($p=0.003$) but not with sex ($p=0.653$).

Conclusions: Our data demonstrate that the antibody response after the administration of two doses of the BNT162b2 SARS-CoV-2 mRNA vaccine was obtained in 100% of the subjects studied. In particular, there is a relationship with age: younger subjects show a more robust response. Gender does not influence extent of response.

Screening of irritable bowel syndrome in emergency-urgency unit: clinical-diagnostic implications

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Background: Irritable bowel syndrome (IBS) is a chronic gastrointestinal disorder whose prevalence is estimated to be around 10-20%, is more common in women and can be painful and debilitating and negatively affect the quality of life. The incidence of the disease is not well known and every year the global costs for the diagnosis and treatment of these patients constantly increases. The purpose of the study was to establish the real incidence of IBS in Emergency Unit.

Methods: In two months, 500 consecutive patients were enrolled in the emergency. Patients were investigated with DASS-21 scale, Birmingham questionnaire and Bristol scale.

Results: A total of 250 females and 250 males with an average age of 49.8±23.76 and 58.12±18.37 respectively of which 110 with abdominal pain (80 females and 30 males). A total of 390 patients (170 females and 220 males) reported other symptoms. The Bristol scale showed that 120 patients had constipation, 300 regular bowel habit and 80 diarrhea. From DASS scale it was found that 280 patients presented a 'normal' psychological profile, 140 depression and 80 anxiety. According to the Rome IV criteria, the IBS is present in 190 out of 500 patients. In these, greater mental distress was observed (OR 5.33; 95% CI: 1.02-27.27, $p=0.05$).

Conclusions: This study showed an incidence of IBS of 38% with a significant association with psychological distress.

Quando le complicanze mascherano la diagnosi

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Descrizione del caso clinico: 64 aa, fumatore. HCV mai trattato. Valutato per febbre (39,5°C) resistente a terapia, tosse ed astenia. Si presenta stabile, febbrile con IR tipo I. Agli esami ematici piastrinopenia (nadir 44000/mm³), INR 1.32, D-dimero 106463 ng/ml, fibrinogeno nei limiti, PCR 17.09 mg/dl. All'angioTC polmonare embolia laminare e micronoduli aspecifici. Viene impostata terapia antibiotica ad ampio spettro per sepsi senza esito. Sembra non essere un'infezione batterica (PCT, emocolture ed urinocoltura negative; non evidenza di endocardite). La febbre persiste ed il paziente sviluppa pancitopenia, iperferritinemia (>7500 ng/ml), ipertrigliceridemia (325 mg/dl) e splenomegalia (16 cm). All'immunofenotipo su sangue periferico, cellule NK sopresse: è una linfoistocitosi emofagocitica secondaria...a cosa? Non c'è riattivazione dell'epatite. Non ci sono altri agenti infettivi virali nel sangue. La TC tb mdc e la BOM escludono una malattia linfoproliferativa. Potrebbe essere un LES (ANA 1:640 con pattern omogeneo/speckled), quindi il paziente viene inserito in follow-up immunologico. La terapia cortisonica ad alte dosi, intanto, attenua il quadro clinico. Solo dopo tempo la sierologia per Leishmania risulta positiva ed il paziente, trattato con amfotericina, guarisce.

Conclusioni: La malattia e le sue complicanze parlano la stessa lingua: il quadro clinico osservato è una combinazione delle tre entità ed ognuna può mascherare l'altra. Nel nostro caso splenomegalia e pancitopenia erano presenti quasi all'esordio, ma "mascherati" dalla HLH e dal possibile LES.

Diagnostic accuracy of stroke mimic prediction scales in a Stroke Area

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Background: A substantial amount of patients with symptoms of acute stroke (AS) are Stroke Mimics (SM). Clinical differentiation is challenging and advanced diagnostic neuroimaging not universally available, so clinical prediction tools have been proposed to identify patients with SM, avoiding unnecessary thrombolysis. The goal of our study was to evaluate the performance of four SM prediction scales. We also aimed to identify possible predictors of SM as compared to patients with AS.

Materials and Methods: We retrospectively evaluated 340 patients admitted in our Stroke Area between January 2019 and December 2020. Among them, 267 (78,5%) were stroke and 67 (21,5%) were stroke mimics. Four SM prediction scales (FABS, simplified FABS, Telestroke Mimic Score and Khan Score) were compared. Area under receiver operating curve (AUROC) analysis was performed. Logistic regression analyses were performed with SM vs AS as dependent variable to identify predictors of SM.

Results: Telestroke Mimic Score and FABS performed equally (AUROC=0,80). Telestroke showed greatest sensitivity (90,4%), while FABS the best specificity (79,8%). At multivariate analysis isolated vertigo (OR=12,1 p<0,001), history of migraine (OR=12,1 p=0,035), female sex (OR=2,4 p=0,023), cognitive impairment (OR=3,9 p<0,001) were independently associated with SM.

Conclusions: The proposed prediction scales in our population showed good performance. Some of variables not included in any scale (i.e female sex and isolated vertigo) may contribute to differentiate SM from AS in new score prediction scales.

Sequela a lungo termine dopo ospedalizzazione per COVID-19 severa: uno studio prospettico di coorte

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Premesse: Sono state riportate in letteratura evidenze che l'infezione da SARS-CoV-2 (CoViD-19) potrebbe determinare sintomi persistenti per settimane o mesi dopo la fase acuta di malattia. Tuttavia tali sintomi potrebbero essere influenzati da fattori psicologici.

Materiali e Metodi: In questo nostro studio osservazionale prospettico abbiamo valutato la presenza di sintomi ad un anno in una coorte di 200 pazienti ricoverati per CoViD-19 tra il 01/03/2020 ed il 15/05/2020 che erano già stati sottoposti a follow-up a 4 mesi dopo la guarigione. L'indagine è stata condotta tramite visita ambulatoriale.

Risultati: La popolazione in studio presentava età mediana di 62 [51-71] anni; 122 pazienti erano di sesso maschile. La durata mediana del ricovero è stata di 9 [5-16] giorni. Dopo 366 giorni dal ricovero [363-369] 79 pazienti (39,5%) hanno riportato almeno un sintomo. 22 pazienti (11,2%) lamentavano tosse, 16 (8,1%) dispnea, 13 (6,6%) disgeusia, 19 (9,7%) anosmia, 43 (21,9%) artromialgie, 30 (15,4%) astenia, 71 (36,2%) alopecia. Non abbiamo osservato una significativa riduzione del numero e della qualità dei sintomi dai 4 ai 12 mesi di follow-up.

Conclusioni: Il persistere di sintomi come l'affaticamento o la dispnea sono frequenti nei mesi successivi all'infezione da SARS-CoV-2. I sintomi possono persistere fino a 12 mesi dopo la dimissione.

Il dilemma MDRO: solo un dibattito epidemiologico o un reale problema clinico?

Uno studio di coorte in un reparto di Medicina Interna

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Background: Le infezioni batteriche da patogeni "multi-drug resistant" (MDR) costituiscono un problema sanitario emergente. Non è ancora completamente nota la correlazione tra la positività per MDR al tampone rettale e lo sviluppo di sepsi/shock settico. Gli obiettivi del nostro studio sono valutare l'impatto della colonizzazione da MDR sull'*outcome* (mortalità o necessità di incremento di setting assistenziale) e le implicazioni cliniche (sviluppo di sepsi/shock settico).

Metodi: È stato condotto uno studio di coorte retrospettivo. Sono stati considerati come casi i pazienti ricoverati presso il reparto di Medicina Interna 1 della AOU Careggi, tra 1 gennaio 2019 e 15 marzo 2020, che risultavano positivi per MDRO al tampone rettale all'ingresso. Per ciascun caso sono stati arruolati due controlli con caratteristiche demografiche simili, risultati negativi al tampone d'ingresso e ai successivi. Abbiamo quindi condotto un'analisi univariata e multivariata.

Risultati: Su una coorte di 2.147 sono stati arruolati 300 pazienti, di cui 100 casi e 200 controlli. La colonizzazione rettale da MDRO era associata significativamente ad un outcome avverso [p=0,001; O.R.=3,40 (I.C.95%=1,72-6,69)] e ad un aumentato rischio di sviluppare sepsi o shock settico [p=0,007; O.R.=3,35 (I.C.95%=1,45-7,77)]. Inoltre, i pazienti con tampone rettale positivo per MDR avevano una maggiore durata media di degenza (p=0,021).

Conclusioni: La positività per MDRO al tampone rettale d'ingresso può rappresentare un fattore di rischio per lo sviluppo di sepsi, influenzando sia la mortalità che i tempi di degenza.

Use of predictive scores for the gastrointestinal bleeding: differences under treatment with DOACs

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Background and Aim: Gastrointestinal bleeding (GIB), upper (UGIB) and lower (LGIB), is a frequent cause of hospitalization. Mortality relates to age, comorbidity and polypharmacy. GIB is a major complication of treatment with direct oral anticoagulants (DOACs). The gold standard procedure for diagnoses of GIB is endoscopic examination. Several Authors proposed different scores to predict outcomes in GIB. In UGIB are mostly used AIMS65, Glasgow-Blatchford (GBS), Rockall pre-endoscopy (RP) and Rockall complete (RC). Studies suggest their validity in LGIB (using the modified version of GBS, mGBS). The Oakland score (OS) demon-

strated to predict mortality, rebleeding, request of blood transfusion and therapeutic intervention in LGIB. Our aims are to assess the validity of these scores in our population and to observe possible differences in the patients treated with DOACs.

Materials and Methods: We retrospectively collected clinical data of 208 patients (age 81 ± 8.5 ; 51.4% females) admitted for acute GIB. We calculated predictive scores for each patient and OS just for LGIB.

Results: UGIB occurred in 65.4% of cases. AIMS65, RP, GBS and mGBS relate to outcomes and mortality rates. OS relates to blood transfusions request ($p=0.001$). LMWHs present higher RP ($p=0.045$) and RC scores ($p=0.031$) than DOACs, as VKAs for AIMS65 ($p<0.001$) and mGBS ($p<0.019$). In DOACs group, rivaroxaban has higher AIMS65 scores ($p=0.001$).

Conclusions: GIB scores showed to predict events and outcomes as described in literature. Among DOACs, rivaroxaban is associated to higher mortality risk. Our data confirm anyways DOACs better safety profile compared to LMWHs and VKAs.

To be or not to be...intensive: Internal Medicine unit role during and after CoViD-19 pandemic

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Background and Aim: CoViD-19 causes major changes in daily hospital activity, both in clinician and organizational aspects. Aim of this research is investigated a new model of Internal Medicine Unit. ASL Roma 6 is a local health facilities where hospital, territorial medicine and low-care facilities are integrated.

Materials and Methods: Initially, Delphi method (by six experts with clinician, statistic, health economic and public health expertise) allowed to analyze bad outcome causes in Ospedale dei Castelli's CoViD wards cohort (Lazio, Italy) via Ishikawa diagram and to create a SWOT analysis table. At the least, a Barber-Johnson's nomogram has been made with performances of MC (Medicine-CoViD) and MCF (Medicine-CoViD-free) units considering: length of the stay, bed occupation ratio, turn over interval and bed rotation index. CoViD-three-waves have been considered alone and overall.

Results: MCF hospitalized 790 patients (-23,90% compared to 2019 Internal Medicine admission), MC hospitalized 350 patients (M 199/F151). Main risk factor for mortality: patients admitted from local facilities (+7%, 57,14% of overall CoViD deaths) and presence of comorbidities (>3: 100%, =5: 24,7%). 197 (25%) patients have been treated with non-invasive ventilation (NIV).

Conclusions: CoViD Medicine wards show higher complexity and demand compared to non-CoViD ones, comparable to Sub-Intensive Therapy units; it is necessary to promote the NIV usage in such setting and to use CoViD expertise to build a new hospital model, where Internal Medicine is the core of care, integrated with territorial medicine.

Gastrointestinal involvement in systemic sclerosis: pathogenetic role of gut microbiome, cytokines and adipokines

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Background and Aim: Gastrointestinal (GI) involvement is very common in scleroderma (SSc) patients with high risk to develop malnutrition. The aim of the study was to evaluate GI symptoms, malnutrition status, changes in gut microbiome and serum levels of adipokines and cytokines involved in the pathogenesis of SSc.

Materials and Methods: We enrolled 25 scleroderma patients. UCLA-SCTC GIT 2.0 questionnaire and MUST were used. The samples of gut microbiome were subjected to extraction for 16SrRNA gene. ELISA test was used for cytokines and adipokines.

Results: 79.9% had GERD and 63.5% abdominal distension at

GIT 2.0 questionnaires. 48% had moderate risk (MUST2) and 12% had high risk (MUST3) of malnutrition. In phenotypic and genotypic analysis of gut microbiome was found: low similarity (76%) and diversity (44%); reduced concentration of gluten-digesting, lactose-digesting and vitamin K-producing bacteria; reduced bacteria involved to maintaining weight control (96%); alterations of intestinal permeability (reduction in mucolytic bacteria); potentially pathogenic bacteria (Salmonella in 56%, Klebsiella in 36% and Enterococcus faecalis in 12%). 44% patients had elevated serum levels of IL10 and IL12 correlated with high concentration of acetaldehyde-producing, low levels of acetaldehyde-degrade and mucolytic bacteria. Reduced levels of mucolytic bacteria also correlated with high serum leptin levels.

Conclusions: In our study genotypic changes of gut microbiome might play a role in damaging the permeability of the mucosa and increasing risk of malnutrition.

Efficacy and safety of P2Y12 inhibitors plus aspirin versus aspirin alone for acute treatment and secondary prevention of non-cardioembolic minor ischaemic stroke and high-risk TIA: a systematic review and meta-analysis

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Background and Aim: Aspirin is a cornerstone of preventive treatment for stroke recurrence, but the role of DAPT is much more emerging. This systematic review aimed to evaluate efficacy and safety of early use of P2Y12 inhibitors (clopidogrel/ticagrelor) plus aspirin compared to aspirin alone for acute treatment and secondary prevention in acute non-cardioembolic minor ischaemic stroke or TIA.

Materials and Methods: A systematic search on MEDLINE and EMBASE was performed. Treatment effects were estimated with RRs and 95% CI. We used RevMan 5.4 for data analyses. We assessed methodological quality of selected studies according to RobT tools and quality of evidence with GRADE approach.

Results: Four RCTs with 21459 patients were included. As compared to aspirin alone, DAPT was superior in reduction of stroke recurrence (RR 0.74, 95% CI 0.67-0.82) and disabling stroke defined as mRS>2 (RR 0.84, 95% CI 0.75-0.95), with no impact on mortality (RR 1.30, 95% CI 0.90-1.89) and increased risk of major bleeding (RR 2.54, 95% CI 1.65-3.92).

Conclusions: The administration of P2Y12 inhibitors plus aspirin in patients with acute non-cardioembolic minor ischaemic stroke or TIA within 24 hours from symptoms onset and for at least 21 days reduced the absolute risk of ischemic stroke recurrence by 2%, with an increased absolute risk of major bleeding by 0,4%, compared to aspirin alone. Considering the characteristics of different antiplatelet drugs and risks and benefits of each of them, antiplatelet therapy could be customized according to patient's characteristics and presentation severity.

Organizational system for chronic diseases: experimental project in Azienda Socio Sanitaria (ASL) 2 Liguria

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Background and Aim: Chronic diseases are constantly increasing and represent the 1st cause of death; heart failure, COPD and diabetes are the most at risk of adverse outcomes, such as increased health costs, frequency and duration of hospitalization, disability and lack of self-sufficiency¹. In the USA 3 million people >65 years live a condition of frailty; 85% are carriers of a disabling case and 60% of two². In Europe 87% of the population has at least a chronicity³. In Italy 40% of the >65 is suffering from a chronic pathology⁴ and 19% from two⁵. In ASL on 01.12.20 has

been started an innovative project of taking charge, called Point Operative Chronicity (P.O.C.), a coordination tool able to govern the path of discharge and the information of care. Aim of the study was to evaluate the model, reduce interruptions between different levels of care and to analyze the quality of services through the voice of the patient.

Materials and Methods: Analysis of the context through data relating to E.R. access and to ordinary and urgent admissions. Definition of integrated care processes T-H-T for a prompt resolution. Use of the PREMs questionnaire.

Results: From 01.01 to 15.05.21 were realized n.109 performance (for a total of 109 patients, 64 F and 45 M, average age of 76, and 22 deaths pre discharge). The service provided was very positive, almost in the fullness of the sample the perception was excellent.

Conclusions: The project, in addition to assigning the best path of care and promoting proximity assistance, promotes self-determination and the alliance of care between the different professional actors.

Influence of fascial and soft tissue treatment on respiratory efficiency and chest mobility

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Aim of the study: The aim of the study was to determine the influence of fascial and soft tissue treatment on respiratory efficiency and chest mobility of men and women between 22 and 54 years old.

Materials and Methods: Subjects between 22 and 54 y.o., vaccinated or healed from CoViD-19 and without any other pathologies were recruited. Fascial and soft tissues manual treatment was made on mesentery's roots, right pillar of diaphragm and ileocecal valve. Spirometry was executed before and after the treatment. Patients had been adequately instructed on how to make a spirometry.

Results: FEV1 showed an average increase of 2% meanwhile FEF2575 showed an average increase of 14.38% [from 0.26% to 31.76%].

Conclusions: Although FEV1's improvement is not indicative, there is an improvement in FEF2575 indicating better spontaneous return of the diaphragm to its resting state after the treatment. The treatment doesn't act on filling because we have seen that the increase in FEV1 is not significant but it affects emptying so it could be interesting to evaluate how patients are able, after the treatment, to better empty themselves and, since better emptying is a prerequisite for better filling, whether and how the residual functional capacity improves. It is as if with the treatment we had made patients learn to better empty themselves, getting therefore a more elastic return of the diaphragm in its relaxed position. There is a gain except for smokers who always remain hyperinflated emphasizing then how the share of emphysema is already measurable for the smoker.

Management of COPD patients in the Internal Medicine Operative Units

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Background and Aim: COPD is a disease with increasing frequency and relevant mortality. The therapeutic goal is to improve symptoms and prevent exacerbations, thus improving prognosis. Most patients with COPD exacerbations refer to Internal Medicine Operative Units (OUTs), which have a responsibility for the man-

agement of the disease. In this context, FADOI and GSK promoted a project focused on the identification of a standardized pathway for the COPD patient's management.

Methods: A Board of FADOI Experts coordinated the various steps of the process, from the workflow (survey, identification of OUTs etc.) to data analysis, identification of critical aspects and actions. The survey was conducted using a questionnaire covering organizational aspects, patient classification, pharmacologic therapy, patient discharge and follow-up.

Results: 126 UOTs took part to the survey; data were analysed and discussed by the Board to identify the main critical points from which some actions were suggested. In particular, the management of COPD patients with severe exacerbation is a challenge for Internal Medicine due to the multiplicity of factors affecting the outcome. Their management requires the application of precise paths for hospitalization, discharge and follow-up of COPD patients.

Conclusions: The objective of this project is the implementation of a model for management of COPD patients hospitalized in Internal Medicine. The survey permitted to identify aspects to which to apply ameliorative actions. The results should be interpreted carefully but may be worth of consideration.

3CHF score performance in predicting short-term events in a cohort of elderly subjects admitted for acute heart failure

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Background and Aim: 3CHF score predicts 1-year mortality in patients with heart failure considering age, therapies and both cardiac (NYHA class, atrial fibrillation, valvular disease, ejection fraction) and non-cardiac (anemia, complicated diabetes, hypertension, serum creatinine) comorbidities. We aimed to evaluate if 3CHF was able to predict in-hospital mortality in a population of elderly patients admitted in Internal Medicine.

Methods: For each patient, we collected age, sex, in-hospital death, admission BNP, eVFG and ferritin levels and calculated 3CHF-score according to its original definition. 3CHF accuracy in predicting in-hospital death was assessed with ROC curve analysis. The relationship between 3CHF and admission BNP, eVFG and ferritin was assessed with multiple regressions

Results: We obtained a cohort of 390 subjects (age: 85,4±7,47 years; females: 61,5%; 3CHF: 28,16±11,53), and we observed 37 (9,5%) in-hospital deaths. ROC curve analysis showed a non-significant association between 3CHF and in-hospital mortality (AUC: 0,476; 95%CI: 0,372-0,580; p=0,631). Higher 3CHF was significantly associated with higher admission BNP (p=0,0001), lower eVFG (p=0,0001) and lower ferritin levels (p=0,0001).

Conclusions: 3CHF is accurate in predicting long-term events in heart failure, however it was not effective in predicting in-hospital mortality in a cohort of elderly subjects admitted for acute heart failure. However, subjects with higher 3CHF showed, at admission, higher BNP levels, lower eVFG values and lower ferritin levels, suggestive of a more severe clinical presentation.

Acute respiratory distress syndrome in CoVID-19: correlations between clinical and histopathologic patterns

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Background and Aim: We conducted a multidisciplinary study to investigate the correlations between clinical-laboratory-imaging data and histopathologic pulmonary patterns in patients died from severe CoViD-19.

Materials and Methods: We analyzed lung autoptic tissue from consecutive CoViD-19 patients between February 29 and June 30, 2020. We considered three samples for each pulmonary lobe per patient. The pre-specified histopathological patterns were: exudative diffuse alveolar damage (DAD), proliferative DAD, organizing pneumonia, acute fibrinous organizing pneumonia, interstitial pneumonia, bronchopneumonia, arteriolar thrombi, intracapillary megakaryocytes, and areas of normal lung. Hierarchical cluster analysis was performed.

Results: Among 92 autopsies, 48 patients had complete clinical data. Four clusters were identified. Length-of-stay in ICU and in hospital ($p<0.0001$), days on mechanical ventilation ($p<0.0001$), days on positive pressure airway ($p<0.0001$), mean positive end-expiratory pressure PEEP ($p=0.007$), PEEP x days on mechanical ventilation ($p=0.003$), PEEP x days on positive pressure airway ($p=0.003$), worst serum albumin ($p=0.017$), interleukin 6 ($p=0.047$), and kidney SOFA ($p=0.001$) differed between clusters. The cluster characterized by prevalence of exudative-proliferative DAD and lung megakaryocytosis had the greater difference from the others.

Conclusions: Our research sheds light on the correlations between clinical-laboratory-imaging pictures and histopathologic findings, with clues on the impact of therapeutic strategies on lung tissues.

IL-6 and PCR, possible predictors of CoViD-19 pneumonia

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Background: Many CoViD-19-infected patients may die due to an over-response of the immune system (IS) characterized by the abnormal release of circulating cytokines. The SARS-CoV-2 virus binds to alveolar cells, activating the IS, with the release of numerous cytokines, including interleukin 6 (IL-6), which is responsible for the increase of the reactive C protein (PCR). PCR is useful for assessing the trend of acute inflammation in patients with CoViD-19 pneumonia, while the dosage of IL-6 is not routine.

Materials and Methods: In 35 consecutive patients coming from the Emergency Room and then admitted to our division, we dosed IL-6 and PCR at the entrance (T0) and after 5 days (T5), to understand if the combination of the 2 values could be more predictive of the course of the disease. The degree of clinical stability was assessed using the Modified Early Warning Score (Mews).

Results: At T0 the subjects with MEWS score 0 were 9, score 1 were 11, score 2 were 12, 1 score 3, 1 score 4. The average value of IL-6 of the subjects to T0 was 52.6 (range 16-150), with higher values in subjects with higher MEWS, from score 0 to 3 respectively: 16.9, 46.8, 76.4, 150.0. Values of IL-6 at T5 remain increasing as the MEWS score increases, with average values=24.3 for MEWS 0-2 and 138.7 for MEWS 3-5 ($p=0.07$). Similar trends presented PCR values: with average values of 41.0 for MEWS 0-2 and 144.4 for MEWS 3-5 ($p<0.05$).

Conclusions: Preliminary data from our study, limited by the small sample, suggest that high values of IL-6 and PCR are present in patients with more severe clinical scores, and should be confirmed by larger-scale studies.



26
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A blue man standing

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Background: Platypnea-orthodeoxia syndrome (POS) is an uncommon disorder characterized by dyspnea and hypoxemia occurring when the patient is sitting or standing and disappearing when recumbent. Atrial septal defects (ASD) are frequent cause, but both an anatomic and a functional component are required. Nowadays, no more than 50 cases have been reported in the literature.

Presentation of the case: A 85-year-old man was admitted to the Emergency Room for respiratory distress. Physical examination, blood test and chest radiography ruled out pneumonia, pulmonary embolism, acute heart failure. The electrocardiogram showed atrial flutter with spontaneous reversal to sinus rhythm. Despite the high flow oxygen therapy, the patient presented a positional dyspnea which led him to a peripheral oxygen saturation under 88% when sitting or standing, increased to 92% when lying supine. He underwent an echocardiogram that showed a dilatation of the aortic root and of the ascending aorta and an aneurism of the interatrial septum with right-to-left shunt at the subsequent bubble study. The ASD was confirmed by a transesophageal echocardiography. A Septal Occluder device was successfully placed with a complete remission of the patient's symptoms, who was discharged without oxygen therapy.

Conclusions: Our patient had an ASD unknown until the hospitalization. The interatrial defect was probably triggered by the increased diameter of the ascending aorta and of the aortic root and by the new onset of atrial flutter. In the diagnostic work-up of unexplained dyspnea an intracardiac shunt must be ruled out.

Legal complaint against physicians due to CoViD-19

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Background: Italy is one of the few countries globally where physicians can be criminally prosecuted.

Results: The total of pending civil sector files in 2020 is rather stable however, it has suffered a net increase in the Supreme Court (+12%), an increase in the Court (+3.1%) and in the Court of Appeal (+1.1%) mainly due to CoViD-19 (C19) restrictions. Many patients or patients' families have sued physician because of the deaths due to C19. ISTAT has published the information reported by physicians in 4,942 death cards of subjects diagnosed with a positive C19 test (15.6% of the total deaths reported to the ISS Integrated Surveillance System). In the cards of deaths are certified, in addition to C19, those conditions and diseases that have played a role in determining death.

Conclusions: Law No. 24/2017 states that an HP who commits an avoidable technical error can be considered not guilty if full compliance with proper national guidelines/protocols is proven and it is not a case of "gross negligence" (a term that is not explicitly defined by any law). In 2020 C19 pandemic no national effective guidelines/protocols were given so HPs have no official documents to refer to in order to properly treat the patients and this has led to a significant increase in cases evolving into criminal and civil proceedings for medical malpractice. A proper defensive

strategy is essential both for the HP and the Hospital/Clinic to avoid final conviction and, in case of evident malpractice, make recourse to the help of a mediator is highly recommendable rather than taking legal action or trying to win a trial.

An atypical case of AL amyloidosis

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Preconditions: Cardiac arrhythmia, heart failure with reduced EF and nephrosic syndrome are typical signs of amyloidosis in the elderly patient.

Description of the case: A 74-year-old man has been suffering from palpitations, dyspnea and worsening of kidney function. In anamnesis: hypertension, severe OSAS, chronic renal failure, hypothyroidism, previous vocal cord cancer and dyslipidemia. On physical examination the patient presents mild dyspnea, palpitations and declining edema in the lower limbs. Blood chemistry tests are normal with the exception of a significant increase in creatinine, BUN, pro-BNP, troponin and PCR. The ECG shows high-responsive atrial fibrillation rhythm while the color-doppler echocardiogram shows parietal hypertrophy and a slightly reduced systolic function (45%). The bed-side abdominal ultrasound shows a picture of chronic kidney disease and 24h proteinuria is performed which is significant. Diagnostic analysis are then performed with serum and urinary immunofixation which shows an excess of Kappa chains. In addition, anti-mitochondria anti-nucleus and anti-DNA antibodies are measured, which are negative. Periumbilical biopsy is performed and it shows the classic green birefringence in polarized light to Congo Red staining, confirming the presence of Amyloid AL. Support therapy with diuretics is set.

Conclusions: The presence of typical symptoms, altered blood and instrumental tests and advanced age must put the suspicion of AL amyloidosis, which is diagnosed with certainty with biopsy and histological examination of target organs.

Potenziale ruolo della Radiofrequency Echographic Multi Spectrometry nella valutazione dello stato osseo in donne anziane con diabete di tipo 2

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Background e scopo dello studio: I pazienti con DMT2 presentano un rischio di frattura aumentato con una densità minerale ossea (BMD) più elevata o normale. La misurazione della BMD con DXA è il "gold standard" per la diagnosi di osteoporosi. È ora disponibile un ecografo che utilizza una tecnologia basata sul metodo REMS. Scopo dello studio è stato quello di valutare lo stato osseo di una coorte di donne con DMT2 utilizzando la tradizionale metodica DXA e la metodica REMS.

Materiali e Metodi: In 90 donne (70,5±7,6aa) con DMT2 ed in 90 controlli, abbiamo misurato la BMD a livello lombare (BMD-LS) e femorale con metodica DXA e con tecnica REMS.

Risultati: Abbiamo valutato i valori di BMD T-score acquisiti a livello del rachide lombare e femore sia con DXA che con REMS ed i valori di T-score BMD con REMS sono risultati significativamente ridotti sia a livello del rachide lombare (p<0.01) che a livello del collo e del femore totale (p<0.01). Inoltre, la percentuale di donne

con DMT2 classificate come “osteoporotiche”, sulla base della BMD valutata con REMS era nettamente superiore rispetto a quelle classificate con DXA (47,0% vs 28,0%, rispettivamente). Le donne con DMT2 con fratture da fragilità presentavano valori inferiori di BMD-LS sia con DXA che con REMS rispetto alle pazienti senza fratture; tuttavia, la differenza risultava significativa ($p < 0,05$) solo per BMD-LS valutata con REMS.

Conclusioni: I nostri dati confermano la validità della REMS nella valutazione della BMD per la diagnosi di osteopatia diabetica; pertanto la REMS può essere proposta come alternativa alla DXA per la valutazione del rischio di frattura nelle pazienti con DMT2.

Allopurinol hypersensitivity syndrome: a case report

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Background: Allopurinol represented the leading urate-lowering treatment for decades; it continues to be widely prescribed as a first line therapy on the basis of its large availability and low cost. Nevertheless, allopurinol may be related to serious, although rare, adverse reactions. Allopurinol hypersensitivity (AH) is a clinical condition characterized by cutaneous reactions, fever and multi-organ involvement.

Description of the case: A 87-year-old Caucasian male was hospitalized for maculopapular skin rash over the whole body, associated with worsening renal function (serum creatinine 1.9 mg/dl) and acute liver failure (AST 3731 U/l; ALT 2332 U/l; PT 2.16 sec). Patient's medical history included chronic lymphocytic leukemia, heart failure and diabetes mellitus type II. Allopurinol therapy 300 mg/die had been started approximately 6 weeks earlier for asymptomatic hyperuricaemia. During hospitalization allopurinol assumption was immediately discontinued, we started a supportive therapy with i.v. fluids and corticosteroids in association with antihistamines. Patient's conditions progressively improved, with complete resolution of the clinical scenario.

Conclusions: Allopurinol still represents an effective and largely used therapy for hyperuricaemia, nevertheless this drug can lead to life-threatening adverse reactions with an incidence of 0.4%. We want to emphasize how important it is to identify risk factors for AH (ethnicity, CKD, older age) and to establish a correct starting/maintenance dose, also focusing on possible interactions with concomitant medications.

Impegno renale e sclerosi sistemica.

Descrizione di un caso clinico

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Background e Obiettivi: La sclerosi sistemica (SSc) è una malattia autoimmune sistemica caratterizzata da una microangiopatia e fibrosi diffusa. Descriviamo il caso clinico di un paziente di sesso maschile che ha presentato un fenomeno di Raynaud necrotizzante alle mani ed impegno renale con riscontro casuale di proteinuria pari a 2.6 g/24 h. La biopsia renale che ha evidenziato un coinvolgimento vascolare e glomerulare con infiltrati di linfociti CD20+.

Descrizione del caso clinico: Un paziente di anni 61 presentava edemi alle mani e fenomeno di Raynaud trifasico complicato da necrosi digitale. Esami ematochimici: Anticorpi Antinucleo (ANA) 1:2560 cg; Anticorpi anticentromero (ACA) positività; IgA anti cardiolipina >20. L'esame capillaroscopico periungueale ha evidenziato un quadro clinico compatibile con un “pattern active” di SSc. La biopsia renale ha evidenziato un impegno glomerulare e vascolare. Immunofluorescenza: positività per C3 (+++) a livello vascolare e capsulare. Immunistoichimica: numerosi elementi CD20+ e qualche elemento CD3+.

Conclusioni: I linfociti B sono coinvolti nella patogenesi della SSc

per la produzione di autoanticorpi e di collagene con vasocostrizione. Nel nostro paziente è avvenuta un'iperattivazione dei linfociti B e si è verificata una “overexpression” di linfociti CD20+. La positività di IgA aCL è stata responsabile dell'impegno vascolare renale e glomerulare in corso di SSc. Il paziente ha esordito con fenomeno di Raynaud ed impegno glomerulare, mediato dai B linfociti permettendo di trattare il paziente con rituximab.

A “hoarse” anemia: a case report

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Description of the case: A 48-year-old female with a previous diagnosis of iron deficiency anemia was admitted complaining since 2 months worsening asthenia and metrorrhagia. On admission, she presented asthenia and hoarseness; her vital signs were normal. A complete blood count showed WBC 6380/mm³ (Neu 66.8%, Ly 23.3%), Hb 5.7 g/dL, RET 1.3% and Plt 246000/mm³. Serum chemistry showed LDH 206 IU/L, PCR 0.5 mg/dL, sideraemia 12 mcg/ml, ferritin 4 ng/ml, vitB12 206 pg/ml, folic acid 4.6 ng/ml, TSH 102.38 mcIU/ml, fT3 2.32 pg/ml, fT4 9.39 ng/dl. The autoimmunity showed positivity of AFI (142 IU/ml), APCA (>169 U/ml), AbTg (94.1 U/ml), AbTPO (>1300 U/ml) and negativity of AGA (IgA and IgG), tTG, EMA. The instrumental examination showed atrophic gastritis, chronic thyroiditis and uterine fibromatosis. It was diagnosed Type 3B autoimmune polyendocrine syndrome (APS-3B) according to classification of APS modified from Neufeld. A blood transfusion was therefore carried out for the correction of anemia, replacement therapy with levothyroxine 25 mcg/day and integration for iron and folate deficiency began.

Conclusions: APS-3 is defined by the presence of an autoimmune thyroid disease and another autoimmune illness, excluding Addison's disease; the pathogenesis is unclear. This is a frequent combination but still misdiagnosed. We present a clinical case of APS-3B with anaemia and Hashimoto disease. The case reflects the successful application of multidimensional anemia assessment; metrorrhagia turns out to be an important confusing factor.

Stroke and pulmonary embolism in moderate CoVID-19

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Background: Venous thromboembolism, arterial thrombosis and thrombotic microangiopathy substantially contribute to increased morbidity and mortality in CoVID-19. We report a case of 56-year old man that presented with stroke and was found to have CoVID-19 pneumonia complicated by pulmonary embolism (PE).

Description of the case: A 55-year-old man with history of hypertension presented to the emergency department after a transient loss of consciousness. He was found to have left lateral hemianopia and lower right quadrant anopsia and head CT confirmed bilateral stroke in the posterior cerebral artery territory. MR angiography excluded atherosclerosis/dissection of the vertebral and basilar artery and a positive nasopharyngeal swab PCR test revealed SARS-CoV-2 infection. The patient was admitted and ASA 100 mg and enoxaparin 40 mg per day were started. He experienced dry cough and fever and 10 days after admission presented atypical chest pain. CT Angiography revealed multiple confined ground glass opacities with segmental bilateral PE. Therapeutic dose of enoxaparin was started and after 5 days switched to edoxaban 60 mg per day. The patient progressively recovered and a complete work up excluded patent foramen ovale and any other cause predisposing to combined presence of venous and arterial thrombosis.

Conclusions: CoVID-19 has presented many diagnostic challenges in patients with neurologic and respiratory findings: thromboembolic disease may even be the initial or unique presentation. The early recognition of these phenotypes of the disease play a dramatic role in the CoVID-19 management.

An unusual manifestation of EBV infection in an immunocompetent patient

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Background: Primary EBV (Epstein-Barr virus) infections are frequent but develop mostly subclinical especially in immunocompetent patients.

Description of the case: A 57-year-old man was admitted to Internal Medicine Department because of persistent chest pressure worsen with deep breath and radiating to the jugulum begun a month before that had been initially misdiagnosed as bacterial pneumonia. Blood tests showed elevated liver enzymes, D-dimer, inflammation markers and mild respiratory failure. A CT scan showed a left side interstitial pneumonia with ground glass opacity and pleural effusion associated to mild splenomegaly. We performed a thoracentesis and the liquid was exudate with mononuclear cells infiltration. Serial ECG revealed ST-segment evolution compatible with acute pericarditis associated to partially organized pericardial effusion without cardiac tamponade. Main infective and autoimmune causes of pleuropericarditis were ruled out and serology was compatible with a late primary infection or reactivation of EBV (VCA IgM, VCA IgG and EBNA-1 IgG positivity). A combination therapy with colchicine plus NSAIDs was started and a symptom and inflammation improvement was observed. Pleural effusion showed a slowly resolving course.

Conclusions: EBV infection is common in the general population and may show different clinical manifestations. Sporadic cases of acute pleuro-pericarditis with EBV infection have been described in the medical literature. Serological profile is helpful for EBV infection dating in immunocompetent patients.

Diffuse liver infiltration of small cell lung cancer causing acute liver failure

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Background: ALF (acute liver failure) is a rapid deterioration of liver function without underlying chronic liver disease and it rarely occurs as a result of metastatic tumor involvement.

Description of the case: A 59 yr old man was admitted to Internal Medicine Department because of weakness and abdominal distension occurred over a week period. He was an ex-smoker with *no significant past medical history or significant alcohol intake*. Laboratory test revealed severe hyponatremia associated to liver damage and altered liver function tests. A wide spectrum of infective, toxic and autoimmune causes of ALF was ruled out. Ultrasound, CT scan and MRI with hepatospecific contrast agent showed hepatomegaly, ascites and multiple low-density hypovascular hepatic areas with no hypointensity on hepatobiliary phase associated to mediastinal lymphadenopathies. *Small cell lung carcinoma* with diffuse liver metastasis was diagnosed with mediastinal lymphadenopathies EBUS-TBNA and liver biopsy. The patient's clinical course deteriorated developing hepatic encephalopathy (MELD-Na 30) and multiorgan failure with no indications for chemotherapy or liver transplantation.

Conclusions: Diffuse metastatic liver infiltration is an unusual pattern of liver metastasis but it should be considered in the differential diagnosis of ALF of unknown etiology especially in patients with known oncological history. Neoplastic diffuse liver involvement can be difficult to be diagnosed because often missed by imaging techniques and therefore a liver biopsy may be indicated to clinch the diagnosis and guide treatment.

Severe hypertransaminasemia in a pregnant woman with SARS-CoV-2 infection

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Description of the case: A 38-year-old patient of Moroccan ethnicity, who had vaginally delivered a healthy baby girl in the obstetric ward the previous night, was transferred to the CoViD Hub of Varese Hospital due to the onset of nausea and emesis and severe hypertransaminasemia. The patient was known to be positive for SARS-CoV-2 infection but was not taking any medications at home. Physical examination was normal, except for scleral icterus. Laboratory tests were significant for bilirubin 2.52 mg/dl, AST 2729 U/L, ALT 513 U/L, LDH>1800 U/L; we also found mild thrombocytopenia (104,000/L), INR 1.24, d-dimer>9000 ng/ml, prolonged prothrombin time, and reduced fibrinogen levels. Serological tests were negative for hepatitis A, B, C, and E, EBV, CMV, HSV type 1 and 2, and HIV. Autoimmune or toxic hepatitis was excluded. No teardrop-shaped erythrocytes were visualized. No vaginal bleeding was found. HRCT showed diffuse multiple bilateral consolidations, and abdomen CT excluded portal thrombosis. Infusive fluid and prophylactic therapy with sodium enoxaparin were started. During hospitalization, the detection of SARS-CoV-2 RNA in the nasopharynx sample was persistently positive. On the tenth day post-hospitalization, the patient was discharged with normalization of liver values and clinical well-being.

Conclusions: Severe acute hepatitis has been reported in patients with severe CoViD-19, but it is rare in pregnant women with asymptomatic SARS-CoV-2 infection without other pregnancy-related disorders, as in the present case.

Safety profile of Pfizer-BioNTech CoViD-19 vaccine in patients with rheumatic disease: preliminary assessment

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Background: On December 11, 2020, the Food and Drug Administration issued an Emergency authorization for Pfizer-BioNTech CoViD-19 vaccine to prevent CoViD-19 infection. The primary end point of this study was the safety of each administered dose in patients with rheumatic diseases (RDs).

Methods: In this observational study, we interviewed by phone 47 patients with RDs and 50 healthy subjects receiving the Pfizer-BioNTech vaccine (0.3 m.l. i.m. in two doses 21 days apart, time 0 and 3 weeks).

Results: As of 30 March 2021, 97 subjects (47 patients and 50 healthy control subjects) were interviewed. Among the whole population, 59 subjects (28 patients and 25 healthy subjects) complained of adverse events after the two doses of vaccine, with symptoms onset occurring within 1 day of vaccination. All adverse events (100%) were classified as non-serious and included: injection pain (37) fatigue (10), headache (32) fever (7), and paresthesia (4). After 21 days, 22 patients and 34 healthy subjects received the second dose of vaccine. Forty (12 patients and 34 subjects) of them (88%) reported adverse events, again categorized as non-serious. Specifically, injection site pain (30), fatigue (35), headache (b35), fever (34), paresthesia (3), cutaneous vasculitis (2), itchy and scratchy throat (2), diarrhea (8), lymph node enlargement (1) were recorded. No differences were noted between patients with RDs and healthy subjects in terms of adverse events.

Conclusions: This preliminary study shows that Pfizer-BioNTech CoViD-19 vaccine is as safe in patients with RDs as in healthy subjects.

Sweet syndrome induced by adenovirus vector CoViD-19 vaccine

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Introduction: Sweet syndrome (SS) is a rare skin disease, characterized by rapid onset of plaques or nodules with extensive infiltration of neutrophils into epidermis and dermis. Three main types of SS are known: classical or idiopathic, malignancy-associated, drug-induced.

Case report: A 69 yo woman was admitted because of recent pyrexia, painful and asymmetric erythematous plaques on legs and buttock, painful wrist and elbow tenderness for 6 days. History: hypertension and dyslipidemia. Eighteen days before she received Vaxzevria first dose. Physical examination revealed normal findings except of skin lesions. Biohumoral exams showed increased CRP, normal GB count; negative SARS-CoV-2 test, as well as HBV, HCV, CMV, EBV, Quantiferon, ANA, ANCA, LAC. C3 and C4 were normal. Blood and skin cultures were negative. Chest X-ray, ECG, ecocardiography, EGDS, colonoscopy, PETTC were all normal. A broad spectrum antibiotic and anti-inflammatory therapy was initially set (vasculitis vs staphylococcus infection). Skin biopsy was performed: it showed a dense interstitial neutrophilic infiltrate of the dermis, according with SS. Corticosteroid therapy caused a prompt improvement of skin lesions.

Conclusions: A classical SS induced by SARS-CoV-2 vaccine was diagnosed at the discharge. A vaccine-associated SS is well known: some post CoVid and post mRNA SARS-CoV-2 vaccine SS are described in literature. This is probably the first case of a SS induced by SARS-CoV-2 adenovirus vaccine. An alert was sent to AIFA.

Sindrome di Gitelman

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Descrizione del caso clinico: Dinanzi ad uno squilibrio idroelettrolitico, è sempre difficile stabilire la vera causa, soprattutto quando sussistono interferenze farmacologiche ma la clinica, le linee guida e il meccanismo d'azione dei farmaci aiutano la soluzione del caso. Donna di 35 anni, veniva ricoverata per ipopotassiemia, iperglicemia e lesioni epatiche. Recente perdita, diabete mellito tipo 2 in trattamento con metformina, incretine e glifozine. La ipopotassiemia era già nota alla paziente dal circa due anni. Attività cardiaca ritmica, PA: 90/60. Fr: 16 a.m., alvo stitico. EGA: alcalosi con alcalemia metabolica e acidosi lattica. Sodio P 134 mEq/L potassio P 1.9 mEq/L cloro P 86.5 mEq/L, magnesio P 1.4 mg/dl, fosforo 2.5 mg/dl, calcio 8.07 mg/dl, cloro U 44 mEq/L, potassio U 26.3, sodio U: 36. Renina: 400 microg/ml, aldosterone: 241,0 pg/ml. RM addome con mdc: adenomi epatici da terapia estrogenica che la paziente assumeva da 8 anni, surreni aumentati di volume. La sintomatologia mostrava una ciclicità pari alla sospensione terapeutica dell'anticoncezionale per l'azione antiminerale corticoide del progestinico. La metformina era stata la causa dell'acidosi lattica così come l'uso di glicosurico aveva peggiorato la ipovolemia.

Conclusioni: Ipotassiemia da Sindrome di Gitelman.

Is it possible to predict early the outcome of CoVID-19 patients? Prognostic value of lactate

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Aim of the study: Aim of this study was to identify an early predictor of poor outcomes in CoVID-19 pneumonia and, in particular, evaluate the role of lactate.

Materials and Methods: An observational retrospective study was performed by analyzing clinical, laboratory and instrumental features from 155 hospitalized patients for CoVID-19 pneumonia in our General Medicine and Semi-intensive Care Units.

Results: Lactate was significantly higher in patients transferred to ICU or died ($p < 0.001$), in the ones with more severe lung impairment ($p = 0.042$), in patients treated by non-invasive ventilation ($p < 0.001$) and, in particular, lactate had a positive correlation with PEEP ($r = 0.436$, $p = 0.001$). Moreover lactate had a positive correlation with Troponin-I ($r = 0.229$, $p = 0.011$), creatinine ($r = 0.387$, $p < 0.001$), and sO₂ on blood gas analysis ($r = -0.238$, $p = 0.008$). In patients with higher LDH values (cut-off 1.8 mEq/L) inflammation biomarkers were worst (higher ESR, $p = 0.031$; higher

CRP, $p = 0.011$; higher serum proteins in alpha-1/beta-1 electrophoretic bands, $p = 0.025$ / $p = 0.027$); and arterial blood gas analysis was worst (lower pO₂, $p = 0.010$; lower sO₂, $p = 0.001$).

Conclusions: Therefore, elevated lactate level at admission is a risk factor for the severity and mortality of CoVID-19.

Don't awake a sleeping HBV

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Background: Ibrutinib is a tyrosine kinase inhibitor used to treat chronic lymphocytic leukemia (CLL). HBV re-activation during or after ibrutinib therapy may rarely occur.

Description of the case: A 74-year-old woman was admitted for jaundice, ascites, peripheral edema and asthenia gradually appeared in 3 weeks. In her past medical history a CLL treated with ibrutinib for 4 months was present. The drug was stopped 2 months earlier for inappropriate sinus tachycardia. She was assuming statin for hyperlipidaemia and denied any other medical issue. Lab tests showed acute liver injury: ALT 1381 U/L, AST 1459 U/L, total bilirubin 24 mg/dl, direct bilirubin 22 mg/dl, gGT transferase 171 U/L, ALP 165 U/L. Abdominal CT scan showed normal hepatic parenchyma and biliary tract, diffuse peritoneal fluid, lymph nodes enlargement and slight splenomegaly. Further lab tests were positive for HBsAg, HBcIgM, HbeAg, HBV-DNA copies $18,5 \cdot 10^6$ U/L. Ascites was consistent for transudate. Entecavir was started. Three weeks later at discharge, jaundice, edema and ascites were noticeably improved, transaminases and bilirubin halved. Two months later at our outpatient ambulatory she referred well-being, no jaundice neither edema were visible. Lab tests showed all liver enzymes in normal range values. A HBV-DNA of 354 IU/L was still present.

Conclusions: Ibrutinib could reactivate an unknown HBV infection and lead to a life threatening liver damage. Evaluation of hepatic blood tests for those who receive or received the drug could intercept an acute severe reactivation.

CoVID-free ground glass pattern

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Background: Interstitial lung disease (ILD) is an umbrella term used for a large group of diseases that cause scarring of the lung.

Description of the case: We describe the case of a 57-year-old woman who has been hospitalized for dyspnea, fever and dry cough. Objectively she presented late inspiratory bibasilar crackles, periungual erythema, hyperkeratosis of the fingers and oral ulcers. Baseline complete blood count, liver and kidney function, as well as creatine kinase and lactate dehydrogenase were normal. The chest-X-ray showed a diffuse reticulonodular pattern and high resolution computed tomography confirmed diffuse ground glass opacities. Four nasal and oropharyngeal swabs for SARS-CoV-2 molecular detection, bacterial and viral serology and blood cultures were all negative. Antinuclear antibodies and myositis specific autoantibodies were negative, excepted for the melanoma differentiation associated gene 5 antibodies (MDA5). The diagnosis was of MDA5+ amyopathic dermatomyositis with ILD.

Conclusions: Dermatomyositis (DM) and polymyositis (PM) are classified as idiopathic inflammatory myopathies. Among patients with DM or PM, interstitial lung disease is a major cause of morbidity and mortality. Anti MDA5 antibodies are often associated with a rapidly progressive course of ILD and cutaneous vasculitis. Skin lesions include digital and palmar papules and ulcerations, alopecia and oral ulcers. Anti MDA5 disease can be present in the absence of muscle enzyme abnormalities or other autoantibodies and portends a worse prognosis.

A big surprise: Mycobacterium avium complex infection of abdominal wall

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Background: Mycobacterium avium complex (MAC) organism are ubiquitous in the environment and typical reservoirs have been identified soil, water as well domestic and wild animals. There are not documented cases of horizontal transmission of MAC.

Description of the case: A 45-year-old man with non-significant medical history came to our attention with increasing pain present for two months on the right side of his abdomen: in suspicion of appendicitis he performed a CT scan of the abdomen with evidence of appendicular abscess. Despite undergoing appendectomy the pain persisted. Lab tests were normal and histological exams were not significant. Four months after surgery he was admitted again with persistent abdominal pain. Abdominal CT revealed a large abscess in the abdominal wall. The abscess infiltrated the ileopsoas muscle and engulfed the cecum. The patient underwent an enlarged right hemicolectomy, but the histological examination showed chronic nonspecific inflammation and the microbiological tests were negative. We repeated multiple biopsies and culture tests without obtaining a diagnosis. It was not until nine months after the first hospital admission that a diagnosis was made: MAC infection of abdominal wall in immunocompetent patient.

Conclusions: Abscess in the abdominal wall by MAC is a poorly described entity. Most cases in medical literature occur in individuals with primary or acquired immunodeficiency, but it is even less common in patients without immunocompromised conditions. The diagnosis and treatment of abdominal MAC infection is complex and challenging.

Spontaneous iliopsoas hematoma: a warning for CoViD-19

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Background: Patients with CoViD-19 are at high risk of thromboembolic events due to hemostatic changes directly related to the SARS-CoV-2 infection or to the consequence of cytokine storm. Anticoagulation with heparin is recommended to reduce the thrombotic risk. Spontaneous iliopsoas hematoma (IPH) is a potentially life-threatening complication of anticoagulation therapy described in CoViD-19 patients.

Materials and Methods: We report two cases of association with IPH and SARS-CoV-2 pneumonia treated with heparin.

Results: Over a 5-month period (November 2020-April 2021) 252 subjects with SARS-CoV-2 infection were admitted to our CoViD hospital. We found two cases of spontaneous IPH during the clinical course of CoViD-19. Diagnosis of IPH was made by CT angiogram. Coagulation parameters and platelet count were normal. One patient (an 83-year-old woman) was on prophylactic low weight molecular heparin (LWMH). The other patient (a 79-year-old man) received a therapeutic dosage with LWMH for pulmonary thrombosis and died, after urgent transarterial embolization, because of hemorrhagic hypovolemic shock.

Conclusions: Although case reports are scarce for conclusion, our two cases, in addition to previous reports, suggest that CoViD-19 patients treated with anticoagulants are at risk of IPH. Given the indications to prescribe anticoagulation in CoViD-19 and the lack of solid evidences on the optimal dose and duration, it is important to be aware of IPH as a potentially serious complication. Rapid diagnosis and timely intervention are crucial to ensure good patient outcomes.

Tocilizumab treatment in CoViD-19 ventilated patients: a single center experience

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Background: In severe coronavirus disease 19 (CoViD-19) high levels of IL-6 are associated with increased mortality. Some trials showed that Tocilizumab (TCZ), a monoclonal antibody against IL-6, is associated with some clinical improvement in CoViD-19 patients requiring oxygen or ventilatory support. In this study we report our experience with TCZ in terms of clinical outcomes.

Materials and Methods: 20 patients with severe CoViD-19 ad-

mitted to our hospital from March to April 2021 needing non-invasive ventilatory (NIV) support were included in this study. A single dose of TCZ was administered within 24h from start of NIV (as IDSA guidelines). All patients had C-reactive protein >7,5mg/dL, no absolute contraindication to TCZ and received standard treatment (steroids, LMWH).

Data collected included demographic information, comorbidities, laboratory tests and ventilator-free days and mortality at day 28.

Results: In our study population mean age was 65 years; the average CoViD-GRAM score at presentation was 157. Hypertension was the main comorbidity (67% of patients). The average length of stay was 20days. All inflammatory markers showed improvement after TCZ and 18 patients (90%) showed also significant improvement in respiratory function and were discharged home. In these patients the median number of ventilator-free days at day 28 was 18. 3 patients required invasive ventilation and 1 of them died.

Conclusions: Our experience showed that TCZ is associated with marked reduction of inflammatory levels and modest improvement in respiratory function, although not in all patients.

Sacubitril valsartan: dati preliminari di efficacia in una popolazione di pazienti complessi

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Premesse: Efficacia sacubitril valsartan in pz complessi.

Materiali e Metodi: Popolazione di 28 pz in trattamento con sacubitril valsartan, da giugno 2019 a giugno 2021. 18 uomini e 10 donne, età media 79 aa, con scompenso cardiaco: classe II NYHA 7 pz (25%), classe III 18 pz (64%), classe IV 3 pz (11%). Tutti con FE 20-32% e copatologia: ipertensione arteriosa 21 casi (75%), diabete mellito 9 (32%), fibrillazione atriale 9 (32%), cardiopatia ischemica 12 (43%), BPCO 12 (43%), altre (70%).

Risultati: I decessi sono stati 9 (32%), 6 per infezione da CoViD e 3 per insufficienza respiratoria acuta di altra natura. Posologia del sacubitril valsartan ottimizzata in 14 (50%) pz; in 14 (50%) solo dosaggio intermedio per ipotensione sintomatica dopo adeguamento dei diuretici e beta bloccanti. E' stato sospeso in 5 (17%) pz, tutti con cardiopatia ischemica (recente sindrome coronarica) e diabete mellito complicato (nefropatia), per rapida recidiva di scompenso acuto, grave ipotensione sintomatica con accesso in PS, peggioramento della cenestesi. Nei restanti 23 pazienti osservata una positiva risposta sui sintomi e qualità di vita: miglioramento della dispnea (96%) e dell'astenia (87%), maggior benessere (96%). Non riospedalizzazione per scompenso o visite urgenti, un contatto telefonico. La funzione renale si è mantenuta sostanzialmente stabile, non iperkaliemia significativa. Ai controlli ecocardio, in tutti i casi documentato miglioramento della FE, in 7 (25%) normalizzata.

Conclusioni: Si dimostra efficacia in pz complessi, tranne se ischemici recenti e con diabete complicato.

Nuove traiettorie organizzative in Medicina Interna

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Premesse e Scopo dello studio: L'attuale momento epidemiologico fotografa una popolazione affetta da comorbidità con fabbisogno assistenziale e terapeutico significativo; complessità clinica ed assistenziale hanno proposto l'esigenza di una survey che rilevasse con indicatori validati il reale fabbisogno di questi pazienti

Materiali e Metodi: Sono state individuate 5 UU.OO. di Medicina Interna: Osp. Luigi Sacco a Milano - Osp. Maggiore Policlinico e Niguarda a Milano - Osp. "Salvini" di Garbagnate Milanese - Osp. Policlinico San Matteo a Pavia.

Risultati: I dati raccolti in due settimane consecutive (sett-ott. 2020 -188 pz.) confermano: un pz. comorbido, in politerapia, con patologie gravi ed acute, non autonomo. Score validati come il MEWS e l'IDA lo descrivono: età media 75 aa, con 6 o più farmaci, instabilità clinica (MIEWS ≥2) e per circa l'8% di essi necessità di setting di cura più complessi; l'IDA score poi dichiara che oltre

il 47% di questi stessi pazienti ha un cut off inferiore a 19 quindi con carico assistenziale elevato.

Conclusioni: La Medicina Interna dovrà affrancarsi da stereotipi e intraprendere una trasformazione che la vede proiettata verso un modello avanzato con possibilità di cure da una parte più coerenti alla complessità ed instabilità clinica di pz. cronici e fragili. UU.OO. di Medicina Interna con letti monitorati dedicati all'instabilità clinica ed efficaci processi di presa in carico appaiono ormai esigenze organizzative indifferibili che trovano negli Specialisti Internisti esperienza e disponibilità nella proposta di traiettorie organizzative nuove.

COMETA project: the meeting of clinical practice and metabolomic in the fight against CoViD

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Background and Aim: The metabolomic profile is a valuable tool in biomedicine. In the framework of the COMETA project, metabolomic analyses are used to identify specific biochemical alterations of the CoViD-19 disease, of its severity and evolution over time.

Materials and Methods: Four different groups of subjects are enrolled in the study: 1) CoViD-19 positive patients at different stages of the disease; 2) CoViD-19 recovered patients; 3) patients with CoViD-19-like symptoms but with negative nasopharyngeal swab; 4) control subjects. Metabolomic analyses are conducted on blood plasma samples using proton nuclear magnetic resonance (¹H NMR) spectroscopy. The ¹H NMR spectra contain information on the number and relative concentration of the most abundant metabolites in each sample (>1 μM) and represent the metabolic fingerprint of each patient.

Results: ¹H NMR spectra on a first set of approximately 400 plasma samples have been acquired allowing us to measure 25 metabolites among those involved in the main biochemical pathways (glucose metabolism, glycolysis and Krebs cycle, ketone bodies, amino acids) as well as 114 parameters related to plasmatic lipoproteins.

Conclusions: Based on previous studies by some of us and considering the high number of patients be enrolled in COMETA, we expect an excellent discrimination and characterization of the pathology in its various clinical manifestations. Long-term effects of the disease will be evaluated via a follow-up at 3-6 months from disease onset.

Diagnosi differenziale di ipoglicemia: non dimentichiamoci delle malattie rare

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Premesse: La sindrome insulinica autoimmune o sindrome di Hirata è una sindrome rara caratterizzata da episodi ipoglicemici iperinsulinemici causati da elevate concentrazioni sieriche di autoanticorpi anti-insulina (IAA).

Descrizione del caso clinico: Donna di 55 anni in apparente buona salute giungeva in PS per malessere generale e crisi di fame con tremori e sudorazione per i quali aveva incrementato l'introito alimentare da una settimana. Alla visita veniva riscontrata un'ipoglicemia grave che veniva corretta con soluzione glucosata endovena. Si ricoverava per accertamenti: agli esami ematochimici si riscontrava iperinsulinemia, aumento del C-peptide ed ipocortisolemia. Nel sospetto di insulinoma si eseguiva PET/TC con Gallio che non evidenziava aree di ipercaptazione significative. Nel sospetto di una sindrome di Hirata si dosavano gli IAA che risultavano positivi. Il test da carico di glucosio non veniva portato a termine per scarso patrimonio venoso. Alla luce del quadro clinico si iniziava terapia con prednisone 25 mg e si introduceva una dieta a basso contenuto di zuccheri semplici salvo in caso di ipoglicemia.

ma. Si dimetteva quindi la paziente con indicazione a monitoraggio glicemico e terapia steroidea con successivo programma di follow up.

Conclusioni: La sindrome di Hirata è una patologia sempre più diagnosticata non più limitata al solo continente asiatico e deve essere considerata nella diagnosi differenziale delle ipoglicemie. Il gold standard diagnostico è il dosaggio degli IAA. Non esistono trial clinici né linee guida sulla corretta gestione terapeutica.

L'assistenza infermieristica nello scompenso cardiaco in stadio avanzato: criteri di definizione del fine vita. Una revisione della letteratura

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Premesse e Acopo della ricerca: Una persona con scompenso cardiaco, in quarta classe NYHA, non riesce a svolgere alcun tipo di attività e presenta sintomi invalidanti. In questa fase, la presa in carico, orientata alla tutela della miglior qualità di vita possibile, necessita di una rimodulazione dei percorsi clinico-assistenziali. Attraverso una revisione della letteratura, la ricerca è finalizzata all'identificazione dei criteri che definiscono la fase terminale di uno scompenso cardiaco in stadio avanzato.

Materiali e Metodi: La ricerca è una revisione della letteratura, focalizzata sull'assistenza infermieristica nello scompenso cardiaco in stadio avanzato.

Risultati: Sono stati selezionati 13 articoli, dall'analisi dei quali emerge l'importanza di garantire ai pazienti un'assistenza caratterizzata da cure di tipo palliativo anziché di tipo intensivo. Un'assistenza infermieristica di questo tipo, orientata al mantenimento del miglior comfort possibile, si rivolge al controllo dei sintomi emergenti e alla garanzia del benessere.

Conclusioni: Prognosticamente, è complesso determinare previsioni attendibili, in considerazione dell'andamento della patologia stessa. La letteratura evidenzia come i pazienti con scompenso cardiaco avanzato vengano indirizzati a programmi assistenziali intensivi, allo scopo di prolungare la sopravvivenza. Tuttavia, in considerazione dei bisogni assistenziali che essi presentano, appare opportuno indirizzare l'assistito verso trattamenti volti a favorire la qualità di vita, attraverso la pianificazione di un'assistenza personalizzata e condivisa.

Appropriateness of use and complications of PICC and Midline catheter in CoViD-patients: an observational retrospective cohort study of Azienda Sanitaria Locale Biella (ASL BI)

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Background and Aim: Use of peripheral inserted central catheters (PICC) and Midline catheter has been little studied in CoViD-patients. Aim of this study is evaluating appropriateness of positioning and complications of this device in CoViD-patients.

Methods: We conducted a retrospective observational cohort study on adult patients with PICC or Midline catheter in 2020. Authors used quantitative methods to compare results, like mean duration or complications, in CoViD-patients and other patients.

Results: Our cohort included 733 patients. In the sample there are 157 CoViD-patients and 576 other patients. Mean duration of catheters is 16d in CoViD-patients, for others patients is 36d. We have registered 128 (87%) of catheters removed in CoViD-patients for end of use or death (46p). In this cluster the complications were done displacement (5%), mechanical complications (10%) and infection (1.3%). We registered 434 (79%) of catheter removed in other patients for end of use or death (101p). In this group the higher complications were done mechanical complications like thrombosis or occlusion (10.5%) followed by displacement (7%).

Conclusions: We can consider this report to promote appropriateness of PICC or Midline catheters requests in CoViD-patients too. In qualitative analysis of this study, the reporting and attrition bias to suppression of information it's to be considered.

Organizzazione per intensità di cure di reparti CoVID multidisciplinari: dati preliminari dello studio

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Premesse e Scopo dello studio: A causa della pandemia da CoVID-19 è stato necessario aprire reparti e creare percorsi d'accesso dedicati ai pazienti affetti da tale patologia, garantendo un adeguato trattamento mediante la collaborazione di medici di diverse specialità.

Materiali e Metodi: Due padiglioni dell'ospedale sono stati riservati ai malati CoVID e sono stati aperti tre reparti multidisciplinari, due a media e uno a bassa intensità di cura, tutti di ventitré posti letto, in aggiunta a letti di pneumologia e terapia intensiva. Sono stati definiti dei criteri per il ricovero nei setting assistenziali sopraelencati, di cui il principale è stato la valutazione del rapporto paO₂/FiO₂. Sono stati nominati responsabili: un coordinatore generale, un team leader ed un responsabile clinico per ogni reparto. I reparti multidisciplinari sono stati formati con personale da unità operative sia di pertinenza medica che chirurgica, con internisti e cardiologi costituenti circa il 60% del personale.

Risultati: E' stato possibile assistere i malati in base al loro livello di gravità e instabilità clinica, rispettando i principi di "congruenza verticale" - il livello di cura e assistenza deve essere appropriato al bisogno - e "integrazione orizzontale" - l'intervento specialistico multidisciplinare è centrato sul singolo paziente - e cambiando il setting assistenziale in relazione al quadro clinico.

Conclusioni: La costituzione dei reparti CoVID ha consentito di accogliere e trattare malati affetti da CoVID e multiple patologie concomitanti in un clima di efficace collaborazione.

CoVID e surreni: una relazione pericolosa!

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Premessa: L'infezione da CoVID-19, sebbene nota come malattia a prevalente coinvolgimento polmonare, consente interessanti considerazioni relative ai meccanismi fisiopatologici di malattia per il coinvolgimento del sistema endocrino. Presentiamo il caso di una donna con infezione da CoVID-19 esordita con insufficienza surrenalica acuta.

Descrizione del caso clinico: Una donna di 42 anni giunge presso il nostro P.S. per la comparsa di dolori addominali, diarrea, febbre e severa ipotensione, con valori di saturimetria nella norma, non dispnea. Non patologie degne di nota in anamnesi, non alterazioni all'esame obiettivo. Il tampone molecolare per SARS-CoV-2 risulta positivo e gli esami ematochimici rivelano un quadro di insufficienza surrenalica. La paziente viene ricoverata in reparto CoVID ad alta intensità di cura, iniziata terapia sostitutiva e trasferita in media intensità per il miglioramento del quadro clinico. Dopo alcuni gg si osserva però un'insufficienza respiratoria ingravescente con evidenza TC di un severo coinvolgimento polmonare e la paziente, nonostante venga immediatamente ventilata e poi intubata, supportata da alte dosi di steroide ev in associazione alla terapia del caso, presenta un peggioramento progressivo con esito finale infausto.

Conclusioni: L'insufficienza surrenalica è una manifestazione atipica di esordio di infezione da CoVID-19 che potrebbe essere correlata ad una prognosi peggiore, ma che per il meccanismo fisiopatologico dovrebbe essere presa in considerazione anche in forme di malattia meno severa per una migliore gestione del caso.

Coagulopathy and CoVID

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Background and Aim: To compare the characteristics of patients

with CoVID-positive pneumonia with patients with non-CoVID interstitial pneumonia.

Materials and Methods: Two homogeneous groups of hospitalized patients with pneumonia on CT were identified: 38 with a mean age of 72 years (10 males and 8 females) positive for SARS-CoV-2 and 38 patients with a mean age of 72 years (9 males and 9 females) suffering from non-CoVID interstitial pneumonia. Clinical, laboratory and instrumental data were compared.

The degree of severity of pneumonia was compared with the presence of diabetes, heart failure, chronic renal failure. There are no significant differences between the two groups for the relationship between comorbidities, length of hospital stay and severity of pneumonia.

Results: Significant differences were observed in the coagulation parameters: the most significant statistic was the difference in the PT and PTT alterations between the two groups: with the chi-square a significance <0.05 with values of longer PTTs. Higher values of fibrinogen and dimer in CoVID positive patients as well as the response to anticoagulant therapy significantly reduced hospital stay in CoVID positive cases.

Conclusions: This study, with the limitations of such a small number of cases, has shown that thrombotic complications are more significant in CoVID pneumonia than in other forms of pneumonia. Anticoagulation targets should be suggested in these patients as well as specific CoVID related coagulopathy studies.

Olanzapine versus haloperidol in CoVID patients

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Background and Aim: Haloperidol is the most widely used drug for the prevention and treatment of delirium in the Operating Units of Internal Medicine. New generation antipsychotics are a possible alternative often with fewer side effects. The objective of this study is the evaluation of a single-center observational retrospective study to compare the efficacy and tolerability of oral olanzapine versus haloperidol for the management of delirium in CoVID-19 patients.

Materials and Methods: 97 patients were enrolled. The analysis of all data is retrospective as a single-center observational study approved by the ethics committee. Two groups were identified: the first of 49 patients treated with haloperidol, 48 patients treated with olanzapine.

Results: We observed lower efficacy and safety of oral haloperidol than olanzapine in the management of delirium in elderly patients with CoVID-19-related pneumonia. In particular, we observed a reduction in the number of episodes of delirium, a reduction in hospitalization and greater compliance with ventilatory therapy with fewer adverse events in the group treated with olanzapine.

Conclusions: Oral olanzapine therapy may be indicated as a better alternative for the management of delirium in the fragile high-risk geriatric patient.

Diagnosing the cause of pulmonary hypertension: when imaging is misleading and necroscopy necessary

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Background: Establishing the etiology of respiratory failure in patients with pulmonary hypertension is sometimes complex and imaging can be misleading. Very often it is possible to reach a correct diagnosis only after necroscopy.

Case description: 64-year-old woman. Medical history: locally advanced left breast cancer, treated with RT and CT. Recurrence of malignancy in contralateral axillary lymph node, successfully treated with antiHER2. At the end of 2020 onset of worsening exertional dyspnea. Three hospitalizations in the following months. Appearance of worsening type 1 respiratory failure associated to pulmonary hypertension (estimated with echo). Multiple courses of antibiotic were administered because of the presence of a septic status. Heparin and DOAC were also prescribed because of diffuse, peripheral and bilateral pulmonary embolization (positive

ventiloperfusion scintigraphy, negative TEP angioTC) secondary to a peri-PORT DVT. A series of first, second and third level diagnostic tests were performed without reaching a definitive etiological diagnosis. In May 2021, death occurred due to further worsening of pulmonary function. The autopsy showed a diffuse lymphovascular neoplastic invasion with multiorgan metastases (immunophenotype CK 7+, ER-, GATA3-) suggesting breast origin.

Conclusions: The diagnosis of pulmonary hypertension may be difficult despite the available imaging tests. Very often a clinical diagnosis is not reached during life and autopsy becomes essential in order to clarify the cause of PH.

L'aria a volte inganna

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Premesse: Una ragazza di 17 anni è stata ricoverata una prima volta nel 2019 per enfisema sottocutaneo all'arto superiore sinistro, pneumotorace e pneumomediastino dopo trauma al polso. Si ripresenta nel 2020 per nuovo episodio di enfisema all'arto inferiore destro dopo trauma distorsivo. In anamnesi sono riportati episodi di panico e asma allergica.

Descrizione del caso clinico: Durante il primo ricovero sono state escluse infezioni ed eseguite plurime indagini (TC torace, FBS, studio della deglutizione, toracoscopia) senza evidenza di perdite aeree. Valutata più volte dai colleghi psichiatri nell'ipotesi di autolesionismo. Il quadro si risolse con sintomatici. Nel 2020 la ragazza presenta importante enfisema dell'arto inferiore destro fino alla parete anteriore addominale ed al retroperitoneo. Nuovamente escluse infezioni cutanee e perdite aeree evidenti. Improvvisa comparsa nel ricovero di ipoglicemia ripetuta con insulina elevata e C-peptide azzerato. Si è pertanto consolidata l'ipotesi di autolesionismo: la paziente è stata trasferita presso la psichiatria e solo dopo prolungati colloqui, test psicologici ha ammesso l'autosomministrazione di insulina (rubata al fratello minore diabetico) e l'autoprovocazione dell'enfisema con siringhe di aria.

Conclusioni: La sindrome di Munchausen è un disturbo psichiatrico per cui le persone fingono o si autoprocuroano lesioni. La diagnosi è tardiva, di solito dopo una lunga serie di indagini. L'enfisema sottocutaneo è segnalato tra le nuove forme di autolesionismo nei giovani, imitato da video pubblicati sui social media.

Colite ischemica: una possibile complicanza dell'infezione da SARS-CoV-2

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Premesse: Frequentemente alla sintomatologia respiratoria che caratterizza la malattia CoViD-19 si associano sintomi gastroenterici e sono stati riportati rari casi di ischemia intestinale acuta.

Descrizione del caso clinico: Donna di 93 anni, ipertesa e con pregressa infezione da SARS-CoV-2 (3 mesi prima) associata a sintomi gastrointestinali residuati in lieve addominalgia cronica, accedeva in Pronto Soccorso per lipotimia, rettorragia e peggioramento della sintomatologia dolorosa addominale. Il quadro clinico, la leucocitosi neutrofila, l'incremento di troponina e D-dimero erano compatibili con un quadro di ischemia intestinale. La TC addome mostrava un diffuso ispessimento ipodensso sottomucoso del colon discendente e del sigma con iperemia della mucosa, associato a falda fluida periviscerale e, nelle scansioni passanti per il torace, ispessimento fibrotico interstiziale mantellare. Le immagini deponevano per un quadro di colite ischemica su base microvascolare. La colonscopia confermava la diagnosi evidenziando petecchie e piccole ulcere del colon discendente, dalla giunzione del sigma fino alla flessura splenica. Con terapia medica conservativa si riscontrava un miglioramento del quadro clinico.

Conclusioni: L'infezione da SARS-CoV-2 determina danno del circolo microvascolare, sia alterando direttamente l'endotelio, sia generando uno stato di ipercoagulabilità che induce trombosi dei

piccoli vasi. Si può ipotizzare che tali meccanismi comportino alterazioni persistenti del microcircolo sistemico con possibili gravi complicanze gastrointestinali anche a distanza di tempo.

Be a woman in CoViD-19 pandemic

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Aim of the study: Aim of this study was to discover any possible conditioning of sex on the epidemiology and clinical course of CoViD-19.

Materials and Methods: An observational retrospective study was performed by analyzing clinical, laboratory and instrumental features from 155 hospitalized patients for CoViD-19 pneumonia in our General Medicine and Semi-intensive Care Units.

Results: As described in literature, also in our population, the incidence of CoViD-19 was higher in males (61.9%, p=0.003), though women had a more severe clinical impairment as were mainly treated by non-invasive ventilation (p=0.029), had higher PEEP (p=0.023), worst inflammation biomarkers (higher ESR, p=0.007; higher LDH, p<0.001); worst arterial blood gas analysis (lower pO₂, p=0.019; lower sO₂, p=0.006; higher lactate, p=0.021) and metabolic dysfunctions were prevalent (higher BMI, p=0.009 and higher HbA1c, p=0.022). Nevertheless, both mortality rate and the number of transfers to ICU weren't different among male and female cohorts (p=0.40).

Conclusions: Though women were less frequently affected by CoViD-19, they had a more severe clinical course but, surprisingly, not a higher mortality rate.

Serum lactate dehydrogenase level may predict residual functional impairment in patients with previous CoViD-19

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Background and Aim: We know that serum LDH has been identified as an important biomarker for the activity and severity of idiopathic pulmonary fibrosis. In patients with severe pulmonary interstitial disease the increase of LDH is significant and is one of the most important prognostic markers of lung injury. LDH levels have been found higher in CoViD-19 patients than in patients with SARS-CoV-2 negative confirmed pneumonia. Elevated LDH values were associated with severe CoViD-19. Aim of study is to evaluate, whether even in patients recovered from CoViD-19, LDH could be considered a marker of bad outcome and if it is associated with the development of pulmonary fibrosis or reduced performance at 6-minute walking test (6MWT).

Materials and Methods: Retrospective study on 40 patients with previous CoViD-19, 3 months after viral nucleic acid tests turned negative. All patients underwent a chest CT (Lung Score - LS), lung Ultrasound (Lung US Score - LUS) and 6MWT.

Results: LDH was directly related both to LS (r= 0.607; p= 0.002) and LUS (r= 0.63, p= 0.001). Moreover, the mean LDH value was significantly higher in patients with pathological 6MWT (256.8±70 vs 191.3±55.5; p= 0.030) and in patients with greater degree of dyspnea at the end of 6MWT (223.7±58.3 vs 165.6±53; p= 0.014). LDH was greater in patients with fibrous stripes on CT (228.8±67.1 vs 173.8±50.2; p= 0.026).

Conclusions: LDH can be considered a potential bad outcome marker in post-CoViD as it is associated with the presence of fibrous stripes with worse performance at 6MWT and higher LS and LUS score.

Safe dose thrombolysis nell'embolia polmonare del paziente CoViD: case report

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Premesse: L'incidenza dell'embolia polmonare nel CoViD-19 è circa 2.6-8.9% dei pazienti ospedalizzati. In studi autoptici il TEV è stato causa diretta di morte nel 58%. Forme segmentarie e sub-segmentarie sono le più frequenti ed espressione di trombosi autotona, più rare ma possibili le forme centrali. Comunque la presenza di embolia polmonare aggrava pesantemente la prognosi.

Descrizione del caso clinico: Donna, 88 anni accede al PS degli Ospedali Riuniti di Ancona per dispnea ingravescente. Il TNF risultava SARS-CoV-2+e all'angioTC del torace si diagnosticava embolia dell'arteria polmonare principale e polmonite bilaterale. Veniva ricoverata in area COV subintensiva e dopo 4 ore nonostante la terapia con UFH ed ossigenoterapia ad alti flussi, presentava progressivo deterioramento con agitazione, dispnea, tachicardia ed ipotensione che richiedeva supporto con amine e ventilazione non invasiva. Il deterioramento emodinamico e la presenza di RVD ci ha indotto ad effettuare trombolisi sistemica con alteplase a dosaggio ridotto (50 mg). Dal giorno seguente è stata interrotta noradrenalina e NIV ed intrapresa terapia usuale per SARS-CoV-2. Dimessa lo stesso giorno dell'ammissione.

Conclusioni: In questo setting di pazienti, l'EP con instabilità emodinamica è sicuramente una problematica che mette il paziente a rischio di morte. Il trattamento trombolitico sistemico può diventare necessario e a volte, come in questo caso, risolutivo. La safe dose di rTPA è da considerare nei pazienti CoViD a motivo dell'aumentato rischio emorragico per la concomitante angiopatia.

Unusual back pain

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Background: Often the onset symptoms of a disease don't easily direct towards the correct diagnosis. Furthermore, the CoViD-19 pandemic has often been an obstacle to obtaining a quick diagnosis.

Description of the case: Male 49-year-old patient admitted to emergency room for persistent back pain, asthenia and weight loss. Physical examination revealed a palpable mass in the right gluteal region, chest X ray an enlargement of mediastinum. Nasopharyngeal swab for CoViD-19 was positive (even if negative for CoViD-related symptoms); he was so hospitalized in our Internal Medicine CoViD Ward. Blood samples found microcytic anemia (thalassemic trait carrier); high ferritin (1072 ng/ml), aptoglobin (297 mg/dl, nv <200) and B2 microglobulin (3.25 mg/l, nv <2.53); K and L chains normal with K/L serum ratio reduction, increase in urine sample. Lymphocyte subpopulations were indicative of lymphopenia. Suspecting a lymphoproliferative disease, he performed a chest and abdomen CT scan that found: multiple bilateral pulmonary nodules, the largest one 10x9 cm in the left lung; a left renal lesion 11x10 cm; a mass 9.5 cm of the sacroiliac left wing and splenomegaly (145 mm). We thus performed a US-assisted biopsy of the mass in the gluteal region. The histological examination allowed to identify metastasis from clear cell renal carcinoma.

Conclusions: We report this case to highlight the peculiarity of onset of this renal carcinoma, in absence of genitourinary symptoms. Diagnostic autonomy can be a winning weapon in accelerating the diagnostic process, even more so in times of CoViD-19 pandemic.

IL-6 is a warning signal for pneumomediastinum in non-invasively ventilated CoViD-19 patients

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Background and Aim: Pneumomediastinum (PNM) is not an infrequent complication in CoViD-19 patients and IL-6 is a laboratory index which can predict a worst outcome in these patients.

We analysed the role of IL-6 and his association with the incidence of PNM.

Materials and Methods: In our retrospective study, we analysed a population of 304 patients with SARS-CoV-2 infection admitted to an Internal Medicine ward from 17th October 2020 till 25th January 2021, including 176 males (57.9%) and 128 females (42.1%), with a mean age of 69.6 years. During hospitalization, 129 patients (42.4%) needed NIV. Of these, 5 (3.8%) presented a PNM.

Results: Higher levels of interleukin-6 (IL-6) on admission were present in PNM patients than in the overall population (168.9±296.3 pg/mL vs 37.9±69.6 pg/mL, Student t-Test p<0.001) and NIV population (168.9±296.3 pg/mL vs 30.1±76.5 pg/mL, Student t-Test p=0.015); IL-6 levels are strongly associated with incidence of PNM. In recent literature, high levels of IL-6 are strictly associated with severity of CoViD-19 disease and severity of respiratory failure, needing for NIV and/or invasive ventilation and death.

Conclusions: In conclusion, PNM represents a severe and quite frequent complication in CoViD-19 patients treated with NIV. Before CoViD-19, the occurrence of PNM during NIV in Community Acquired Pneumonia was a rare complication. The detection of high levels of IL-6 must be a warning signal in ventilated patients, addressing the choice toward a more protective ventilation.

Can aldosterone increase Interleukin-6 levels in CoViD-19 pneumonia?

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Background: Several evidence have identified the role of Interleukin-6 (IL-6) in the cytokine storm induced by CoViD-19 pneumonia. Interestingly, the correlation between the serum levels of IL-6 and the plasma aldosterone has already been demonstrated in patients affected by primary aldosteronism (PA). Therefore, we suppose that aldosteronism may increase IL-6 levels in CoViD-19.

Presentation of the case: We report a case of a 47-year-old female CoViD-19 patient who had developed severe pneumonia complicated by Guillain-Barre syndrome (GBS). The blood test revealed high levels of IL-6 (serum IL-6: 402 pg/mL) and of its soluble receptor (soluble IL-6 receptor >1900pg/mL) and she required mechanical ventilation for severe hypoxemia. Furthermore, evidence of right adrenal adenoma, resistant hypertension, severe hypokalemia and high serum levels of aldosterone with high aldosterone/renin ratio were also consistent with diagnosis of PA. Thus, tocilizumab and spironolactone were administered with rapid improvement in clinical condition. Finally, she was diagnosed with acute motor sensitive neuropathy and began the rehabilitation phase.

Conclusions: Increased aldosterone levels in PA may be associated with more severe forms of CoViD-19 by stimulating IL-6 production. This association could have a synergic effect in development of complications such as GBS. Increased aldosterone activity/levels could be involved in CoViD-19 patients with secondary aldosteronism. Further studies are needed to evaluate Tocilizumab and spironolactone therapy in CoViD-19.

Case report. La mucosite durante chemio/radioterapia: utilizzo di una nuova modalità di trattamento

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Premesse: Il paziente oncologico sottoposto a trattamento combinato di chemio/radioterapia tende a sviluppare precocemente mucositi del cavo orale, con conseguente dolore e difficoltà nell'assunzione di cibo che possono condurre a malnutrizione. Un intervento in fase precoce sulle lesioni del cavo orale, può consentire un'efficace riduzione delle mucositi, del dolore e della malnutrizione.

Descrizione del caso clinico: Il caso qui esposto si riferisce ad un paziente sottoposto a trattamento con Novox®Drop, dispositivo me-

dico sotto forma di gel oleoso composto da olio di oliva arricchito di ossigeno e da eccipienti per favorire la palatabilità (Mentha Arvensis Oil, Stevia). Il dispositivo è confezionato in siringa, con dosaggi 1ml e 5 ml, è indicato per lesioni acute e croniche della mucosa orale e labiale. Il paziente è un maschio, 65 anni, in trattamento combinato chemio/radioterapia con lesioni del cavo orale e diffuso stato infiammatorio, dolore (VAS 9) che impediva l'assunzione di cibi sia solidi che semisolidi. Il trattamento ha previsto l'applicazione del dispositivo 3 volte al dì per una settimana, dopo appropriata corretta igiene del cavo orale, con il divieto di alimentarsi nell'ora successiva. Il trattamento è durato 3 settimane, sono state consegnate tre siringhe da 5ml, una a settimana. Sono state effettuate foto settimanali per documentare l'andamento delle lesioni. Al termine delle tre settimane le lesioni si sono notevolmente ridotte fino a scomparire; lo stato infiammatorio del cavo orale è progressivamente diminuito; il dolore si è ridotto ed il paziente è stato in grado di tornare ad alimentarsi.

Multifocal pyomyositis in decompensated DM and SARS-COV-2 pneumonia: a diagnostic challenge

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Background: Pyomyositis is a bacterial infection of skeletal muscle characterized by intramuscular abscess formation that arises in endemic areas (tropical) or in patients with immunocompromised condition such as HIV or Diabetes Mellitus. Staphylococcus aureus is the most common culprit, with rising proportion of MRSA.

Description of the case: A 35-year-old man with history of diabetes mellitus in poor control was admitted to our ward with ketoacidotic state, fever, respiratory insufficiency and diffuse myalgia. After the prompt correction of DKA, Chest X-ray revealed bilateral interstitial pneumonia and nasopharyngeal swab for CoVID-19 resulted positive. He started dexamethasone, remdesivir and non-invasive ventilation with improvement of gas exchanges. A MRI revealed an intramuscular abscess on left paravertebral muscle and bedside ultrasound showed multiple muscular abscesses (right rectus femoris, right gastrocnemius, left teres minor and left semitendinosus). Ultrasound assisted drainage was performed and liquid culture yielded MSSA, thus antibiogram guided treatment with linezolid plus sulphamethoxazole/trimetoprim was started. Follow-up PET at two weeks demonstrated a dramatic reduction in the inflammations.

Conclusions: Pyomyositis is a potentially severe but uncommon complication of poorly controlled diabetes that could be difficult to detect in the setting of a concomitant viral illness. Bedside ultrasound has a unique role in the diagnosis, in the surgical drainage and in the follow-up. The cornerstone of optimal antimicrobial therapy is antibiogram-guided due to the rising proportion of MRSA.

L'arteriopatia ostruttiva periferica come marcatore di malattia cardiovascolare: esperienza nei reparti di Medicina Interna della Campania

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Premesse: L'arteriopatia ostruttiva periferica (PAD) rappresenta a tutti gli effetti la manifestazione più sottovalutata e subdola della patologia cardiovascolare. In recenti studi, inoltre, è stato notato che la PAD è asintomatica o presenta sintomi atipici fino al 90% dei soggetti, per cui può risultare di difficile individuazione se l'anamnesi e l'esame obiettivo dei pazienti non si eseguono in maniera dettagliata e completa.

Materiali e Metodi: Nell'ambito del progetto Cuore-FADOI, abbiamo sottoposto ai medici dei reparti di medicina interna della Regione Campania, una Survey composta da dieci quesiti, al fine di valutare le modalità di approccio e di gestione dei pazienti in degenza ordinaria affetti da PAD.

Risultati: I risultati emersi dimostrano che nella metà dei reparti di medicina interna l'utilizzo dell'indice caviglia-braccio (ABI) consente di individuare i pazienti che presentano un maggior rischio cardiovascolare e che richiedono ulteriori approfondimenti diagnostici. Dai dati emersi e riportati in letteratura, inoltre, appare evidente che vi sia una diversa espressione di malattia tra il sesso femminile e quello maschile: infatti nel sesso femminile, vi sono degli aspetti peculiari da considerare che rendono ancora più complessa la diagnosi e la gestione della PAD e che vanno pertanto approfonditi e ricercati.

Conclusioni: Alla luce dei dati acquisiti risulta necessario poter strutturare e avviare un percorso unico da adottare in tutti i reparti di Medicina Interna al fine di diagnosticare e trattare in maniera precoce la malattia cardiovascolare.

Porpora trombocitopenica immunitaria da SARS-CoV-2

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Premesse: La malattia da SARS-CoV-2 può determinare uno stato di ipercoagulabilità sistemica con eventi trombo embolici o trombocitopenia. Meno frequente è la piastrinopenia grave.

Descrizione del caso clinico: Paziente di 68 anni con anamnesi di ipertensione arteriosa e diabete mellito, accede in PS per dispnea con riscontro di positività al tampone per Sars-Cov2 ed evidenza, alla TC torace, di aree di ground glass opacity bilaterali compatibili con polmonite interstiziale. Durante la degenza, sviluppa una sindrome da distress respiratorio acuto con necessità di ossigeno ad alti flussi sino alla ventilazione meccanica non invasiva. Viene somministrato Remdesivir ed impostata una profilassi con enoxaparina con miglioramento del quadro respiratorio. Il paziente mostra una trombocitopenia grave (2.000/mm³) a insorgenza tardiva con un tempo per raggiungere il nadir pari a 12 giorni dall'insorgenza della malattia. Il calo della conta piastrinica si realizza nell'arco di 72 ore. Si esegue striscio periferico che mostra l'assenza di forme immature. La piastrinopenia risulta refrattaria alla somministrazione di concentrati piastrinici. Il paziente mostra ematuria e petecchie del volto, del cavo orale e degli arti inferiori. Nel sospetto di piastrinopenia reattiva secondaria all'infezione da SARS-CoV-2, si somministra terapia cortisonica con prednisone al dosaggio di 1 mg/Kg e immunoglobuline ev (0,4g/kg per 5 giorni) con miglioramento progressivo del quadro. **Conclusioni:** Viene posta diagnosi di porpora trombocitopenica immunitaria (ITP) correlata ad infezione virale da SARS-CoV-2.

Infezione periprotetica tardiva

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Premesse: Le infezioni periprotetiche tardive esordiscono dopo almeno due anni dall'impianto della protesi d'anca.

Descrizione del caso clinico: Donna di 75 anni giunge in PS per febbre con brivido da tre giorni. Agli esami ematochimici si evidenzia un vistoso aumento degli indici di flogosi (GB, PCR, PCT). La paziente è eunpoica in aria ambiente e non mostra flebiti, sintomi di IVU o lesioni da pressione. Dal colloquio anamnestico emerge una storia di disturbo neurocognitivo maggiore e pregressa protesi di anca destra nel 2008. Non segni di flogosi o dolorabilità alla mobilizzazione degli arti. Vengono inviati campioni di emocolture su picco febbrile che risultano positivi per stafilococco aureo MRSA. Si introduce la vancomicina. Nulla da segnalare alla TC total body con mdc. L'ecocardiogramma TT e TE non mostra segni di plus valvolare. La TC dell'arto inferiore destro con mdc mostra una raccolta ascessuale periprotetica che si estende dalla testa femorale lungo lo stelo protesico in corrispondenza dei muscoli vasto laterale e vasto intermedio con dimensioni di circa 82x32 mm. Il campione prelevato durante l'artrocentesi conferma la presenza stafilococco aureo MRSA. In accordo con gli ortopedici si effettua un intervento in due tempi: si rimuove la protesi, si posiziona uno spaziatore e si dispone nuovo impianto dopo otto settimane di antibiotico.

Conclusioni: Nell'indagare le cause di febbre di origine sconosciuta, vanno considerati i pregressi interventi ortopedici anche in assenza di dolore, segni locali di infiammazione, deiscenza della ferita chirurgica o fistola cutanea.

Improving simulated postprandial glycemia and hyperinsulinemia in healthy subjects with agri-food waste products: pilot study

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Background and Aim: Control of glucose homeostasis is the goal of the prevention and management of diabetes and pre-diabetes. Antidiabetic agents are available, not all without side effects, so patients are more prone to natural alternative treatments. Several studies suggest the use of nutraceutical antioxidants for glycemic control with great interest in agri-food by-products as sources of bioactive compounds including polyphenols.

Materials and Methods: 20 healthy patients between the ages of 18 and 70 with BMI > 26% normal glycemic profile were enrolled from the Samnium Cooperative of Benevento in 2019. We tested new nutraceuticals based on polyphenolic extract of nectarines (NecP), skins of tomato (TP) and olive leaves (EOL) on glycemic and insulinemic responses. They contained, respectively: 0.007 mg of abscisic acid (ABA) /g, 0.5 mg of carotenoids/g, and 150 mg of oleuropein/g. Enrolled subjects consumed a normal glucose solution (RG) or treatment drink (TB) obtained by mixing RG with the individual formulations (TB NecP, TB EOL, and TB TP), separately and on different days.

Results: All three formulations significantly lowered both peak plasma glucose ($p < 0.05$ for all) and peak plasma insulin ($p < 0.05$ for all) in 30 min.

Conclusions: The results obtained, albeit on a limited sample of subjects, may lead to the hypothesis of a formulation of a multicomponent nutraceutical with synergistic efficacy for glycemic control.

Polyphenolic extracts from poplar propolis for the remission of symptoms of uncomplicated upper respiratory tract infection

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Background and Aim: Propolis (P) is a natural resinous substance used in the treatment and prevention of infections of the oral cavity and upper respiratory tract for its antimicrobial and anti-inflammatory properties. The aim of the study was to evaluate the efficacy of an oral spray based on poplar P extract (P), with a known and standardized polyphenol content, on the remission of symptoms associated with uncomplicated mild URTI.

Materials and Methods: A randomized, double-blind, placebo-controlled clinical study was conducted on 122 healthy adults with mild upper respiratory tract infection. Participants, randomly assigned to P (N=58) or placebo (N=64) group, underwent four visits (t0; after 3=t1; 5=t2 and 15 days= t3). The content of polyphenols of P was 15 mg /ml for five days. The duration of the study was 8 week.

Results: After 3 days of treatment, 83% of the subjects treated with P spray had a remission of symptoms. 72% of the placebo had at least one symptom left. After five days, all subjects had recovered from all symptoms. Resolution from uncomplicated mild URTIs in treated subjects occurred two days earlier than in the control group.

Conclusions: P oral spray can be used to improve both bacterial and viral uncomplicated URTI symptoms in fewer days without the use of drug treatment, leading to prompt resolution of symptoms.

Tasso di mantenimento di teriparatide (studio TERRA): confronto tra il farmaco originale e il biosimilare

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Premesse e Scopo dello studio: Nelle forme severe di osteoporosi (OP), si deve ricorrere a strategie di trattamento favorevoli la formazione ossea onde prevenire fratture vertebrali o femorali. In Europa, teriparatide (TPH) è il solo anabolico approvato per l'osteoporosi. Finora non ci sono studi di comparazione di efficacia tra TPH originale (oTPH) e biosimilare (bsTPH). Scopo di questo studio è verificare se il tasso di mantenimento (TdM) di oTPH e bsTPH sia simile.

Materiali e Metodi: Tutti i pazienti affetti da OP in terapia con TPH tra il 1/1/2013 e il 30/04/2021 sono stati arruolati raccogliendo dati anamnestici, numero di fratture maggiori, durata del trattamento e motivo di eventuale sospensione. I pazienti sono stati raggruppati in base alla terapia ricevuta. Il TdM è stato valutato con le curve di Kaplan-Maier, le differenze tra gruppi tramite test di Fisher o di Mann-Whitney. Una $p < 0.05$ è stata considerata come statisticamente significativa.

Risultati: Sono stati arruolati 262 pazienti (età media 76 IQR 71-81, M:F 23:239). La maggior parte ha ricevuto oTPH (184/262). I gruppi si differenziano per prevalenza femminile (162/184 vs 77/78 $p=0.003$) e numero medio di fratture maggiori (2 vs 3 $p=0.0007$). Il TdM a 1 anno era del 94%. Nel gruppo bsTPH il TdM era maggiore rispetto al gruppo oTPH (97% vs 93% $p=0.15$). In entrambi la sospensione era riconducibile alla comparsa di astenia e mialgie (4.3% vs 2.6% rispettivamente nel gruppo oTPH e bs TPH $p=0.7$).

Conclusioni: Nella coorte osservata il TdM di TPH a 1 anno è risultato più elevato rispetto a quello riportato nei trial. Inoltre non sono emerse differenze significative tra oTPH e bsTPH.

In-hospital utilization of pre-hospital device for CPAP to manage acute respiratory failure in CoViD-19 pneumonia: findings from a single center

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Background: Since February 2020, CoViD-19 spread in Italy. Acute respiratory failure (ARF) was the most relevant clinical presentation, often requiring invasive and non-invasive ventilation. We report the management of ARF in in-patients using Easy Vent Mask (EVM) system for C-PAP, a device registered for pre-hospital use.

Methods: In this retrospective study, we included all patients admitted to Emergency Medicine Unit from March 2 to April 25, 2020 with ARF secondary to CoViD-19 pneumonia and treated with EVM system. Our aim was to evaluate the efficacy and tolerability of in-hospital use of EVM system. All demographic, clinical and treatment data were recorded.

Results: Thirty patients affected by mild/moderate CoViD-19 pneumonia having $PaO_2/FiO_2(P/F)$ ratio between 100 and 200 were treated with EVM system for C-PAP, of them 25(83%) were discharged and 5(17%) died in hospital. The system was well tolerated with a mean time of use of 13 consecutive days. Five patients were transferred to ICU due to failure of C-PAP treatment, of whom 3 died. Two patients died in our ward for worsening of clinical conditions. Pressure skin lesions and hypercapnia were recorded as adverse events in 24 and 2 patients respectively. Moreover, our finding showed a higher reduction of P/F value and a longer time from admission to C-PAP initiation in non-survivors, compared to survivor patients.

Conclusions: EVM system for C-PAP seemed to be well tolerated and may represent an alternative to ventilators in in-hospital treatment of CoViD-19 mild/moderate pneumonia, but dedicated studies are needed.

Is it possible to predict early the outcome of CoViD-19 patients? Prognostic value of lactate dehydrogenase

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Aim of the study: Aim of this study was to identify an early predictor of poor outcomes in CoViD-19 pneumonia and, in particular, evaluate the role of LDH.

Materials and Methods: An observational retrospective study was performed by analyzing clinical, laboratory and instrumental features from 155 hospitalized patients for CoViD-19 pneumonia in our General Medicine and Semi-intensive Care Units.

Results: LDH was significantly higher in patients transferred to ICU or died ($p=0.010$), in the ones treated by non-invasive ventilation ($p=0.001$) and resulted higher in patients with more severe lung impairment ($p=0.024$). LDH had a positive correlation with administered FiO_2 ($r=0.199$, $p=0.027$) and PEEP ($p=0.016$), with Troponin-I ($r=0.349$, $p<0.001$), creatinine ($r=0.322$, $p<0.001$), QTc interval on ECG ($r=0.231$, $p=0.023$), and a negative correlation with P/F ratio on blood gas analysis ($r=-0.307$, $p<0.001$). In patients with higher LDH values (cut-off 300 U/L) hospitalization was longer ($p=0.021$); inflammation biomarkers were worst (higher ESR, $p<0.001$; higher CRP, $p=0.008$; higher serum proteins in alpha-1/alpha-2/beta-2 electrophoretic bands, $p<0.001$ / $p=0.004$ / $p=0.013$); arterial blood gas analysis was worst (lower pO_2 , $p=0.006$; lower sO_2 , $p<0.001$; higher lactate, $p=0.046$).

Conclusions: Therefore, elevated LDH level at admission is a risk factor for the severity and mortality of CoViD-19.

Is it possible to predict early the outcome of CoViD-19 patients? Prognostic value of glycated haemoglobin

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Aim of the study: Aim of this study was to identify an early predictor of poor outcomes in CoViD-19 pneumonia and, in particular, evaluate the role of HbA1c.

Materials and Methods: An observational retrospective study was performed by analyzing clinical, laboratory and instrumental features from 155 hospitalized patients for CoViD-19 pneumonia in our General Medicine and Semi-intensive Care Units.

Results: HbA1c was significantly higher in patients transferred to ICU or died ($p<0.001$) and in patients treated by non-invasive ventilation ($p=0.024$). In patients with higher HbA1c values (cut-off 6.5%) LDH was higher ($p=0.016$), inflammation biomarkers were worst (higher ESR, $p=0.046$; higher serum proteins in beta-1/beta-2 electrophoretic bands, $p=0.033$ / $p=0.006$); arterial blood gas analysis was worst (lower pO_2 , $p=0.024$; lower sO_2 , $p=0.029$; lower P/F ratio, 0.047 and higher lactate, $p=0.003$).

Conclusions: Therefore, elevated HbA1c level at admission is a risk factor for the severity and mortality of CoViD-19.

Sindrome di Evans in corso di infezione da CoViD-19

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Premesse: In corso di infezioni da CoViD-19 sono stati descritti numerosi casi di disturbi ematologici e/o immunologici. La sindrome di Evans (SE), è condizione rara caratterizzata dalla associazione di anemia emolitica autoimmune e di trombocitopenia immune. Descriviamo il caso di una paziente che ha manifestato SE in corso di infezione da CoViD-19 asintomatica

Descrizione del caso clinico: Donna, 64 anni, veniva inviata presso il nostro Pronto Soccorso per astenia ingravescente e severa anemia macrocítica (Hb 6 g/dl MCV 120), in PS marcate reticolocitosi ed emolisi. Coombs diretto positivo (IgG e complemento). Piastrine in calo a 68000/mm³ Assenti blasti o schistociti nello striscio di sangue periferico. Il tampone NF molecolare per CoViD-19 risultava positivo senza segni o sintomi di SARS-CoV-2. Iniziava terapia steroidea: metilprednisolone 1 mg/kg. Visto ulteriore calo dell'Hb (4.5g/dl) e della conta piastrinica (19000/mm³) con ecchimosi cutanee dopo due gg oltre

asteroide iniziava immunoglobuline ev alla 1 g/kg/die per due giorni. Progressivo aumento dell'Hb e riduzione dell'emolisi, risalita della conta piastrinica. Alla dimissione dopo 16 giorni (con tampone NF negativo per CoViD-19) Hb 9.2 g/dl e Plt 169000/mm³, ai controlli successivi Hb e Plt normali e tapering steroideo.

Conclusioni: Varie infezioni virali possono causare SE e sono stati segnalati rari casi di SE associati a CoViD-19 con malattia conclamata. Il nostro caso differisce da quelli descritti sia per l'assenza di sintomi da SARS-Cov-2 che per le modalità di trattamento.

A case of dementia in a young woman

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Background: Cognitive disturbances and behavioral abnormalities are often attributed to psychiatric pathologies. When the Internist is involved, he has to face with heterogeneous pathologies, not always immediately identifiable.

Description of the case: We were called in Psychiatry department to evaluate a 48-year-old woman with diarrhea and vomiting. For some months she had been asthenic, depressed, lost weight. She had hallucinations and cognitive impairment. Blood tests are almost normal, except macrocytosis, with normal B12 and folate. A previous alcohol abuse emerges from careful study of the anamnesis. Liver function tests are normal. Abdomen ultrasound and CT scan say: no image of cirrhosis. Echocardiogram without alterations. We found an emergency room report from 3 months earlier, for second and third degree burns to the limbs and neck possibly attributed to sun exposure. The patient still had de-epithelialization and skin hyperpigmentation. Although the most frequent manifestations of alcoholic abuse were not present in the liver, heart, blood, the patient had a severe deficiency syndrome, in particular from niacin, also called the three D syndrome (dementia, diarrhea, dermatitis) or pellagra. We started vitamin supplement treatment and parenteral nutrition. After 3 months, the patient completely recovered the intestinal, skin and neurological manifestations and resumed a normal life.

Conclusions: Some rare deficiency syndromes, such as pellagra, can still occur in particular situations. Only a precise medical history, with a careful physical examination, can lead to a correct diagnosis and treatment.

Un modello di presa in carico dei pazienti con esiti cronici da CoViD-19

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Premesse e Scopo dello studio: I pazienti guariti da CoViD-19 possono presentare sequele croniche a interessamento polmonare, renale, cardiaco, immunitario, neurologico e psichiatrico. Il servizio ambulatoriale PostCoViD ASL4 ha lo scopo di inquadrare gli esiti cronici multiorgano. È stato ideato uno studio osservazionale "ALT-CoViD19" il cui obiettivo primario è valutare la prevalenza delle sequele croniche.

Materiali e Metodi: Il Day-service prende in carico tre tipi di pazienti: dipendenti guariti, dimessi da reparti dedicati della ASL e CoViD-19 territoriali. Sono previsti valutazione clinica, esami ematochimici, prove di funzione respiratoria (spirometria, DLCO, 6MWT) e indagini strumentali appropriate. I casi sono discussi in equipe multidisciplinare (internista e pneumologo). I pazienti con esiti cronici respiratori o neurocognitivi avviano riabilitazione neuromotoria, psicologica o psichiatrica.

Risultati: 596 pazienti attualmente inclusi. 35.2% ha esito TC torace positivo. Di questi 11.9% presentano deficit funzionali. 38% presenta sintomi neuropsicologici persistenti, la maggior parte sono ospedalizzati dimessi, per cui in questa sottopopolazione l'incidenza di tale esito è maggiore (52%). L'incidenza per dipendenti è del 21% e per i territoriali 33%. Permangono sintomi come astenia, stato ansioso-depressivo, anosmia/ageusia, cefalea, insonnia, parestesie, turbe della deambulazione.

Conclusioni: Frequentemente nei pazienti CoViD-19 dopo la guarigione persistono esiti polmonari e/o neuropsicologici che necessitano di percorso riabilitativo strutturato.

Acute kidney injury in CoViD-19: an overlooked complication?

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Background: A kidney tropism for SARS-CoV-2 was demonstrated from the beginning of the pandemic. However, the clinical impact of renal complication in CoViD-19 isn't understood. The study aimed to define the prevalence of AKI in hospitalised patients and its relationship with in-hospital death and respiratory distress.

Methods: We included all patients admitted for CoViD-19, except dialysis patients. Anamnestic and clinical data at admission were reported. AKI was defined by KDIGO criteria. Primary and secondary endpoints were in-hospital mortality and the necessity of mechanical ventilation.

Results: 350 patients were included. 218 were males and the median age was 71 (60-82). 147 patients required mechanical ventilation and 79 died. At admission, median creatinine was 0,94 (0,77-1,25), median GFR 75 (51-88). At discharge, values were lower for creatinine (0,78, 0,65-0,93, $p < 0,001$) and higher for GFR (87, 71-100, $p < 0,001$); baseline creatinine was also lower (0,84, 0,7-1, $p < 0,001$) and GFR higher (84, 65-98, $p = 0,001$). AKI were reported in 97 (27,7%) patients; these had higher values for IL6, CRP, d-dimer, LDH, Call Score, and lower Pao₂/Fio₂. In multivariate models including age, sex and presence of comorbidities, AKI was associated with increased risk of both dead (OR 5,2, $p < 0,001$) and needing of mechanical ventilation (OR 1,7, $p = 0,07$).

Conclusions: CoViD-19 is associated with alterations in renal function, frequently resulting in overt AKI. Patients with AKI had more severe CoViD-19, with an increased risk of both death and needing mechanical ventilation.

Health surveillance program for CoViD-19 in hospital

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Background and Aim: In February 2020, the pandemic phase of CoViD-19 began in Italy. Healthcare workers were at the forefront of care and were immediately exposed to the risk of infection. Aim of the study was to evaluate the impact of the health surveillance system on the spread of infections in a health population

Materials and Methods: The cases of infection in the period February 2020 - February 2021 were examined, compared to the number of molecular swabs performed on the health personnel of the F. Miulli Regional Hospital, in Acquaviva delle Fonti (BA).

Results: A total of 14,133 molecular swabs were performed (on average 1,177 per month), finding 169 positive cases (equal to 1.19% of total swabs), on average 14 cases per month. The program included a schedule for performing swabs based on the level of risk of the healthcare staff. The tracking system put in place by the prevention service made it possible to minimize the spread of the infection. In addition, a continuous training program for operators on the use of personal protective equipment has been established, with random checks on correct use.

Discussion: The health surveillance system, through the execution of periodic molecular swabs for all staff, together with the constant use of personal protective equipment, has made it possible to minimize the spread of the infection in the population of health workers with considerable benefits also on the safety level of hospitalized patients.

Alterazioni a lungo termine della funzionalità polmonare in pazienti ospedalizzati per CoViD-19: uno studio di coorte prospettico

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Premesse e scopo dello studio: Le alterazioni a lungo termine dovute all'infezione da SARS-CoV-2 sono ad oggi sconosciute. L'obiettivo dello studio è stato quello di valutare il grado di compromissione funzionale respiratoria a 12 mesi dall'infezione.

Materiali e metodi: Abbiamo reclutato 200 pazienti, ospedalizzati per infezione da SARS-CoV-2, sottoponendoli a valutazione clinica, TC torace e misurazione della diffusione del monossido di carbonio (DLCO) a 4 e 12 mesi dalla dimissione. L'outcome primario è stato valutare la percentuale di pazienti con DLCO <80% a distanza di 4 e 12 mesi. Gli outcomes secondari la proporzione di pazienti con DLCO <60% ed i potenziali fattori associati a compromissione della funzionalità respiratoria.

Risultati: Dei 200 pazienti valutati, 122 uomini (61%), l'età media era di 62 anni [51-70]. Le mediane dei valori di DLCO non sono cambiate significativamente a 4 e 12 mesi (79% vs 80%) così come la percentuale di pazienti con DLCO <80% (51% vs 50%) e DLCO <60% (12% vs 12%). A valori di DLCO <80% è risultato associato il sesso femminile ($p = 0,0001$); a valori di DLCO <60% la presenza di ipertensione ($p = 0,05$), malattia renale cronica ($p = 0,006$) e severità del quadro radiologico ($p = 0,01$).

Conclusioni: A 12 mesi dall'infezione non è stato riscontrato alcun miglioramento degli scambi respiratori, il 50% dei pazienti mostra ancora una DLCO inferiore ai limiti di norma. Una maggior compromissione funzionale risulta correlata ad ipertensione, malattia renale cronica ed entità del danno polmonare, una compromissione di grado minore al sesso femminile.

L'efficacia della CPAP nel paziente con scompenso cardiaco acuto e polmonite da CoViD-19

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Descrizione del caso clinico: Uomo di 79 anni affetto da cardiopatia dilatativa post-ischemica, dislipidemia, iperplasia prostatica benigna. Il paziente giunge nel reparto di medicina d'urgenza CoViD per dispnea ingravescente e positività al TNF per SARS-CoV-2. Gli esami di laboratorio evidenziavano un importante aumento dell'NT-proBNP e l'EGA (eseguito in VMK 60% 12L/min) la presenza di una grave insufficienza respiratoria di tipo parziale (pH 7.42, pO₂ 57 mmHg, pCO₂ 28 mmHg, sO₂ 83%, P/F 59, HCO₃ 18.4 mmol/l, lac 6.7 mmol/l). È stata avviata terapia farmacologica con furosemide, morfina, nitroglicerina e contestualmente posizionata maschera CPAP (PEEP 10 cmH₂O, Fio₂ 60%) che ha portato ad una netto e progressivo miglioramento del quadro clinico dell'edema polmonare acuto e che ha permesso di trattare, con significativo successo ed in prima istanza, la polmonite da CoViD-19.

Conclusioni: L'applicazione di una pressione positiva di fine espirazione ha permesso di superare la fase acuta dell'edema polmonare sfruttando gli effetti emodinamici della CPAP, ma anche di approssimare nella fase iniziale la polmonite da CoViD-19, contribuendo alla progressiva risoluzione del distress respiratorio e dell'ipossiemia.

The DAMA (disable advanced medical assistance) project: a virtuous path for disabled people

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Background and Aim: The primary objective of the DAMA project is to implement healthcare pathways for the management of patients with intellectual and motor disabilities who manifest a pathology not necessarily related to the underlying disability, by means of integrating the territorial network of professionals with those of the hospitals. The optimization of human, organizational and technological resources allows to adapt the healthcare response to the specific needs of people with disabilities

Materials and Methods: The DAMA project includes 1 doctor, 2 nurses, 1 educator and the administrative staff. The healthcare process begins with the patient's clinical classification in the presence of the healthcare team in order to outline the diagnostic-therapeutic pathways. Clinical cases are previously discussed directly with the specialists before the patient is sent to them, thereby facilitating the access and taking charge by the specialist while maintaining the DAMA holders as the central reference.

Results: From 2020 to date, 109 patients have been taken in charge, 796 health services have been provided and 135 diagnostic paths have been implemented.

Conclusions: The introduction of the DAMA Project had a positive organizational impact, highlighted by the support and simplification for the hospital professionals' work and by the standardization of the path's phases that have led to a reduction of improper access to the emergency dept, specialist's visits and hospital admissions with savings in public spending and improvement in the quality of patients and caregivers' lives.

Severe hypernatremia refractory to therapy in patient with SARS-CoV2 infection

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Background: In December 2019, pneumonia-like syndrome with unknown etiology was observed in China. Later on, a new coronavirus was identified, named SARS-CoV-2. We present a case of SARS-CoV-2 pneumonia complicated by severe hypernatremia refractory to therapy.

Description of the case: A 60-year-old man with mild dyspnea came at the DEA. He reported infection with SARS-CoV-2 from a week. He reported no medical history except for prostatic hypertrophy. At the entrance the patient was lucid, oriented and cooperative. The B.P. was 130/75 with pulse 75 bpm, afebrile, SpO₂ 88% on A.A. To DEA showed examinations: D-Dimer 291, fibrinogen 744, VES 84, PCR 21.4, Ferritin 17347, LDH 532, normal electrolytes. The EGA (Reservoir 60%) detected: pO₂ 61.8 mmHg, pCO₂ 42.7, pH 7.45, SpO₂ 89% and P/F 103. The Rx thorax showed multiple hazy parenchymal opacities in the lower lobar seat bilaterally. He was submitted to therapy based on dexamethasone, fluid therapy, antibiotics, enoxaparin. After 36 hours, he presented progressive deterioration of the cognitive state and blood tests showed hypernatremia (154 mmol). He undergoing therapy, sodium (168 mmol) worsened. After six days he died.

Conclusions: While the multisystem impact of SARS-CoV-2 has been well established only recently been described the incidence of the disruption of sodium homeostasis in patients with CoViD-19. The peculiarity of this case-report is given by the early and serious hypernatremia as an uncommon complication. This suggests that others processes related to CoViD-19 might be the mechanism of dysnatremias in hospitalized patients.

Correlative analysis between radiographic score and P/F in 30 patients with SARS-CoV-2 interstitial pneumonia. CODIPAF study

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Background and Aim: The authors present the "CODIPAF" study, an acronym deriving from "sCOre radIographic in pneumoCoViD-19 and oxygen PArtial pressure/inspiratory Fraction". A retrospective analysis was performed on 30 patients with CoViD-19 pneumonia. The diagnosis was confirmed by the radiological picture (CT-CXR), by the positivity of the molecular swab for SARS-CoV-2. All patients underwent CRX on day 0 (T0) and on day 30 (T30), and in all patients it was calculated the P/F always at T0 and at T30. The "CODIPAF" study has the following objectives: 1) verify any relationships existing between the values of the radiological score and the P/F at T0 and T30; 2) verify the statistical significance found by applying the Wilcoxon test as an analysis test for the variation and the Pearson test for the correlation between the two parameters.

Materials and Methods: The Wilcoxon paired data test was used

to evaluate the variation of parameters between T0 and T30. The linear Pearson correlation evaluated the correlation between the variations of the two parameters.

Results: Pearson correlation shows the median values of both parameters at T0 and at T30. There is a high inverse correlation between the change in P/F and in score ($r = -0.82$ $p < 0.001$).

Discussion: The "CODIPAF" study demonstrated a statistically significant correlation between the values of the CRX score and those of the P/F obtained at T0 and T30.

Conclusions: The "CODIPAF" study showed how the radiological score obtained at T0 and T30 correlates with the P/F values always obtained at T0 and T30.

A complex case of CoViD-19

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Background: SARS-CoV-2 can determine pneumonia and multi-organ damage due to systemic inflammation.

Description of the case: A 51-year-old man was admitted to our CoViD-19 ward for diabetic acidosis and positive SARS-CoV-2 test. The patient had type 1 diabetes mellitus and he was taking insulin. Three days before this admission, he had presented nausea. The first day, after that acidosis was managed with intravenous infusion of insulin and bicarbonate, the patient referred dyspnea while he was breathing ambient air and a chest CT scan was performed with evidence of interstitial pneumonia and multiple bilateral consolidation areas. Supplemental oxygen and antibiotic plus antiviral therapy (remdesivir) were started. During the hospitalization, the patient faced progressive anemia and blood transfusions were administered. For deterioration of respiratory function, non-invasive ventilation was applied. Laboratory exams showed leukocytosis, renal insufficiency, PCR and D-dimer increased. Also cardiac troponin showed a sharp rise; therefore ECG, echocardiography and coronarography were performed with diagnosis of critical stenosis of left anterior descending artery. Cardiac stent was placed, obtaining troponin reduction and cardiac kinesis recovery. In the following days, patient showed progressive improvement of lung inflammation, allowing us shifting to low flow Venturi mask oxygenation.

Conclusions: This case shows how complex can be a CoViD-19 patient with metabolic alterations and severe damage to vital organs (as lung, heart and kidney) that request a multidisciplinary approach.

Gender differences and CoViD-19: a multicenter observational study

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Background: Between genders it has been reported a similar number of patients affected by SARS-CoV-2 infection, although mortality seems to be higher in men. The aim of this study is to analyze the epidemiologic and clinical features, as well as, outcomes of CoViD-19 patients by gender.

Methods: In this study, all data of the CoViD-19 patients, from March 01 to July 31, 2020 were collected and their epidemiological data, demographics, signs and symptoms on admission, comorbidities, laboratory findings, chest radiography and CT findings, treatment received and mortality rate were analyzed by gender.

Results: 2256 patients were included. Frequency of hypertension and COPD were significantly higher in male patients. In male sub-

jects, the epidemiological link was related to rehabilitation ward and community ($p < 0.001$). The frequency of atypical chest-X ray was significantly higher in female ($p < 0.001$). Tocilizumab (TCZ) and antiviral drugs were prescribed more in male ($p < 0.001$). Male had increased use of oxygen therapy ($p < 0.001$). No strong significant difference by gender in the death rate was observed.

Conclusions: In male patients, hypertension and COPD were observed more frequently and the epidemiological link was related to rehabilitation ward and community. In female subjects, the epidemiological link was related to Hospital and we observed significantly higher atypical chest-X ray. Tocilizumab, oxygen therapy and antiviral drugs were prescribed more in male subjects. No differences by gender we report in other treatments and outcomes.

Gender differences in ischemic stroke intra-hospital mortality

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Background: To evaluate whether intra-hospital mortality from ischemic stroke is different in female patients. **Methods:** Studies were found in PubMed, Web of Science. We excluded 119 records because they did not include relevant reports or data. Study were eligible for inclusion if enrolled adult patients with ischemic stroke and if odds ratio (OR) of intra-hospital mortality in females compared to males is provided. Three retrospective cohort studies were eligible for inclusion criteria and so were included in the analysis. **Results:** The random effect model showed a pooled significant higher risk of intra-hospital mortality [OR 1.34 (95% CI 1.04, 1.74), $p = 0.026$] in female group compared to male group. **Conclusions:** Our systematic review shows that intra-hospital mortality was significant higher in female subjects compared to male.

Valutazione della risposta anticorpale post-vaccinazione SARS-CoV-2 in operatori sanitari

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Premesse: Gli operatori sanitari sono stati sottoposti per primi alla vaccinazione contro il SARS-CoV-2. Il presente studio vuole valutare la risposta anticorpale in un gruppo di operatori sanitari vaccinati con Comirnaty (Pfizer-BioNTech).

Materiali e Metodi: Sono stati raccolti i risultati di controlli sierologici per la ricerca di IgM ed IgG verso SARS-CoV-2 di operatori sanitari di un Ospedale campano (compresi 4 soggetti risultati precedentemente malati), vaccinati con due dosi. I campioni sono stati analizzati in tempi diversi (48 h prima della 2° dose e dopo il richiamo a 7, 30 e 90 giorni) con metodica CLIA (chemiluminescenza). I valori >39 BAU/ml (15 AU/ml) sono stati considerati indicativi di avvenuta esposizione al patogeno.

Risultati: I valori mostrano che dopo la prima dose, 37 vaccinati (compresi 4 operatori già malati per CoViD-19) avevano sviluppato una risposta anticorpale adeguata. A 7 giorni dalla seconda dose, i soggetti con IgG protettive erano quasi la totalità (47/49). Dopo un mese tutti gli operatori avevano sviluppato un titolo anticorpale quasi quattro volte superiore al valore minimo. Dopo tre mesi il titolo anticorpale è rimasto alto in tutti i campioni. Era ulteriormente aumentato in 27 soggetti (55%), ma in 18 operatori sanitari (36%) il titolo anticorpale era in riduzione.

Conclusioni: Non sono stati identificati low-responder. La risposta anticorpale è stata subito presente (75%) già dopo la prima dose. Ma la discesa del titolo anticorpale, ancora protettivo, in un terzo del campione (36%) richiede di proseguire lo studio per rivalutare a 6, 9 e 12 mesi quale sia la copertura fornita dal vaccino.

Trasformazione digitale nella ASL di Frosinone

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Premesse e Scopo dello studio: Il progetto è stato messo a punto nella prima fase dell'emergenza CoViD e ampliato nei mesi successivi e si articola in più servizi digitali.

Materiali e Metodi: Il servizio di Telecardiologia (TC) territoriale ha coinvolto 3 UOC di cardiologia e specialisti ambulatoriali convenzionati. Sono state effettuate 15 installazioni, tra case della salute, ambulatori territoriali e tre carceri. Il sistema implementato permette di scaricare i referti e gli esiti di ulteriori indagini eseguite nell'ASL attraverso un portale aziendale. Il servizio di Telemonitoraggio domiciliare ha lo scopo di monitorare i pazienti in isolamento fiduciario CoViD con una chiamata automatica a cura del Dipartimento di Prevenzione. La presa in carico prevede il monitoraggio di sintomi quali febbre, tosse e difficoltà respiratorie. Il sistema genera un allarme in presenza di sintomi segnalati dal paziente, monitorabili tramite cruscotto da parte del personale sanitario, e dà modo di contattare il paziente in modo diretto e tempestivo.

Risultati: Rispetto alla TC, il numero di ECG erogati e refertati dalla piattaforma è stato pari a 200 e sono attualmente in aumento. Il Telemonitoraggio è arrivato a gestire circa 1.200 pazienti al giorno, 44.000 in totale, effettuando oltre 164.000 chiamate ai pazienti.

Conclusioni: Quando si parla di trasformazione digitale nella nostra ASL, non bisogna perdere di vista che l'obiettivo è fornire al paziente un percorso ottimizzato, una patient experience basata sull'integrazione ospedale-territorio, in modo che il paziente sia sempre al centro.

CoViD-19 comorbidities and preventive measures

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Background and Aim: Comorbidities are integral part of frailty syndrome characterized by the presence of chronic pathologies and inflammation state, that involves biochemical modifications in the lipid structure of the membrane, which is the key element in the impairment of information flows and the development of atherosclerosis with its further complications. This study compare two groups of subjects with comorbidities in relation to CoViD-19 infection.

Materials and Methods: 101 patients admitted to an acute care ward in internal medicine and the second 52 guests of a high maintenance RSA (mean age 79.6 yy). The patients in the first group were all CoViD CoViD-19 positive, while the RSA hosts were all CoViD CoViD-19 negative. All were subjected to blood chemistry tests and image investigations were performed. The Severity Index (IS) of the pathologies present and the Comorbidity Index (CI) were studied using CIRS.

Results: Guests severity Index in RSA is on average 2.3, while the Comorbidity Index is >3 for all guests. For Internal Medicine patients, the severity index is on average 1.8, the comorbidity index is 2.8; the Comorbidity Index between RSA and Internal Medicine is significant $p < 0.02$.

Conclusions: Patients of high maintenance RSA have a greater comorbidity, a higher average age and consequently greater frailty and a much higher risk of developing a more serious disease if there was a CoViD-19 infection. CoViD-19 positive Internal Medicine patients have a lower average age, but the presence of comorbidities, statistically insignificant, predisposed to CoViD-19.

Complessità diagnostica delle polmoniti nei pazienti comorbidi e fragili in pandemia CoViD-19

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Premesse: Da marzo 2020, con l'avvento del CoViD, la causa prevalente di insufficienza respiratoria in reparto è stata la polmonite interstiziale. Le polmoniti di altra natura ne erano spesso una complicanza. Nei primi mesi del 2021 si è aggiunta l'incognita della reinfezione da varianti.

Descrizione del caso clinico: Uomo 61 anni, emiplegia sinistra in esiti di ictus, cardiopatia ischemica, diabete mellito tipo 2, recente CoViD-19. Accesso presso altro Presidio per epatocolangite da E. coli, portatore di CVC. Insorgenza di insufficienza respiratoria acuta. In presenza di IgM, ripete tampone per SARS-CoV-2 che risulta positivo. Si pone sospetto per reinfezione. HRTC torace all'ingresso in reparto compatibile con processo flogistico. Peggioramento clinico laboratoristico e riscontro di infezione urinaria da E. faecalis e C. albicans trattata con pip/tazo, tigeciclina e fluconazolo. Per mancata risposta della sintomatologia respiratoria alla terapia, ripete TC che mostra multipli noduli bilaterali compatibili con polmonite da SARS-CoV-2, quadro atipico, o con eziologia fungina. Per la presenza di fattori di rischio per infezione micotica generalizzata inizia caspofungin con pronta risposta.

Conclusioni: Questo caso evidenzia la complessità diagnostica nei pazienti comorbidi e fragili. Spesso l'inquadramento diagnostico richiede numerose indagini e rivalutazioni strumentali. Le reinfezioni da SARS-CoV-2, seppur rare, andrebbero considerate nella diagnostica differenziale delle polmoniti e, se presenti fattori di rischio per infezione micotica generalizzata, anche tale eziologia.

Sartorializzazione della terapia nei pazienti comorbidi e fragili affetti da polmonite da SARS-CoV-2

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Premesse: La pandemia da SARS-CoV-2 ha colpito in particolar modo i più fragili: anziani, con comorbilità, istituzionalizzati e affetti da patologie croniche degenerative come i disturbi cognitivi. In questi pazienti la scarsa compliance alle cure e il maggior rischio di complicanze intraospedaliere, come il delirium, ne compromettono la sopravvivenza.

Descrizione del caso clinico: Donna, 67 anni, tiroidite di Hashimoto, artrite reumatoide, disturbo neurocognitivo maggiore severo. Giunge per insufficienza respiratoria acuta in polmonite interstiziale SARS-CoV-2 relata. Per compromissione degli scambi gassosi inizia NIV a seguito della quale non solo non vi è stato significativo miglioramento clinico, per scarsa compliance, ma un decondizionamento globale con l'insorgenza di disfagia e delirium ipocinetico. Si è quindi optato per una deescalation della intensità di cura mediante O2 terapia con HFNC. Inoltre è stata data priorità al care; in particolare alla stimolazione sensoriale attraverso un programma di FKT quotidiano per il mantenimento delle autonomie residue e la supplementazione nutrizionale, evitando il posizionamento di SNG, possibile causa di complicanze. Tale intervento multidisciplinare ha ottenuto ottimi risultati che hanno portato alla guarigione della paziente con recupero delle capacità funzionali precedenti il ricovero.

Conclusioni: La sartorializzazione della terapia, un approccio olistico e multidisciplinare con un impegno coordinato e sinergico di tutto il personale di reparto, si rivela spesso la strategia vincente in questi malati.

New biotechnologies: the importance of biofilm management and wound bed preparation to promote tissue repair in the management of the diabetic foot. Case report

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Background: It is estimated that in 2035, the global diabetes mellitus prevalence will rise to affect about 600 million people, and of these 80% in developing countries. Investing appropriately in the care of the diabetic foot is therefore a valid rationale for reducing healthcare costs and improving care.

Description of the case: 80-year-old patient with obstructive arterial disease of the lower limbs, his left foot following gangrene.

The extent of skin damage was assessed using the "Texas scale" and "WBS" scale. After the amputation, negative pressure therapy was applied to favor the closure of the lesion by secondary intention, however after 15 days of treatment, there were no significant signs of healing/improvement, instead an increase in exudate on the ulcer bed (translucent background) was observed, leading to suspension of the treatment. The patient was put in charge to a specialist nurse, expert in Vulnology, who assessed the tissue by visual examination, identifying the presence of biofilm, which was most likely responsible for the stasis in the spontaneous proliferation process. The expert nurse therefore decided to implement wound bed cleaning strategies using, a medical device composed of an oleic matrix releasing Reactive Oxygen Species (ROS), which acts through the local creation of a microenvironment unfavorable to pathogens growth, therefore favouring the reduction of the bacterial load.

Conclusions: The Wound Care specialists are skilled in identifying the local and systemic factors that impair healing, and defining the correct multidisciplinary team.

Osteopontin role and intima media thickness in patients with systemic lupus erythematosus

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Background and Aim: Patients with SLE may benefit from additional screening for CV risk factors and more intensive prevention strategies; to estimate subclinical atherosclerosis have been used different non-invasive approaches, however evaluation of carotid intima media thickness (cIMT) is the most used for risk stratification in SLE patients. We have tried to test the potential role of osteopontin (OPN) as a biomarker of the subclinical atherosclerosis associated with SLE.

Materials e Methods: Eighty females affected by SLE were enrolled in the present study. All subjects fulfil the diagnostic criteria of the American College of Rheumatology for SLE diagnosis and were in an inactive stage of the disease defined as SLE disease activity index score (SLEDAI) ≤ 4 . None of subjects had an history of clinical CV or cerebrovascular events in addition.

Results: As expected given the young median age (42.6 years), patients showed low CV risk as calculated by the Heart Score. CCA-IMT was detected and significantly correlated with hs-CRP. A strong correlation with CCA IMT was also reported for OPN. Patients with SLE showed significantly higher serum levels of both hs-CRP and OPN; in addition SLE patients were also characterized by increased CCA-IMT.

Conclusions: The main finding of the present study is that serum levels of OPN overcome high-sensitivity CRP as biomarker of subclinical atherosclerosis in patients with SLE. On this basis, OPN emerges as potential sensible marker of early atherosclerosis in the setting of patients with SLE.

Nursing care and quality of life of caregivers in Alzheimer's disease: a literature review

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Introduction and Aims: The family member who cares for an Alzheimer's patient (informal caregiver) indirectly suffers the consequences of this highly debilitating disease and the resulting burden of care. This leads to a lower quality of life (QoL) such that they are considered the "hidden victim" of the disease. This review aims to define the level of QoL of informal caregivers of Alzheimer's patients and to identify effective nursing interventions in relieving the caregiver burden.

Methods: Search was performed in several databases and object-specific journals without predefined limits. The study population included informal caregivers of Alzheimer's patients. Outcomes considered in the review were: QoL, caregiver burden, mortality, costs, patient admission to nursing homes, quality of care.

Results: Thirteen studies were included. Results demonstrate a low level of QoL in caregivers of Alzheimer's patients, up to ten times lower than the general population and several times lower also compared to caregivers of other chronic patients (*i.e.* cancer). Among the nursing interventions identified in this review, the technological approach, along with emotional and training support, seems to be the most effective.

Conclusions: The limited number of validated care practices and the heterogeneity of caregiver QoL measurement methods show that the informal caregivers' needs are poorly recognized. Promoting the caregiver's QoL should be the main prevention tool in Alzheimer's disease in terms of health, quality of care, and health-care costs.

Livello di conoscenza degli studenti infermieri sulla corretta esecuzione dell'emocultura: uno studio cross-sectional

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Premesse e Scopo dello studio: Una corretta esecuzione dell'emocultura da parte degli studenti infermieri è fondamentale per garantire assistenza di qualità durante il tirocinio e come futuri professionisti. Lo scopo dello studio è di determinare il livello di conoscenze degli studenti sulla corretta esecuzione della procedura. **Materiali e Metodi:** Studio cross-sectional multicentrico (gennaio-marzo 2021) in un campione di studenti (n=514) del Corso di Laurea in Infermieristica. È stato somministrato un questionario composto da 14 domande su: conoscenza delle Linee Guida, esperienza di esecuzione della procedura in ambiente pre-clinico e clinico e necessità di formazione.

Risultati: La maggioranza di risposte errate riguardano: la disinfezione del tappo di gomma dei flaconi (44.9%), il volume di sangue per set (43.1%) e l'effettuazione del prelievo da catetere venoso centrale (CVC) e/o da venipuntura periferica in caso di sospetta infezione associata al CVC (33.2%). Il 30.4% dichiara di aver effettuato laboratori pre-clinici sulla procedura mentre il 67.7% di averla effettuata in tirocinio.

Conclusioni: Complessivamente, è emerso un buon livello di conoscenze delle Linee Guida rispetto alla procedura dell'emocultura; tuttavia, esistono lacune rispetto ad alcune importanti raccomandazioni. I risultati suggeriscono importanti riflessioni che riguardano l'impatto dei modelli di ruolo negli ambienti clinici e la loro relazione con le conoscenze apprese in ambienti d'aula o simulati.

Pneumomediastinum and pneumothorax in CoVID-19 patients: a case series

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Background: Pneumomediastinum and pneumothorax are not rarely observed during the CoVID-19 pandemic especially among mechanically ventilated patients. We present a case series of six patients with pneumothorax and pneumomediastinum in CoVID-19 pneumonia.

Presentation of the case series: All patients were males with a mean age of 59.63 years. Two patients had spontaneous pneumomediastinum and pneumothorax. One of them denied tobacco or respiratory disease, while the other patient had an history of spontaneous pneumothorax. Four of the six patients received non-

invasive ventilation and the average number of days between ventilation and subsequent barotrauma was 8,5 days. Positive end expiratory pressure (PEEP) was started at 10 cmH2 and then reduced to 8 cmH2. Three of patients had not significant comorbidities, while two of them had a medical history significant for hypertension, type 2 diabetes and ischemic heart disease. Five of six patients had an extensive bilateral interstitial pneumonia and no evidence of pulmonary embolism, three of them also had secondary bacterial pneumonia. Pneumomediastinum was treated conservatively in all patients. One patient with extensive pneumothorax required drainage. The probability of pneumomediastinum and pneumothorax increase with the combination of parenchymal injury from CoVID-19 infection and inflammatory response with additional positive pressure ventilation and likely super imposed bacterial infection.

Conclusions: Pneumomediastinum and pneumothorax are important CPAP/NIV therapy complications in CoVID-19 and they should be considered if patients begin to deteriorate.

Acute intestinal ischemia in a CoVID-19 young patient: a case report

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Presentation of the case: We report the case of a 28-year-old patient who presented to the Emergency Room with severe abdominal, abdominal distention, tenderness. He had a 2 week history of persistent fever and cough in SARS-CoV-2 infection; WBC 19,600 cells/mm3, CRP 20,57 mg/L, D-Dimer 5830.0 microg/L and procalcitonin 9,18 ng/ml. The contrast-enhanced abdominal CT showed pneumoperitoneum and ascending colon wall thickening. The patient underwent emergent laparotomy and he was found a multiple transverse colon perforation. He underwent segmental resection of the transverse colon and ileostomy. He was diagnosed with a severe CoVID-19 pneumonia and required noninvasive ventilation (NIV). In the hospital the patient suffered severe intestinal bleeding treated with interventional radiographic embolization. The Pathology revealed extensive areas of ischemic changes, including extensive necrosis, microvascular thrombosis and focal hemorrhages. The patient was discharged after 35 days.

Conclusions: Gastrointestinal symptoms are present in up to 28% of patients with CoVID-19. Pathogenesis behind acute intestinal ischemia caused by SARS-CoV-2 is multifactorial including diffuse endothelial inflammation, increased procoagulant factors and direct bowel damage by SARS-CoV-2 given high affinity to ACE2 receptor including ileal and colonic enterocytes. This is a rare case of acute intestinal ischemia in young patient in absence of pre-existing comorbidities (hypertension, diabetes, obesity, obstructive sleep, apnea, essential thrombocytosis) than can occur as a presenting feature or a late complication of CoVID-19.

The nutritional status of patients with heart failure: role in short-term prognosis after hospital recovery

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Background: Heart failure (HF) is the leading cause of mortality and morbidity in Western countries. The guidelines did not sufficiently clarify the role of nutritional status on the progression and mortality of heart failure. The purpose of the study was to correlate the survival outcome after hospitalization with the nutritional status of patients with HF.

Methods: A total of 97 patients with class III and IV NYHA HF, were

divided according to nutritional status in cachectic, normal weight and obese sarcopenic subjects. The ADHF/proBNP prognostic score was calculated for each patient. Fischer exact test was used for statistical analysis. The Mann and Whitney test has been used to correlate mortality and ADHF/NTproBNP score. Values of $p < 0.05$ were considered statistically significant.

Results: Out of the total of patients, 29 died and 67 survived in an observation period of one year. Survival is statistically shorter in malnourished than in normal weight patients (OR: 23.72; 95% CI: 1.37-408, $p=0.006$). Mortality is higher in patients with sarcopenic obesity than in cachectic patients, (OR:39; 95%CI: 2.24-676.8, $p=0.0001$). The ADHF/NTproBNP score correlated with short-term mortality for a score below 13 (OR: 6669; 95% CI: 128.97- 345.2 $p=0.0001$).

Conclusions: An altered nutritional status is significantly present in patients with HF. Sarcopenic obese patients are exposed to higher mortality. The ADHF/NT-pro-BNP score proved to be particularly sensitive and accurate in establishing a greater risk of short-term mortality.

The “cancer related fatigue” in patients with gastric cancer: the results of a meta-analysis

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Background: “Cancer related fatigue” (CRF) is defined as a stressful, persistent, subjective sense of physical, emotional, cognitive fatigue or exhaustion related to cancer and its treatment, not proportional to recent activity. Few information is available on the risk factors of CRF in gastric cancer (GC).

Methods: A literature search of MEDLINE, EMBASE, Ovid and Cochrane Library was performed for studies that reported data on clinic-pathological and survival outcomes on CRF in GC. Meta-analysis was performed using random-effect models and between-study heterogeneity was assessed. Values of $p \leq 0.05$ was considered statistically significant for the association to CRF and several variables such as type of surgery, extension of disease, chemotherapy.

Results: 845 patients (538 males and 307 females), mean age of 58.1 ± 11.2 . All patients underwent surgery, 187 with extensive GC (total gastrectomy) and 591 patients with distal GC with sub-total gastrectomy. 564 histology resulted in early GC and 281 advanced GC. At staging, 495 patients were classified as having stage I malignancy while 150 patients were included in stage II/III and therefore were elected to neo-adjuvant treatment with chemotherapy or radiotherapy. CRF was more frequent in advanced GC patients than in Early GC ($p=0.0019$; OR=1.60, CI=1.19-2.15) and in patients undergoing chemotherapy ($p=0.0001$; OR =0.52, CI=0.39-0.69).

Conclusions: In GC, the spread of the tumor and the use of are decisive elements for the onset of CRF.

Ipertensione portale idiopatica non cirrotica: inquadramento e analisi della casistica in un centro epatologico di terzo livello

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Premesse e Scopo dello studio: Lo scopo dello studio è analizzare le caratteristiche dei pazienti affetti da INCPH dell’ambulatorio della Medicina Interna ed Epatologia dell’AOU Careggi e ricercare analogie e differenze con i casi riportati in letteratura.

Materiali e Metodi: E’ stato preso in esame un gruppo di 8 pazienti (M/F: 5/3; $50,3 \pm 13,3$ anni), considerando l’anamnesi pa-

tologica, la presentazione clinica all’esordio e complicanze al follow-up, emocromo con formula, ALT, AST, fosfatasi alcalina, GT, bilirubina, albumina, INR, screening trombotico, e i reports istopatologici delle biopsie epatiche.

Risultati: La maggior parte dei pazienti ha manifestato un esordio sintomatico, e presentava già prima della diagnosi una condizione predisponente. Le alterazioni degli esami ematici si sono rivelate aspecifiche. Lo sviluppo di trombosi venosa portale era collegato a condizioni pro-trombotiche, infine alla biopsia si sono avuti risultati contrastanti perché sebbene la metà dei casi ha riscontrato iperplasia nodulare rigenerativa, non è stata evidenziata venopatia portale obliterativa.

Conclusioni: L’INCPH è probabilmente sottodiagnosticata soprattutto nel mondo occidentale. Questa condizione dovrebbe essere ricercata in situazioni cliniche come la cirrosi criptogenetica, nota per essere facilmente confusa con l’INCPH, pertanto l’istologia del fegato diventa necessaria per una diagnosi corretta. L’analisi dei casi che si presentano a centri terziari consente di comprendere l’eterogeneità di presentazione ed evoluzione della patologia.

Prosthetic valve endocarditis caused by *Corynebacterium afermentans*

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Description of the case: A 74-year-old female went to our observation for fever and transient right brachial hyposthenia. Past medical history: double prosthetic mitral and aortic valve replacement 3 months ago with post-operative course complicated by positive BAL for *Klebsiella oxytoca* and *Pseudomonas aeruginosa* treated with targeted antibiotic therapy; CABG; CKD. The laboratory test showed neutrophilic leukocytosis and elevation of CRP. Brain CT TO e T48h: chronic hypoxic leukoencephalopathy. Chest CT scan: everted area (15x7mm) located postero-superiorly to the prosthetic plane and separated from the aortic wall by a thin septum. Echo TE: suspected pseudoaneurysm with fistulous tract between native non-coronary sinus and left ventricular outflow tract. Blood cultures were positive for *Corynebacterium afermentans*. After cardiac surgeon consult it was indicated conservative therapy. We started ceftriaxone 2g+gentamicin 80 mgx2 iv with reduction of the inflammation index and discharge in home care service and specialist follow-up.

Conclusions: Coryneform organisms are uncommon causes of infections and as commensals of the skin and mucous membranes are often dismissed as culture contaminants. However, there are now over 100 published reports of endocarditis due to *Corynebacterium* species, mostly involving prosthetic or damaged native heart valves. The increasing number of cases of endocarditis due to coryneform organisms suggests that laboratories have become more capable of overcoming the difficulties associated with the isolation, identification, and susceptibility testing of the coryneforms.

A case of extrapulmonary tuberculosis

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Description of the case: A 21-year-old man immigrant from Nigeria came to our observation for swelling of the chest wall and fever. At laboratory tests: neutrophilic leukocytosis, absence of HIV/others viruses infection. Chest X-ray was not conclusive, an abdomen echography showed diffuse lymphadenopathy. In the suspicion of a lymphoproliferative disease we performed a total body CT, that detected colliquated lymph nodes in the laterocervical, abdominal and pelvic stations; at the left pectoral region there was an abscess collection (58x54mm) crossing the intercostal spaces until to the anterior pleura. Ecocardiography showed mild pericardial effusion. The thoracic abscess was drained and a sample of PCR for *Mycobacterium tuberculosis* was positive. We started therapy with rifampicin, isoniazid, pyrazinamide, ethambutol and methyl-

prednisone, awaiting for cultural examination The patient was discharged in good clinical status with diagnosis of disseminated lymph node tuberculosis (LNTB) fistulized to the chest wall abscess and he was referred to specialist follow-up.

Conclusions: The current epidemiological situation of TB is characterized by an increase in immigrants. Integration of specialist skills is necessary for a correct diagnosis and optimal management of TB in immigrants that have linguistic and cultural barriers, to reduce infection in the entire community. The objective of the present report is to emphasize that LNTB should be considered as a noteworthy differential diagnosis in patients with enlarged lymph nodes, particularly in tuberculosis-endemic countries.

Actinomyces bacteremia secondary to pseudomembranous necrotizing oral-tracheobronchial and invasive pulmonary aspergillosis in a patient with CoVID-19

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Description of the case: A 79-year-old smoking patient with COPD, diabetes, previous bladder cancer, and family members positive for SARS-CoV2 was admitted to the hospital for pneumonia and severe respiratory insufficiency. During hospitalization, the nasopharynx sample was persistent negative for SARS-CoV-2, but the serology positive. CT showed signs of interstitial pneumonia. Antibiotic therapy, high-dose dexamethasone, and oxygen therapy were introduced. After an initial worsening of clinical conditions, inflammation indices normalization and marked clinical improvement until the suspension of oxygen therapy were observed. In the discharge phase, fever and increase in CRP and IL6 returned without respiratory failure. Black lesions with a necrotic ulcerated base located on the palate and posterior tongue were observed. Blood cultures were positive for *Actinomyces oris*, and *Aspergillus galactomannan-antigen* was detected. CT showed consolidations, cavitations, ground-glass opacity. Fibrobronchoscopy found tracheobronchial full-layer involvement with pharyngeal/laryngeal and bronchial obstruction by necrotic pseudomembranes. BAL was positive for SARS-CoV-2 and *Aspergillus niger*, and *Aspergillus fumigatus*. Voriconazole and beta-lactam antibiotics were started. The patient improved with the need for repeated FB to eliminate the pseudomembranes, but he died in the ICU due to heart failure.

Conclusions: Hematogenous spread of *Actinomyces* is rare as well as pseudomembranous necrotizing oral-tracheobronchial aspergillosis, but to be considered in CoVID-19 patients receiving high doses of steroids.

A fortuitous detection of composite heterozygous S/C sickle cell disease

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Description of the case: A 21-year-old male immigrant from Mali presented to our hospital with abdominal pain. Laboratory tests revealed elevation of CRP and LDH and mild hypochromic microcytic anemia. CT abdomen and pelvis reported hyposplenism and avascular osteonecrosis of femur heads and lumbar spine. After orthopedic and hematologist consults we performed: - peripheral blood smear, showing abundant red blood cell polychromasia and anisocytosis; - capillary electrophoresis of hemoglobin and HPLC, revealing the double SC heterozygosity; - EKG and echocardiography, excluding CV complications; - ocular evaluation, excluding proliferative sickle retinopathy. We made diagnosis of composite heterozygous S-C sickle cell disease. The patient was referred to a second level specialist center for further investigation of the case.

Conclusions: Hemoglobin SC diagnosis is delayed and performed

in adulthood in 29% of cases. The unique pathology of HbSC disease is complex, characterized by erythrocyte dehydration, intracellular sickling and increased blood viscosity. Systemic complications include vaso-occlusive crises (65%), retinopathy (35%), aseptic hip osteonecrosis (23%) and splenic infarctions (19%). For people with HbSC, unlike HbSS sickle cell disease, the use of disease modifying RBC transfusions, phlebotomy and hydroxycarbamide are supported by low-level evidence of safety and efficacy. Clinical and translational research is needed to develop targeted treatments and to validate management recommendations for efficacy, safety and impact on quality of life for people with HbSC.

Studio osservazionale sulle pancreatiti acute nelle Medicine toscane: dati preliminari

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Premesse e Scopo dello studio: La pancreatite acuta (PA), è patologia complessa con decorso variabile spesso difficile da prevedere all'inizio del suo sviluppo. Le linee guida (LG) si concentrano in particolare sulla fase iniziale, dimostrando come l'approccio nelle prime 48h sia determinante per una corretta gestione diagnostica e terapeutica. Scopo dello studio è quello di valutare l'accuratezza del percorso diagnostico-terapeutico dei pazienti con PA ricoverati in area di degenza internistica identificando la tipologia dei pazienti trattati, le comorbidità e l'aderenza alle indicazioni delle LG

Materiali e Metodi: SOPAMI (Studio Osservazionale Pancreatite Acuta Medicina Interna) è uno studio multicentrico che ha riguardato pazienti ospedalizzati per PA in reparti toscani di Medicina Interna. Abbiamo valutato 211 pazienti consecutivi: età media di 69.7±17.7aa; maschi (50.7%) femmine (49.3%); presentiamo i dati anamnestici inerenti la pregressa patologia pancreatico-biliare e le comorbidità.

Risultati: Dei 211 pazienti affetti da PA 42 (20%) si presentavano con recidiva e 10 (4,8%) con riacutizzazione di pancreatite cronica; in anamnesi è risultata una colelitiasi in 61 (29.1%) e colecistectomia in 33 (15.7%); 33 (15.7%) obesi; 32 (15.2%) diabetici; 52 (24.9%) con anemia; 4 (1.4%) cirrotici; 22 (10%) con cancro attivo. In 171 (81.4%) non è stato rilevato consumo di alcolici

Conclusioni: Il rilievo già nella fase iniziale di colelitiasi, del consumo alcolico, della possibile pregressa patologia pancreatica e delle comorbidità è rilevante ai fini diagnostico-terapeutici e della prognosi.

Is it really a case of Takotsubo syndrome?

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Background: Takotsubo syndrome (TTS) usually occurs after intense physical or emotional stress. It is rare (2-3% in Western countries), prevalent in postmenopausal women (90%).

Description of the case: Puerpera, 33 yo, in the Emergency Room for asthenia and hypotension. EKG: marked sinus bradycardia (F.C. 30/min). Treated for 4 days with methylprednisolone 1g i.v. for post-partum poussè of multiple sclerosis. Immediately after administration of atropine (0.5 mg iv): chest pain and hypertensive crisis. EKG: anomalies of repolarization. Echocardiogram: akinesia mid-apical segments, E.F: 45%, left ventricle within limits. Cardiac markers on the rise. Coronarography: coronary vessels free; aki-

nesia of the mid-apical segments. In the following days: normalization of cardiac markers and EKG. Discharged after 7 days. Diagnosis: TTS. Subsequent MRI checks: restitutio ad integrum.

Conclusion: This clinical case raises a number of questions. Is bradycardia of onset a symptom of TTS or a side effect of high-dose steroid therapy? Is it TTS or peripartum cardiomyopathy (PPCM)? In the hypothesis of TTS, could the administration of atropine have caused it? For the first and last question, there is, in the literature, some data about the possible iatrogenic origin of the case. As for the differential diagnosis, however, post-partum women are at increased risk of TTS. TTS and PPCM occur in non-cardiopathic mothers with acute heart failure and reduced E.F. Prognosis is better in TTC than in PPCM. In our patient, the complete recovery on MRI checks, makes us think of TTS rather than PPCM.

Pathophysiology of thromboembolic risk in SARS-CoV-2 pneumonia

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Background: SARS-CoV-2 disease may be associated with a state of hypercoagulability and an increased risk of both venous and arterial thromboembolism. Clinical and biological evidence has documented a high thromboembolic risk in the acute phase of the infection, but the incidence of the risk in the late phase of the disease requires further investigation.

Description of the case: A hypertensive and diabetic patient comes to the emergency room for dyspnea and fever. It is hypotensive, tachycardic and hypoxemic. Elevated D-dimer and troponin. ECG: sinus tachycardia and right bundle branch block. Echocardiogram: hypertensive heart disease and right overload. Chest CT: bilateral interstitial pneumonia, with filling defects at the bifurcation of the right pulmonary artery. Nasopharyngeal swab for SARS-CoV-2: positive.

Conclusions: SARS-CoV-2 is configured as a multidimensional disease whose characteristic physiopathological and clinical aspects are being defined: a) an increased immunological and inflammatory response with activation of a cytokine storm and consequent coagulopathy, which favours both venous thromboembolism events and thrombosis *in situ* in the pulmonary arterioles and alveolar capillaries; b) a high intrapulmonary shunt, which accounts for the severity of respiratory failure, attributed to a reduced hypoxic pulmonary vasoconstriction with pulmonary neoangiogenic phenomena. These patients may benefit from anticoagulant therapy initiated as early as the diagnosis of SARS-CoV-2 pneumonia.

"Proarrhythmic" role of CoViD-19

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Background: CoViD-19 infection can induce myocardial damage and heart failure, potentially complicated by arrhythmias, both as a direct consequence of CoViD-19 infection on cardiac activity, and as an effect of prescribed drug therapies. In fact, drugs such as azithromycin or hydroxychloroquine, used in CoViD-19 infection, can lengthen the QT interval with the possible risk of arrhythmias.

Description of the case: A 40-year-old patient hospitalized for CoViD complains of heartbeat and atypical chest pain. Normal vital signs. ECG: rapid ventricular response atrial fibrillation. Echocardiogram: normal. Chest x-ray: bibasal interstitial pneumonia. Elevated troponin.

Conclusions: Arrhythmias in patients with CoViD -19 infection are probably the consequence of direct myocardial damage or may occur as a result of metabolic disorder, hypoxia, neuro-hormonal alterations or inflammatory stress in the context of acute viremia. The onset of an arrhythmia in the presence of elevated cardiac markers may be an indication of underlying myocarditis. Since hypoxia and electrolyte abnormalities that can facilitate the onset of arrhythmias are common in the acute phase of the disease, especially in the most severe pictures, the exact arrhythmic risk of patients with less severe pictures and of patients in the post-acute phase is currently

unknown. Stratification of the long-term arrhythmic risk of patients who have experienced episodes of arrhythmias in the acute phase of the disease is essential for their correct management.

Quando la clinica inganna: un caso di sepsi a partenza dai tessuti molli

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Premesse: Uomo di 85 anni, affetto da diabete mellito, cardiopatia ipertensiva, FAC, pregresso ictus. Giunge alla nostra osservazione per stato settico in TVP arto inferiore dx ed allettamento da alcuni giorni.

Descrizione del caso clinico: In realtà l'esecuzione di ecocolor-doppler non confermava la diagnosi iniziale di TVP, venendo invece individuato edema dei tessuti molli a livello di coscia con raccolta fluida. Una TC ginocchio, coscia e addome documentava la presenza di materiale fluido con inclusi gassosi fino al muscolo vasto mediale. Tre successive emocolture evidenziavano un quadro settico da *Staphylococcus aureus*. Il paziente veniva pertanto sottoposto a terapia antibiotica prima a largo spettro e poi specifica su antibiogramma e a numerose sedute di drenaggio e lavaggio ascessuali in collaborazione coi colleghi ortopedici. Contemporaneamente il paziente eseguiva FKT con ripresa della mobilità già dalle prime giornate di ricovero.

Conclusioni: La rapida esecuzione degli accertamenti diagnostici mirati e l'approccio multidisciplinare al caso, hanno permesso di "aggredire" il prima possibile l'infezione portando una veloce risoluzione clinica e laboratoristica e alla ripresa funzionale del paziente.

Criptococcosi invasiva: se l'immunodeficienza rimane misconosciuta

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Premesse: Quando una malattia è così rara da passare inosservata.

Descrizione del caso clinico: Uomo di 80 anni ricoverato per febbre e peggioramento di ulcere croniche alle mani. In anamnesi, malattia di Behcet in terapia cronica con prednisone per fallimento delle precedenti terapie (colchicina, HCQ e MTX), e plurimi carcinomi squamosi cutanei. Al ricovero era confuso, disorientato, sofferente per multiple ulcerazioni necrotiche. Agli esami ematochimici segnaliamo severa ipogammaglobulinemia e linfopenia con CD4+ 90/uL. Rianalizzando la documentazione precedente notiamo che tali alterazioni erano presenti da dieci anni; il test HIV era negativo. Inoltre la diagnosi di Behcet era stata posta per la presenza di sole ulcere orali recidivanti e positività per LAC. Questi dati e la difficile guarigione delle lesioni cutanee, espressione di immunodeficienza, hanno indotto la ricerca dell'antigene criptococcico, positiva, e quindi l'esecuzione di tac total body e rachicentesi, indicative di criptococcoma cerebrale e meningite. Si avviava terapia con amfotericina B liposomiale, flucitosina e immunoglobuline.

Conclusioni: I deficit immunitari documentati da anni, non ascrivibili alle terapie immunosoppressive poiché preesistenti alle stesse, la presenza di lesioni cutanee croniche e la ricorrenza di neoplasie cutanee, avrebbero potuto far supporre la presenza di linfocitopenia CD4 idiopatica. Condizione rara, caratterizzata da una conta assoluta di CD4<300/uL, non spiegata da altre cause (HIV, infezioni, farmaci), associata ad infezioni opportunistiche, neoplasie e disordini autoimmuni.

Valutazione dello stato dell'osso in giovani donne affette da anoressia nervosa mediante la tecnologia REMS (radiofrequency echographic multi spectrometry)

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Premesse e Scopo dello studio: La perdita di densità minerale ossea (BMD) nei pazienti con anoressia nervosa (AN) si verifica rapidamente e persiste anche dopo il recupero del peso. La misurazione della BMD con DXA è il "gold standard" per la diagnosi di osteoporosi. E' ora disponibile un ecografo che utilizza una tecnologia basata sul metodo REMS. Scopo del nostro studio è stato quello di valutare la BMD di un gruppo di pazienti affette da AN ed un gruppo di controllo con metodica DXA e con REMS.

Metodi: In 55 donne affette da AN (29.8±11.2 aa) ed in 25 controlli, abbiamo misurato la BMD a livello lombare (BMD-LS), femorale con metodica DXA e con tecnica REMS.

Risultati: I valori di BMD risultavano ridotti nei soggetti affetti da AN rispetto ai controlli a livello di tutti i siti scheletrici esaminati sia con DXA che con REMS. Come atteso abbiamo rilevato una correlazione positiva tra i valori di BMD con metodica DXA a livello di tutti i siti scheletrici; tale correlazione significativa era evidente anche tra BMI e BMD con REMS ($p < 0.05$). Inoltre 6 pazienti affette da AN avevano riportato fratture (3 vertebrali, 2 tibia e perone, 1 malleolo); anche in questo caso la metodica REMS è risultata al pari della DXA di discriminare le pazienti con frattura e senza frattura.

Conclusioni: I nostri dati confermano la validità della REMS nella valutazione della BMD in pazienti affette da AN; pertanto la REMS può essere proposta come alternativa alla misurazione DXA in una condizione che interessa prevalentemente giovani donne in età fertile permettendo un approccio diagnostico-terapeutico di prevenzione.

Arterial hypertension and diabetes mellitus in CoViD-19 patients: what is known by gender differences

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Background and Aim: Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) has infected >100 millions of people in the World. Hypertension (HT), chronic heart disease (CHD), and diabetes mellitus (DM), increase susceptibility to SARS-CoV-2 infection. We designed this retrospective study to assess the gender differences in hypertensive diabetic SARS-CoV-2 patients.

Materials and Methods: We enrolled 1014 patients with confirmed CoViD-19 admitted into different Hospitals of Campania. All patients were allocated into 2 groups: diabetic-hypertensive group (DM-HT group) that includes 556 patients and the nondiabetic-non-hypertensive group (non-DM, non-HT group) comprising 458 patients. The clinical outcomes (*i.e.*, discharges, mortality, length of stay, therapy, admission on the intensive care) were monitored from 26 March to June 30, 2020.

Results: We have documented that, in DM-HT group, male subjects, compared to female subjects, have higher proportion of CHD. Similarly, in DM-HT groups, male subjects, reported higher hospital stay, compared to female subjects (22 days vs 16 days, respectively, $p < 0.05$). In DM-HT groups, male subjects, compared to female, reported higher admission in IUC (18% vs 11%, respectively, $p < 0.05$) and higher death rate (15% vs 10%, respectively, $p < 0.01$).

Conclusions: Our data described gender differences in DM-HT CoViD-19 patients. Future studies, by gender differences related to CoViD-19 infection are needed, to find patient-appropriate therapies.

Aderenza terapeutica alle linee guida nella pancreatite acuta in Medicina Interna: dati preliminari dallo studio SOPAMI (Studio Osservazionale PANcreatiti Medicina Interna)

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Premesse e Scopo dello studio: La pancreatite acuta (PA) è una importante causa di ospedalizzazione; un corretto approccio terapeutico iniziale può modificare decorso e durata della degenza. Le linee guida raccomandano l'alimentazione per os rispetto al digiuno e l'alimentazione enterale rispetto alla parenterale. Ulteriori raccomandazioni riguardano la fluidoterapia e la scarsa utilità di antibiotici, gabesato e inibitori di pompa protonica (PPI). Scopo del presente studio è valutare l'aderenza terapeutica alle raccomandazioni riportate nelle linee guida in pazienti ospedalizzati per PA in Medicina Interna.

Materiali e Metodi: SOPAMI è uno studio multicentrico osservazionale condotto su pazienti ricoverati per PA in reparti di area medica in Toscana. Sono stati arruolati in modo consecutivo 210 pazienti con età mediana di 74 anni. Sono state raccolte le terapie adottate come: tempistiche e modalità del supporto nutrizionale (digiuno, alimentazione orale, enterale, parenterale), modalità di idratazione (assente, cristalloidi/colloidi, con cut-off di volume infuso pari a 1000 cc nelle prime 24h), trattamento antibiotico, con gabesato e con PPI.

Risultati: Il digiuno veniva applicato nel 16.7% dei casi. Il gabesato veniva somministrato nel 13.8%. I PPI a 146 pazienti (69.9%). L'idratazione con cristalloidi era inferiore a 1000 cc/24h nel 27.6% dei casi, superiore a 1000cc/24h nel 67.6%.

Conclusioni: Una migliore aderenza alle linee guida della terapia delle PA è necessaria per un miglior decorso, minori tempi di degenza e miglior rapporto costi/benefici.

Hypopituitarism and immunodeficiency

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Background: Authors emphasize the role of hormones for T and B cell to generate humoral or cell mediated immune responses.

Clinical case: A 39-year-old Caucasian man presented to Department for not pruritic, Darier's sign positive, red-brown macules gradually appeared and distributed over trunk, upper arms and neck. Medical history included a GH-deficiency treated from 12 to 16 year old. No history of infections, familiar immunodeficiency or thyroid disease Examination of the body was normal. Hormones dosage showed hypothyroidism while thyroid antibodies were negative. Data confirmed low levels of GH showing also testosterone deficiency. Antipituitary antibodies were negative. We revealed humoral immunodeficiency (low Immunoglobulins) with normal values of T and B cell subpopulations. Brain MRI evidenced Chiari type I malformation and reduced volume of the anterior pituitary gland. Bone density scan evidenced a severe osteoporosis. Histology of skin biopsy confirmed mast cell accumulation in a perivascular distribution within derma.

Conclusions: We first describe the association of hypopituitarism, immunodeficiency and mastocytosis. This association supports *in vivo* the functional link between the endocrine and immune systems as shown in studies where the development and function of the immune system are strictly related to hormonal levels. In this patient hormonal deficiency may have been the cause of immunodeficiency. We stress the importance of immunological screening in patients with hormonal deficiency. In some cases, replacement hormonal therapy can correct immunodeficiency.

A case report of bronchiectasis

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Background: Bronchiectasis is an irreversible and abnormal dilatation of one or more bronchi, as a result of destruction of the muscles and elastic connective tissues. Progressive lung damage is due to the disruption of the mucociliary clearance resulting in retention of secretions, which in turn attracts bacterial colonization

with chronic inflammation. Currently, the etiology of bronchiectasis remains unknown in a high percentage of patients (26-53%).

Description of the case: A 33-year-old non-atopic, non-smoker male, was referred for recurrent pulmonary infections (3-4/year) and progressive lung function deterioration despite aggressive multidrug antimicrobial treatment. He referred dyspnea and impaired physical performance. A perimembranous interventricular septal defect with no significant hemodynamic effects was reported. Physical examination revealed bilateral basal crepitations and crackles. HRCT revealed cystic spaces in the right hemi-thorax, suggestive of bronchiectasis with collapse of the right lung. Lung function tests revealed a mixed obstructive and restrictive pattern. Arterial blood gases showed respiratory alkalosis. Immunoglobulins dosage and sweat chloride were normal. Negative sputum culture and PPD skin test. Abdominal fat biopsy for amyloid deposits was negative. *In vitro* production of IFN- was reduced.

Conclusions: Aberrant IFN- secretion can be considered the trigger of bronchiectasis. IFN- has a critical role in innate and adaptive immunity. A diagnosis of IFN- deficiency should be taken into account in all patients with idiopathic bronchiectasis.

The problem of differential diagnosis between acute exacerbation of Echinococcosis infection and polycystic kidney syndrome

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Background: This case report deals with the problem of differential diagnosis between acute exacerbation of Echinococcosis infection and polycystic kidney syndrome.

Description of the case: A 72-year-old man with a history of pericardial, liver and lung resection related to echinococcosis infection (without record) came to the emergency room for lumbar and abdominal pain. To the physical examination there were no objective signs; blood tests indicated an increased creatinine levels (1,51 mg/dl vs 1,20 mg/dl in 2012). An abdominal CT shown thickening of the renal bands bilaterally with fluid layers along the ileopsoas muscles up to the pelvis and edematous thickening of the pre and pararenal adipose tissue and around the large vessels; finally there was a dimensional increase of the multiple cysts of both kidneys. In the suspicion of recurrence of echinococcal infection the patient has been subjected to examination of the leukocyte formula (that excluded eosinophilia), ultrasound characterization of cysts (that didn't show pathognomonic features for Echinococcal cysts), Echinococcus granulosus IgG research (positive). In the hypothesis that the cysts were benign, a nephrological evaluation was performed that did not exclude a polycystic kidney syndrome, therefore all the documentation for genetic tests was sent (in progress). During the hospitalization the patient was treated with analgesic therapy with good response.

Conclusions: This case report is an example of the main role that ultrasonography has in the characterisation and diagnosis of Echinococcal cysts.

CoViD-19 infection presenting as Guillain Barré syndrome

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Background: The Guillain Barré syndrome (GBS) has been linked with several viral infections including CoViD-19.

Description of clinical cases: 5 out of 352 patients referring to Department of Medicine for CoViD-19 infection showed neurological symptoms suggesting GBS. All patients were confirmed as SARS-CoV-2 infected by PCR on nasopharyngeal swabs. Mean age was 63.4. One was female and 4 males. In 3 cases the infection was mild, no lung involvement was found and no intensive care was required. Intensive care admission was needed in a case with bilateral interstitial pneumonia and neurological symptoms and in a patient with pulmonary embolism. All patients suffered for diffuse, severe motor and sensory involvement. In 4 cases the ranking score at admission was 4, in one was 5. Neurophysiological investigations were performed in all patients. Two cases

showed an acute inflammatory demyelinating neuropathy, in 3 cases an acute axonal neuropathy was observed. An increase in proteins was detected in cerebrospinal fluid. The presence of viral-RNA for SARS-CoV-2 in the CSF resulted negative as well as the antibodies against gangliosides. Two patients were treated with dexamethasone whereas in three patients immunoglobulins were added. Neurological symptoms gradually improved in all cases, in fact, the ranking score was 3 at hospital discharge.

Conclusions: Five patients showed neurological symptoms suggesting GBS. These symptoms before treatment resulted severe and improved after therapy. Further studies are needed to confirm whether the CoViD-19 can induce the clinical development of GBS.

Differences between SARS-CoV-2 pandemic first and second waves: survey on hospitalized CoViD-19 patients

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Background and Aim: The CoViD-19 pandemic experienced two main waves: February-June 2020 and October 2020-February 2021 respectively. The F. Miulli Hospital has activated intensive and semi-intensive care, pulmonology and infectious disease departments, for a total of 240 beds. Aim of the study was to evaluate differences between the two waves, in relation to the length of hospitalization and mortality.

Materials and Methods: We collected data from 1005 subjects (619 men). Age, gender, length of hospital stay, and deaths were analyzed.

Results: In the second wave we found a higher percentage of deaths (25.8 vs 19.4%; $p=0.043$) and among these a higher prevalence of males (66 vs 44.7%; $p=0.007$); furthermore, in the subjects hospitalized during the second wave, we observed a lower average age of the deceased (78 ± 13 vs 82 ± 8 years; $p=0.019$) and a shorter duration of hospitalization (18 ± 13 vs 21 ± 14 days; $p=0.004$). No significant difference was observed in the prevalence of males, however most affected (62.4% second wave vs 59.1% first wave), and in mean age (69 ± 15 seconds vs 68 ± 18 first wave).

Conclusions: The second wave showed greater lethality especially for males and younger subjects. Despite this, the duration of hospitalization was shorter, a condition probably linked to the experience acquired by the health professionals involved in the assistance and to a wider network of local structures capable of welcoming CoViD patients. The impact of the variants on the severity of the disease remains to be assessed.

Organizzare l'assistenza in un Ospedale da campo: l'esperienza al CoViD Hospital OGR di Torino

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Premesse: Nel mese di aprile 2020 in relazione alla pandemia da CoViD-19 che ha pesantemente colpito Torino, le OGR (ex Officine Grandi Riparazioni) da luoghi dedicati a iniziative di carattere culturale sono state trasformate in luoghi di cura. Il CoViD Hospital è stato predisposto con 12 stanze con 92 posti letto totali di cui 4 di terapia intensiva, 32 di sub-intensiva e 56 di degenza ordinaria.

Descrizione dell'esperienza: Per organizzare l'assistenza si è dovuto tenere conto di: - Infermieri e OSS con scarsa esperienza clinica. Infermieri e medici cubani con barriera linguistica; - 8.900 mt quadrati di superficie da riorganizzare da un punto di vista logistico-sanitario come un ospedale; - Protezione degli operatori dal contagio. L'organizzazione ha risposto con: - Un programma di formazione sul campo; - Un'equipe multi-professionale (infermieri cubani e italiani, medici italiani e cubani, fisioterapista, ecc.) dedicate a un gruppo di persone assistite; - Personale dedicato alla sub-intensiva; - Valenza riabilitativa per favorire il rientro al domicilio; - Attenzione alla comunicazione dell'equipe attraverso la documentazione clinica/terapia informatizzate; - Briefing e debriefing quotidiani multi-professionali; - Creazione di aree relax per il personale e incontri con lo psicologo.

Conclusioni: La struttura a settembre 2020 è stata trasferita e

riorganizzata all'interno dell'Ospedale Oftalmologico in cui è stato riproposto il modello multi-professionale che ha dimostrato essere vincente.

Iatrogenic sprue-like enteropathy

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Description of the case: 82-year-old male suffering from multiple comorbidities: arterial hypertension, olmesartan therapy for over 5 years, emphysematous COPD with severe restrictive syndrome, diabetes mellitus, former smoker, history of potus. Hospitalized for diarrhea with liquid stools and abdominal pain since 3 weeks; X-ray abdomen distension of the small and large intestine and some hydro-air levels; CTscan of the abdomen with contrast medium evidence of diverticulosis of the colon and some enlarged lymph nodes in the mesenteric area; colonoscopy+polypectomy (tubular-villous adenoma of the ascending colon with inflammation in the lamina propria with eosinophils); initiation of empiric antibiotic therapy with metronidazole without benefit and parenteral nutritional support; parasitological stool test, and Clostridium difficile are negative; EGDS+biopsy: active duodenitis, chronic gastritis, atrophy of the villi in the duodenum; negative celiac disease screening; olmesartan is suspended and a gluten-free diet started; after gradual regularization of the bowel function, paralytic ileus appears with alvus closed to stools, likely clinical expression of diabetic neuropathy; improvement and resolution of the clinical picture with administration of neostigmine; progressive increase in food intake with a significant improvement in clinical conditions; discharged after more than 2 months of hospitalization.

Conclusions: The clinical case focuses on the need to look for unusual and rare factors of chronic diarrhea, frequent and potentially lethal clinical condition in the elderly polyathologic patient.

Side effects of ertapenem in a blind patient.

A case report

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Introduction: Antibiotic therapy is the cornerstone of treatment for many hospitalized patients. Ability to identify atypical adverse reactions is a crucial skill for a physician.

Description of the case: A 85-year-old male, blind due to long-standing diabetic retinopathy, was admitted for fever and diarrhea. Because laboratory findings were suggestive of infection, we started empirical antibiotic therapy meanwhile applying to investigate the origin. The urine culture identified *P. mirabilis* with significant growth (100,000 CFUs/mL), sensitive to ertapenem, which we started, adjusting the dose to the patient kidney function (III A KDOQI stage). Upon 96 hours, patient's neurological conditions worsened: he became lethargic, and later on reported about visual hallucinations. Despite the known state of blindness, associated with involuntary chorea-like movements, cerebral CT scan showed no recent focal parenchymal lesions, nor active signs of bleeding. A EEG exhibited not specific left parieto-occipital and right temporal abnormalities. Since we suspected ertapenem neurotoxicity, we discontinued the drug administration and started fluid and albumin supplementation. After a couple of days, the patient returned to his previous mental status.

Conclusions: Carbapenems are widely and successfully used in the hospital setting for treatment of infections. However, it's imperative to remember their potential various CNS side effects. Elderly patients, with chronic kidney disease, hypoalbuminemia due to malnutrition, previous stroke or sensory deficits, are particularly vulnerable.

Just a (gall)stone: a case of Bouveret syndrome with negative ultrasound scan

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Introduction: Bouveret's syndrome is often overseen in the diagnostic algorithms of gastric obstruction, although not an uncommon (1-3%) cause of gallstone ileus, with high morbidity (60%) and mortality (12-30%)

Description of the case: 84-year-old woman was admitted for nausea and vomiting after meals. Admission ultrasound scan imaging revealed small hyperechoic images inside the biliary tract, with a slightly distended gallbladder. At physical examination, we found a treatable abdomen with weak positivity of cystic signs and valid peristalsis. Despite fasting and antibiotic treatment, her symptoms hardly improved, but eventually progressed into biliary vomiting 7 days after admission. A gastroscopy confirmed the presence of massive biliary stagnation, and later a CT scan showed multiple air-fluid levels, with an obstructive fulcrum caused by a large formation (about 5x3x3 cm) with calcific shell, clogging the lumen. A second large lithiasic formation (about 4.7x2 cm) was also found in the cholecystic lumen, while a fistula between the gallbladder and the duodenal bulb (4 mm wide) completed the picture. Due to the imaging results, the patient was transferred to the surgical ward, where she underwent a cholecystectomy and a repair of duodenal fistula, corrected in two stages for initial leakage.

Conclusions: Gastrointestinal symptomatology is bread and butter for an Internal Medicine physician. Although the etiology is often infectious, we must not oversee the mechanical causes, bearing in mind that the first level imaging work-up often provides incomplete data.

Incidence and outcomes of subclinical atrial fibrillation in a cohort of moderate-severe COVID-19 admitted in a subintensive Internal Medicine unit

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Background and Aims: Subclinical atrial fibrillation (SCAF) is an asymptomatic, short and fast atrial arrhythmia observed during long-term monitoring. SCAF incidence ranges between 5-15% in critical illness and is associated to an increased risk of one-year-death, while its role in thromboembolism is debated. With this pilot study, we assessed SCAF incidence in a longitudinal cohort of moderate-to-severe COVID-19, evaluating its association with in-hospital death, major bleeding or thromboembolism.

Methods: We considered all the subjects admitted to our subintensive medicine department for moderate-to-severe COVID-19 undergoing to continuous ECG monitoring for at least seven consecutive days, evaluating the occurrence of SCAF daily. We also collected history, ECG, age, sex, occurrence of in-hospital death, thromboembolism and major bleeding.

Results: Of 34 consecutive patients, 4 were excluded for pre-existing atrial fibrillation. We analysed 30 subjects who completed ECG monitoring: mean age was 66±14.8 years, 47% were females. SCAF incidence was 20% in 7 days. During the admission we observed 6(20%) deaths, 2(6%) thromboembolic events and 2(6%) major bleedings, with no relationship with SCAF occurrence. SCAF was more frequently observed in severe than in moderate COVID-19 (p=0.0001).

Conclusions: SCAF shows high incidence in COVID-19, especially within a severe disease. This pilot study did not underline an association with short-term events: we are expanding our cohort and performing a longer follow-up to validate our data and to assess associations with post-CoVID events.

Trombocitopenia trombotica immune associata a vaccino anti-SARS-Cov-2 (Vaxzevria)

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Premesse: Esistono rari casi di eventi trombotici insoliti con trombocitopenia dopo vaccino per CoViD-19 Vaxzevria. Dopo 4-14 giorni dalla vaccinazione si manifesta una sindrome simile alla trombocitopenia trombotica indotta da eparina (HIT-T) definita come trombocitopenia trombotica indotta da vaccino (VIT-T). Colpisce soprattutto donne 20-55 anni. Qui il caso di un uomo di 69 anni che 8 giorni dopo Vaxzevria ha sviluppato una sindrome compatibile con VIT-T.

Descrizione del caso clinico: Maschio 69 anni esegue prima 1° dose di vaccino Vaxzevria. Nove giorni dopo l'iniezione va in PS per disuria e febricola. Esami: Plt 90000/mm³. Il giorno successivo discesa delle piastrine a 19000/mm³ D-dimero elevatissimo 139000ng/ml porpora agli arti inferiori. Richiesto dosaggio autoanticorpi anti PF4, risultati molto elevati. Nel sospetto di VIT-T richiesta TAC TB: trombosi venose a sedi multiple (TEP del ramo segmentario arteria lobare inf. iniziale trombosi tratto distale v cava inferiore), al doppler venoso: TVP bilaterale femorali comuni. Inizia terapia con desametasone 40 mg/die ev x4gg, immunoglobuline 1g/kg/die ev x2 gg e fondaparinux 2,5mg/die sc. Sei giorni dopo piastrine 51000/mm³, D-dimero 2.000ng/ml, paziente asintomatico, buone condizioni generali: aumento di fondaparinux a 7,5 mg/die e tapering steroideo. Dopo ulteriori 10 giorni dimesso in ottime condizioni generali, piastrine 136000, D-dimero normale.

Conclusioni: E' probabile che la sindrome descritta sia legata ad intensa attività auto-anticorpale contro PF4 dopo Vaxzevria. E' noto che in tutti i pazienti con VIT-T analizzati sono alti i titoli di anti-PF4, confermando l'ipotesi.

Retrospective analysis of clinical and laboratory findings of a cohort of CoViD-19 patients treated with remdesivir

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Background and Aim of the study: CoViD-19 pandemic required to the physicians the necessity to gain effective treatments against this infectious disease; one of the tried drugs is remdesivir. The aim of our study is to analyze clinical and laboratory features of a cohort of CoViD-19 patients treated with remdesivir.

Materials and Methods: We evaluated retrospectively data of 22 patients (18 men and 4 women), considering two main items: the trend of inflammation markers (erythrocyte sedimentation rate, C-reactive protein, interleukin-6, D-dimers, lymphocyte count, ferritin) and the severity of respiratory failure, comparing data between admission and discharge.

Results: At admission, 85,7% of patients showed signs of acute respiratory failure (P/F ratio <300) and needed oxygen therapy but only 9,1% of them had this condition at discharge. Moreover, ESR, CRP and IL-6 levels were high at admission but showed a significant reduction at discharge; lymphocyte count was instead reduced at the beginning of the disease and increased after treatment; no significative variations were observed for D-dimer and ferritin levels. Finally average hospital stay was 4 days lower than the one of the cohort of patients non treated with remdesivir.

Conclusions: Our results indicate that patients treated with remdesivir showed a good outcome in terms of respiratory function and reduction of inflammation state. However, a larger cohort of patients and the comparison with control patients are necessary to better investigate potential benefits of remdesivir.

Cold agglutinine haemolytic anemia, immune thrombocytopenia and CoViD-19 infection: a casual relationship?

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Background: In literature association with CoViD-19 infection and autoimmune diseases like cold agglutinine hemolytic anemia (HA) and immune thrombocytopenia (IT) was observed.

Description of the cases: We describe the story of two patients admitted to our ward for SARS-CoV-2 related pneumonia. A 84 yo woman affected by NIDDM, hypertension, ischemic heart disease,

colorectal carcinoma (20 years before). Upon the admission HA was reported (Hb 7.6 g/dl, reticulocytes 5.3%, LDH 339 U/l, aptoglobulin <8 mg/dl) with direct Coombs test and cold agglutinine positivity. Bone marrow biopsy (BOM) confirmed the suspected diagnosis. TC scan total body excluded a reactivation of colorectal carcinoma or other neoplastic pathology. A 84 yo man on AVK therapy for permanent atrial fibrillation and recent aortic bioprosthesis, NIDDM and COPD. He received the first dose of m-RNA antiCoViD-19 vaccine three weeks before. In this patient too we found a HA, positive direct Coombs test and cold agglutinine associated to a rapide decline in platelet counts up to 5000/mm³. Patient refused BOM. On suspicion of an autoimmune genesis both patients were successfully treated with prednisone. The second one was treated with immunoglobulins too obtaining Hb and platelet values partial correction.

Conclusions: Our case reports confirm this coexistence between HA, IT and CoViD-19. We cannot say if this is a casual relationship but we can hypothesize this like an effect of a dysregulation of the immune system induced by cytokine storm during CoViD-19 infection. Further studies are needed to establish a possible causal link.

Un caso di infezione delle vie urinarie da Salmonella non tifoide

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Premesse: L'infezione da Salmonella non tifoide (SNT) costituisce una causa molto rara (0.015%) di infezione delle vie urinarie. L'infezione avviene a seguito di batteriemia a partenza dal tratto gastrointestinale o per via ascendente da contaminazione fecale. Fattori di rischio sono il sesso femminile, anomalie del tratto urinario, età avanzata, diabete mellito e altri stati di immunodeficienza. L'eradicazione richiede antibiototerapia prolungata (2-6 settimane).

Descrizione del caso clinico: Una donna di 89 anni affetta da diabete ed ipertensione si ricoverava per comparsa di vomito ed ittero. La paziente riferiva inoltre disuria e pregressa sintomatologia diarroica di lunga durata risoltasi 2 mesi prima del ricovero, non indagata. Nel sospetto di infezione a partenza intra-addominale veniva intrapresa terapia empirica con piperacillina/tazobactam. L'urinocoltura risultava positiva per SNT (1.000.000 UFC/ml). Dalla TC addome non emergevano anomalie del tratto urinario, ma litiasi multipla delle vie biliari principali. In considerazione della storia anamnestica e dei fattori di rischio predisponenti si concludeva per un'infezione delle vie urinarie da contaminazione fecale. La paziente proseguiva a domicilio terapia antibiotica con ciprofloxacina per 2 settimane con risoluzione dell'infezione.

Conclusioni: Il riscontro di infezione delle vie urinarie da SNT è raro e sottende spesso a condizioni di immunosoppressione o patologie delle vie urinarie che andrebbero indagate se non note. Colpendo soggetti fragili può portare a complicanze e se ne consiglia l'eradicazione.

Anemizzazione severa in ematoma dei muscoli retti dell'addome con fistolizzazione vescicale in corso di terapia con EBPM in paziente con IRC e storia di TVP recidivanti

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Descrizione del caso clinico: Donna, 83 anni. IRC (creatininemia abituale intorno a 3 mg/dL), TVP ricorrenti in terapia con rivaroxaban recentemente sostituito con EBPM s.c. per recidiva di evento trombotico all'arto inferiore dx, IA; CAD, FAP. Giunge alla nostra attenzione per insorgenza di dolore ipogastrico, anemia severa (Hb 5 g/dL) e concomitante ematuria. Alla TC addome con MdC riscontro di vasto ematoma della parete addominale inferiore. Non posta indicazione all'evacuazione chirurgica dell'ematoma, la paziente è stata emotrasmessa e trasferita in turno medico. Alla rivalutazione con CistoTC con riempimento vescicale retrogrado con

MdC, evidenza di tramite fistoloso tra il noto ematoma e la parete vescicale anteriore. Su indicazione urologica posizionato CV a dimora per 40 giorni, poi rimosso previa evidenza radiologica di risoluzione della fistola. Per la controindicazione assoluta all'anticoagulazione rappresentata dal sanguinamento addominale con grave anemia, e la contestuale persistenza di TVP femorale comune e superficiale dx, è stato posizionato e mantenuto in sede per 30 giorni un filtro cavale. Durante il ricovero sono intercorse polmonite basale dx ed IVU da *Enterococcus faecium*.

Conclusioni: Nei pazienti con IRC è mandatorio adeguare il dosaggio di EBPM alla funzione renale; il monitoraggio dell'attività anti-Xa può ridurre il rischio di sanguinamenti.

Incidenza della bradicardia in una coorte di pazienti ospedalizzati per polmonite CoViD-19 correlata durante la seconda ondata: uno studio prospettico

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Premesse e Scopo dello studio: L'incidenza della bradicardia in pazienti con polmonite CoViD-19 correlata è riportata in pochi studi e stimata del 8-25%: sembra avere eziologia multifattoriale, è ipotizzato un ruolo iatrogeno del remdesivir. Scopo dello studio: valutare l'incidenza di bradicardia in una coorte di pazienti ospedalizzati per polmonite CoViD-19 correlata e descrivere le caratteristiche cliniche di tale popolazione.

Materiali e Metodi: Studio osservazionale prospettico, inclusi: pazienti adulti, infezione SARS-CoV-2 diagnosticata mediante PCR su tampone naso-faringeo, polmonite CoViD-19 correlata diagnosticata tramite imaging; esclusi: gravidanza o condizione di fine vita. Abbiamo raccolto i dati clinici, la terapia abituale ed ospedaliera di ciascun paziente, che è stato poi sottoposto a monitoraggio ECG. L'ECG è stato eseguito all'ingresso ed in caso di eventi. Abbiamo definito bradicardia ogni evento con FC<60/min, >4h. **Risultati:** Coorte di 36 pazienti, età media 68±14.6 anni, 56% sesso maschile. 9 pazienti (25%) hanno presentato bradicardia. 6 pazienti avevano comorbidità (3 ipertesi, 2 diabetici, 2 obesi e uno con BPCO). Un paziente era in terapia antiaritmica, uno con amine ed uno con sedativi. Un paziente presentava iperkalemia (5.3mEq/l). Tutti erano trattati con desametasone, 8 con remdesivir, uno con tocilizumab.

Conclusioni: I nostri dati confermano in una piccola coorte che fino ad un quarto dei pazienti ricoverati per polmonite CoViD-19 correlata sviluppa un episodio di bradicardia. L'associazione con remdesivir andrà verificata con ulteriori studi.

Trombosi e sanguinamenti: tutta colpa di una capretta?

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Premesse: La contemporanea presenza di eventi emorragici e trombotici costringe i clinici a scelte complesse in un bilancio difficile tra sanguinamenti e trombosi. I setting più frequenti sono quelli chirurgici, ortopedici, oncologici spesso durante immunoterapia o in corso di HIT.

Descrizione del caso clinico: Donna 54 anni si recava in PS per dolore crampiforme al fianco sinistro e vomito Riferiva trauma minore al fianco destro da testata di pecora 10 giorni prima. In anamnesi infezione da SARS-CoV-2 due mesi prima e prima dose di vaccino (AstraZeneca) 9 giorni prima dell'arrivo in PS. Gli esami laboratoristici mostravano D-Dimero 8142, Hb 11, PLT 117000. Alla TC torace-addome: embolia polmonare segmentaria bilaterale, ematoma del surrene sinistro con versamento ematico retroperitoneale e trombosi della vena renale ed iliaca sinistra. Nell'impossibilità di intraprendere trattamento anticoagulante ve-

niva posizionato filtro cavale e intrapresa LWMH a dosi di proflassi. Dimessa 12 giorni dopo il ricovero in PS. Due mesi dopo la dimissione, alla TC torace-addome di rivalutazione: risolta l'embolia polmonare, le trombosi splancniche e il sanguinamento addominale.

Conclusioni: Che anomalie del sistema coagulativo, emorragiche e trombotiche, si associno alla infezione da SARS-CoV-2 e ai suoi vaccini, è ormai cosa nota, ma il meccanismo eziopatogenetico sottostante rimane ignoto e, con esso, la strategia terapeutica più idonea. Il riscontro, in letteratura, di Ab anti-PF4 e di alto D-dimero, sostengono l'ipotesi di una HIT associata a vaccino (VIIT) e attivazione di agenti trombolitici endogeni quale meccanismo e spiegazione della rapida risoluzione.

In transit thrombosis in CoViD-19 patient

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Background: Venous thromboembolism represents frequent complication of patients with severe CoViD-19 disease. The occurrence of venous thromboembolism is mainly in typical district, however several reports about atypical thrombosis are described. We report a case of isolated right endoventricular thrombosis in a patient with SARS-CoV-2 infection.

Case Report: A 60-year-old man was admitted to our ward for severe respiratory failure in interstitial pneumonia. The nasopharyngeal swab for CoViD-19 resulted positive. Prophylaxis with LMWH were started associated to CPAP to maintain good gas exchange. During hospitalization a new onset AF was documented at the telemetry and an echocardiogram was performed showing a right endoventricular lesion of 1.8 cm adhering to the free wall. A CT-pulmonary angiogram (CTPA) resulted negative for pulmonary embolism. Doppler ultrasound showed left popliteal thrombosis. A treatment with fondaparinux was started. After 10 days, an echocardiogram was repeated showing complete resolution of thrombosis. Another CTPA confirmed the absence of pulmonary embolism. The patient clinically improved and he was discharged with dabigatran.

Conclusions: SARS-CoV-2 infection may cause hypercoagulability and inflammation leading to venous thromboembolism and this seems to be related with worse outcome of these patients. For this reason, to monitor the venous thrombosis complication is an important step in the assessment of patients with CoViD-19.

Differences in EHMRG score items between Internal Medicine and Cardiology: a retrospective cohort study

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Background and Aims: Patients affected by acute heart failure (AHF) are often admitted in Internal Medicine (IM) or Cardiology (CAR) after Emergency Department (ED) evaluation. The EHMRG score has been studied to assess the 7-day survival in AHF. We evaluated (i) accuracy of prediction of EHMRG in subjects admitted from ED in IM or CAR and (ii) differences in EHMRG and in each EHMRG item between the two subpopulations.

Methods: We enrolled all the consecutive subjects admitted in IM or CAR in the same timeframe. We collected EHMRG items and in-hospital mortality and calculated EHMRG score according to its original definition. We assessed EHMRG score accuracy in predicting mortality with ROC curve analysis.

Results: We obtained a cohort of 642 subjects (IM:439; CAR:203), 46 (7.1%) deaths. EHMRG predicted in-hospital death (AUC: 0,793; 95% CI: 0,728-0,858; p<0,0001) in the whole cohort. The two populations did not significantly differ, at the admis-

sion, for BNP levels, systolic blood pressure and cardiac frequency. EHMARG (IM:72,2 [101,4]; CAR:13,4 [74,6]), age (IM:84,6±7,7; CAR:72,1±11,5), SpO2 (IM:91,9±7,3; CAR:95,0±4,2), creatinine (IM:1,6±1,0; CAR:1,3±0,9), out-of-range potassium (IM:41,1%; CAR:17,1%), increased troponin (IM:59,2%; CAR:23,7%), ambulance use (IM:64,7%; CAR:7,4%), cancer (IM:17,9%; CAR:5,0%) and metolazone use (IM:2,6%; CAR:7,0%) were significantly different ($p<0,0001$).

Conclusions: EHMARG score can accurately predict short-term prognosis in patients admitted from the ED for AHF. IM patients are often older, with a more severe presentation and often burdened by comorbidities.

Clinical and echocardiographic phenotypes in AHF subjects admitted to Internal Medicine and Cardiology: a retrospective cohort study

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Background and Aims: Acute heart failure (AHF) is a common disease which is often managed in Internal Medicine (IM) or Cardiology (CAR). Clinical and echocardiographic evaluations are necessary to correctly assess short-term prognosis and clinical management. EHMARG score can be used to aid clinical decision making along with echocardiographic data. We evaluated clinical and echocardiographic differences in AHF patients admitted in IM and CAR.

Methods: We enrolled all the consecutive AHF subjects admitted in IM or CAR in the same timeframe, assessing echocardiographic data, in-hospital mortality and EHMARG score.

Results: We obtained a cohort of 642 subjects (IM:439; CAR:203), with 46 (7.1%) deaths. EHMARG was significantly higher in IM (IM:5a; CAR:3). Echocardiographic phenotype differed: HFpEF was more common in IM (IM:33,8%; CAR:17,1%), TAPSE was lower in IM (IM:15,4; CAR:18,1), PAPS was lower in CAR (CAR:45,6; IM:42,2), E/e' was lower in IM (IM:12,3; CAR:14,8), left atrial volume was higher in IM (IM:64,9; CAR:51,3). All the differences were statistically significant ($p<0,0001$). TAPSE/PAPS ratio was not different between IM and CAR ($p=0,286$), however it was able to predict accurately the short-term prognosis (AUC:0,83; 95%CI:0,77-0,88; $p<0,0001$).

Conclusions: Patients with AHF admitted to IM show higher clinical complexity than CAR patients. The echocardiographic phenotype differs between IM and CAR: IM subjects are characterized by normal ejection fraction, worse diastolic parameters and worse right ventricle function. TAPSE/PAPS is a strong marker of in-hospital death in both IM and CAR.

Severe bacterial complications of COVID-19 pneumonia treated with corticosteroids: description of two cases

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Background: SARS-CoV-2 infection, in the most severe cases, can cause bilateral pneumonia and respiratory failure. In these cases, therapy is based on the use of antiviral drugs, immunosuppressants (in order to reduce the cytokine-mediated inflammatory response), oxygen and sometimes non-invasive mechanical ventilation (NIV). We describe 2 cases of severe bacterial infections probably favored by the immunosuppressive therapy.

Description of the cases: A 63-year-old man with no history of significant medical conditions and an 86-year-old man with history of ischemic heart disease treated with PTCA+DES, were both hospitalized for severe bilateral SARS-CoV-2 pneumonia and treated with NIV associated with high-dose steroids (Dexamethasone 8 mg IV

per day). After the resolution of the pulmonary infection, the first one developed a *Pneumocystis jirovecii* pneumonia with the need for re-hospitalization and treatment with trimethoprim-sulfamethoxazole; the second one developed a methicillin-resistant *Staphylococcus aureus* (MRSA) endocarditis with infarct lesions caused by septic emboli in brain and splenic area, with subsequent clinical aggravation and death.

Conclusions: The SARS-CoV-2 pneumonia treatment is based on combined use of NIV and anti-inflammatory, antiviral and immunosuppressive drugs: it is important to minimize duration of treatment because it may lead to the development of serious complications like septic states (even by opportunistic pathogens) that are life-threatening for the patients.

La Delirium Room: un'assistenza infermieristica a suoni e colori. A case report

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Premesse: Le Delirium Room sono nate negli Stati Uniti e recentemente hanno raggiunto anche il territorio italiano, composte per metà dalle ideologie americane e per l'altra metà dalle influenze del metodo olandese Snoezelen che ha l'obiettivo di agire sul benessere e sulla percezione dell'utente, attraverso una specifica stimolazione multisensoriale.

Descrizione del caso clinico: Da una revisione sistematica della letteratura è emerso che molti studi promuovono il trattamento non farmacologico per la prevenzione del delirium, mentre non esistono forti evidenze circa l'utilizzo di interventi non farmacologici per gli stati già manifesti. Un approccio moderno suggerito in letteratura è l'integrazione del metodo Snoezelen con le Delirium Room. Con il case report redatto nell'U.O. di Geriatria del presidio ospedaliero San Donato di Arezzo dove è presente una delirium Room, abbiamo verificato che in soli tre giorni di trattamento il soggetto in studio ha avuto una regressione dello stato confusionale acuto senza utilizzo di farmaci antipsicotici, ed è rientrato presso la sua abitazione con un recupero pressoché totale.

Conclusions: Il case report ha dimostrato nel suo piccolo come un mix di interventi non farmacologici, calibrati su misura per il paziente possano portare alla regressione di uno stato confusionale acuto in tempi relativamente brevi. Ovviamente il singolo studio non rappresenta un'evidenza scientifica ma ha lo scopo di riportare la nostra breve esperienza al fine di prefigurare uno spunto per futuri studi presso il nostro presidio ospedaliero.

Non la solita embolia polmonare del post-operatorio...

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Descrizione del caso clinico: Donna, 65 anni, in APR ndr. Giunge alla nostra attenzione per insorgenza di grave dispnea poche ore dopo essere stata sottoposta a osteosintesi omerale dx per frattura post-traumatica. All'EGA severa insufficienza respiratoria tipo 1 associata ad alcalosi respiratoria ed acidosi metabolica (P/F 75); all'ECG TS con frequenti BESV; agli EE D-dimero 3351 ng/mL, PCR 1,53 mg/dL, restanti reperti nella norma (in particolare TpnHS negativa). Nel sospetto di una TEP è stata eseguita AngioTC del circolo polmonare risultata nei limiti. Trasferita in SI è stata trattata con BiPAP con rapidissimo miglioramento degli scambi respiratori con possibilità di svezzamento dall'ossigenoterapia in meno di 24h. Giunta in turno medico, si è mantenuta emodinamicamente stabile, apiretica, eupoica in AA; per riscontro di Hb in calo in presenza di vasto ematoma alla spalla dx è stata sottoposta ad ECD AV senza rilievo di segni di rifrimento; data la successiva stabilità dell'emocromo, è stata dimessa a domicilio pochi giorni dopo. Ridiscusso collegialmente il caso con i radiologi e con l'ortopedico e l'anestesista che l'avevano trattata in SO, è stata ipotizzata una paralisi temporanea del n. frenico correlata alla tipologia di anestesia loco-regionale utilizzata per l'intervento (coinvolgente il plesso brachiale).

Conclusions: Nella DD delle insufficienze respiratorie che occor-

rono nel post-operatorio, oltre ad escludere quadri embolici, infettivi o cardiogeni, è necessario tenere conto di condizioni meno frequenti come le complicanze correlate alla tipologia di anestesia utilizzata.

Heart failure management: a FADOI survey among Campanian Internal Medicine wards

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Introduction: Heart failure (HF) is still a difficult to manage syndrome.

Materials and Methods: In October 2020, a questionnaire (Q) about HF management was sent to Campanian FADOI members and 70 of them answered.

Results: The patient (pt) with HF is hospitalized in Int Med (78.6%), Card (1.4%), it depends (20%). Pt with HF/total admissions <25% (22.9%), 25-50% (70%), >50% (7.1%). NYHA: II (20%), III (72.9%), IV (7.1%). Optimal therapy >75% (1.4%), 51-75% (18.6%), 25-50% (52.9%), <25% (27.1%). Echocardiogram during the hospital stay: PS (4.3%), PS and ward (W) (41.4%), W (51.4%), rarely (2.9%) Thoracic echography: No (22.9%), PS (12.9%), PS+W (7.1%), W (17.1%), rarely (40%). QoL Q: No (67.1%), Rarely (25.7%), Often (7.1%). Length of stay: 3-7 days (37.1%), 8-15 days (60%), 16-30 days (2.9%). Follow-up: Hospital Ambulatory (A) (32.9%), WA (21.4%), territorial A (4.3%), General practitioner (20%), Cardiologist (C) (21.4%). HF A in hospital: Yes (65.7%), No (34.3%). Managed by: C (56.5%), Internist (10.9%), both (32.6%). Territorial paths upon discharge: Yes (40%), No (60%). Hygiene and dietary recommendations in the discharge letter: Always (27.1%), sometimes (68.6%), Never (4.3%). Comorbidities influence the therapy: No (1.4%), Very little (8.6%), Little (35.7%), Very much (54.3%). Availability of "non-pharmacological" HF treatment: Yes (74.3%), at other facilities (12.9%), No (12.9%). Experience with the most recent drugs for HF: No (5.7%), little (30%), only in monitored in A (15.7%), during hospitalization (48.6%).

Conclusions: The survey shows a heterogeneous situation: more work needs to optimize the management of HF.

Microvascular involvement in long-term CoVID-19: usefulness of nailfold videocapillaroscopy

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Background: Endothelial dysfunction represents a key pathophysiological factor in CoVID-19. A significant proportion of patients (pts) who have been infected with SARS-CoV-2 continue to have symptoms for a long time (long-term CoVID-19). Nailfold videocapillaroscopy (NVC) is nowadays considered one of the best diagnostic techniques of non-invasive imaging, able to study the microcirculation *in vivo*. The aim of our study was to assess microvasculature by means of NVC in long-term CoVID-19 pts.

Methods: We examined 18 pts (12 F and 6 M), aged 53.9 years (range 29-84) with recent diagnosis of CoVID-19 and two successive oropharyngeal swabs resulted negative for the SARS-CoV-2 genome, hospitalized in our ward for other acute pathologies or related to our NVC clinic. The control group consisted of 20 healthy subjects without previous or current SARS-CoV-2 infection with overlapping demographic characteristics. We used a VideoCap 3.0 (DS Medica), equipped with 200x optics to evaluate microcirculation and its elementary alterations.

Results: Long-term CoVID-19 pts, compared to control subjects, showed a higher prevalence of meandering capillaries, enlarged capillaries, loss of capillaries, hemosiderin deposits expression of

micro-hemorrhages and micro-thrombosis, sludge flow and pericapillary edema.

Conclusions: Long-term CoVID-19 pts present greater microvascular abnormalities at NVC compared to healthy subjects. However, further studies with larger case series are needed to assess the clinical relevance of NVC in long-term CoVID-19.

Differenze cliniche e prognostiche fra la seconda e la terza ondata dell'infezione da SARS-CoV-2 in pazienti ricoverati in Medicina Interna

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Premesse e Scopo dello studio: Le tre ondate dell'infezione da SARS-CoV-2 hanno avuto caratteristiche diverse fra loro. Nostro scopo è stato ricercare analogie e differenze fra i ricoverati durante la seconda e la terza ondata (SO e TO).

Materiali e Metodi: Sono stati analizzati in maniera retrospettiva dati clinico-laboratoristici, radiologici e terapeutici dei ricoverati con CoVID-19 a ottobre-dicembre 2020 e febbraio-maggio 2021 (SO e TO) presso l'Ospedale SS Cosma e Damiano di Pescia.

Risultati: I ricoverati nella TO (n=199) rispetto a quelli nella SO (n=83) erano più giovani (66±14 vs 76±14, p<0.0001), con meno comorbidità (68% vs 87%, p=0.003), incluse ipertensione (48% vs 61%, p=0.04), cardiopatia (27% vs 41%, p=0.03), bronchite cronica (5% vs 12%, p=0.03), nefropatia (7% vs 19%, p=0.005) e demenza (8% vs 25%, p<0.001). Nella TO più pazienti avevano dispnea e febbre (52% vs 17%, p<0.001, e 49% vs 28%, p<0.001), polmoniti più estese alla TC (>30% del parenchima nel 66% vs 41%, p<0.001), più tromboembolismo venoso (19% vs 9%, p=0.03) e venivano trattati con ventilazione non invasiva (42% vs 23%, p=0.003), dosaggi più alti di steroidi (47% vs 15%, p<0.001) e tocilizumab (10% vs 0%, p=0.001). Nella TO ci sono stati meno decessi (7% vs 18%, p=0.009), mentre la degenza media era più lunga (9 [6-15] vs 6 [5-10], p<0.001).

Conclusioni: Nella TO, a fronte di un maggiore impegno polmonare, si è assistito a una riduzione del 62% della mortalità intraospedaliera rispetto alla SO, verosimilmente per minore età, grado di comorbidità e miglioramento delle cure.

Predittori di mortalità intraospedaliera in pazienti con polmonite da SARS-CoV-2 ricoverati in Medicina Interna

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Premesse e Scopo dello studio: L'infezione da SARS-CoV-2 può avere un'evoluzione fatale in relazione alle caratteristiche cliniche dei soggetti affetti. Abbiamo analizzato i predittori di mortalità dei pazienti ricoverati per polmonite da CoVID-19

Materiali e Metodi: Sono stati analizzati in maniera retrospettiva i dati clinico-laboratoristici, radiologici e terapeutici dei ricoverati con infezione da SARS-CoV-2 a Ottobre-Dicembre 2020 e Febbraio-Maggio 2021 presso l'Ospedale SS Cosma e Damiano di Pescia.

Risultati: Da Ottobre 2020 a Maggio 2021 sono stati ricoverati 282 pazienti con polmonite da SARS-CoV-2 (età media 69±15 anni, 158 maschi, 75% con comorbidità). Il 96% veniva trattato con ossigenoterapia, il 37% con NIV, il 19% con remdesivir, il 98% con corticosteroidi e il 10% con anti-IL6. Il 9% dei soggetti veniva trasferito in terapia intensiva e il 10% andava incontro a decesso. Alla regressione logistica multivariata i predittori indipendenti di mortalità risultavano l'età, il trasferimento in terapia intensiva, la demenza, un basso rapporto SpO₂/FiO₂ e la necessità di ossigenoterapia ad alti flussi (tutte le p<0.05). Viceversa il sesso, la durata dei sintomi, l'estensione della polmonite alla TC, la terapia corticosteroidica, con anti-IL6 o con remdesivir non si associavano a una variazione della mortalità intraospedaliera.

Conclusioni: Nei pazienti ricoverati con polmonite da SARS-CoV-2 l'età avanzata, la presenza di comorbidità, la necessità di cure intensive e di ossigenoterapia ad alti flussi si associano in modo indipendente ad una prognosi infausta.

Geriatric Nutritional Risk Index in a group of elderly patients hospitalized for SARS-CoV-2 pneumonia: a retrospective study about correlation with intra-hospital mortality rate and length of hospitalisation

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Background and Aim: In medical literature, numerous anthropometric assessment methods and nutritional status assessment scales have been used to identify elderly patients at risk of malnutrition. The Geriatric Nutritional Risk Index (GNRI) is a relatively recent nutritional index used to estimate the risk of nutritionally related morbidity and mortality in hospitalized elderly patients. The purpose of this study is to assess the association between reduced GNRI (cutoff=98) and the basic functional status of the patient with intra-hospital mortality rate for all causes or prolonged hospital stay in a group of elderly patients with SARS-CoV-2 pneumonia.

Materials and Methods: Retrospective study of 77 elderly patients (>= 70 years old) hospitalized for SARS-CoV-2 pneumonia; for each patient GNRI was calculated and the basic functional level of the patient was considered, according to the Barthel index from the nursing card.

Results: In elderly patients with SARS-CoV-2 moderate or severe pneumonia, mortality rate is higher in patients with reduced GNRI, though in our study this data doesn't reach the statistical significance. The average length of hospitalisation is slightly higher in patient with reduced GNRI.

Conclusions: In this retrospective study, mortality rate is higher in elderly patients with SARS-CoV-2 pneumonia and reduced GNRI, a data in line with medical literature about GNRI.

Pandemic: wave 2! Re-organization in CoVID-free General Medicine

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Background and Aim: Coronavirus pandemic has led to new issues in infective disease management, risk management and staffing. The purpose of this work is to demonstrate that the newly adopted strategies of the hospital ward "Medicina II" are effective, without compromising the standard of nursing care that were in place before the pandemic.

Methods: We identified all the problems regarding infective disease management, risk management and staffing, highlighting all the actions taken to mitigate them. We selected three Nursing Sensitive Outcomes (NSO) to serve as a baseline from which we could proceed with a before and after qualitative comparison.

Results: Of the 3 NSOs chosen (fall risk, alcohol-based hand gel consumption rate and pain assessment), both fall risk and hand gel consumption rate showed that the standards were maintained or were improved upon after the adoption of the new strategies. Pain assessment initially showed signs of a decline when compared to the standard. As such, after an analysis of the causes, the according action were taken to rectify this.

Conclusions: While the changes applied showed signs of an increase in effectiveness, more researches must be conducted to corroborate these findings and identify among all the actions taken the most incisive. This could aid in identifying and reducing health and safety restrictions that have been put in place, as these would no longer be required, thus leading to also a better acceptance from the general population.

Midline and deep vein thrombosis in CoVID patient with CPAP

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Background: The necessity of a firm vascular access during the CoVID patient submitted to NIV/CPAP is essential for guarantee a safe NTP and a faster solution for a respiratory failure. But which access is more indicated for these patient, knowing that the thrombotic risk is increased in the CoVID patient and that all the risks related to the presence of a midline?

Methods: A retrospective study has been done on the correlation between DVT and the midline peripheral venous catheter and short midline in a cohort of CoVID patients submitted by NIV for a observation period of 6 months.

Results: This study has been taken into consideration n. 176 CoVID patients with these vascular access, recovered in the high and medium intensive care units of Borgosesia Hospital. In conclusion the patients with short midline have developed a DVT more often than those with midline mostly if they had the CPAP. In the third wave of infections, in all the patients in CPAP has been implanted a midline and has not been seen any DVT cases.

Una causa rara di addominalgia e anemia

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Premesse: La drepanocitosi è un'emoglobinopatia causa di anemia emolitica cronica quasi esclusivamente in individui di razza nera. E' causata dall'eredità omozigote dei geni per l'emoglobina S. I globuli rossi a forma di falce causano vaso-occlusione e sono soggetti a emolisi con conseguenti gravi crisi dolorose, ischemia d'organo e altre complicanze sistemiche. I pazienti si caratterizzano per anemia e per la presenza di cellule falciformi allo striscio periferico. La diagnosi è confermata dall'analisi dell'elettroforesi dell'emoglobina.

Descrizione del caso clinico: Paziente di 32 anni giunge in PS per dolore addominale acuto. Gli esami ematochimici evidenzavano severa anemia (Hb 6.5 gr/dl) con segni di emolisi (LDH 700, aptoglobina <1 bilirubina indiretta 3 mg/dl). Il test di Coombs risulta negativo. Il controllo ecografico dell'addome esclude trombosi della vena porta e/o della vena splenica in assenza di ulteriori alterazioni. Lo striscio su sangue periferico evidenzia numerose cellule falciformi. Viene avviata terapia con idratazione e.v., terapia antidolorifica e terapia antibiotica ad ampio spettro. In dimissione avviata terapia con idrossiurea e inviata in follow-up presso il centro di Ematologia di riferimento.

Conclusioni: Se pur patologia rara la drepanocitosi deve essere sempre sospettata in pazienti giovani, specie di razza nera che sovrappiungono all'osservazione per dolori addominali e/o ossei o sintomatologia dolorosa diffusa con anemia e segni di emolisi.

Un caso di anemia emolitica autoimmune e piastrinopenia (sindrome di Evans) associata a linfoma non Hodgkin: un possibile trigger disimmune?

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Premesse: In letteratura è stata descritta una relazione bidirezionale tra patologie linfoproliferative e background disimmune (malattie autoimmuni, ma anche semplice positività autoanticorpale).

Descrizione del caso clinico: Pz di 85 aa con Hb 6,5 g/dl. Agli EEC riduzione aptoglobina, aumento LDH e bil. indiretta e positività t. di Coombs dir. e ind.; nella norma PLT, reticolociti e striscio ematico. Assenti linfoadenopatie patologiche o splenomegalia. Nel sospetto di anemia emolitica autoimmune è stata intrapresa terapia steroidea (1 mg/kg/die) e, data la scarsa risposta, Ig ev con stabilizzazione dei valori di Hb intorno a 7 g/dl. Il quadro si è complicato con severa piastrinopenia (fino a 8000) associata a ipofibrinogenemia, riduzione di ATIII, in assenza di schistociti allo striscio ematico, per cui veniva trattata con plasma fresco congelato e concentrato piastrinico. Lo studio delle sottopopolazioni linfocitarie ha messo in evidenza un fenotipo suggestivo di disordine linfoproliferativo B CD5- con restrizione clonale k. È stata posta diagnosi di S. di Evans secondaria a LNH a cell. B ed intrapresa tp con rituximab (375 mg/m²/sett/4 sett) con miglioramento di Hb e PLT. Tra gli esami eseguiti nel depistage dell'anemia emolitica si riscontrava positività di ANA Spekled 1:160, Ro52,

AMA-M2. La pz lamentava sindrome secca da anni, Sjogren-like.
Conclusioni: In caso di patologie linfoproliferative sarebbe necessario valutare la presenza di manifestazioni autoimmuni e nei pazienti con malattie autoimmuni andrebbe periodicamente esclusa l'insorgenza di neoplasie ematologiche.

AKI da necrosi tubulare acuta in corso di polmonite interstiziale da SARS-CoV-2 in paziente con IRC in storia di GMN post-infettiva

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Descrizione del caso clinico: Uomo, 75 anni, IRC in progressiva GNF post-infettiva, IPB, IA in terapia. Positivo per SARS-CoV-2, viene ricoverato in reparto CoVID per insufficienza respiratoria di tipo 1 (sO2 87,5%, P/F 280) in corso di polmonite interstiziale bilaterale documentata all'Rx. Agli EE neutrofilia e linfopenia relative, PCR 13,05 mg/dL, Pct 2,57 ng/mL, LDH 803 U/L, IL-6 151,9 pg/mL, Crea 3,76 mg/dL; all'esame urine non segni di infezione; TC addome negativa per calcoli o dilatazione calico-pielica. Trattato con piperacillina-tazobactam (emoculture ed urinocolture negative) e NIV, nel corso della degenza gli indici di flogosi si sono ridotti e gli scambi respiratori si sono normalizzati. Dopo iniziale peggioramento della funzionalità renale (Crea 4,02 mg/dL) con microematuria e leucocituria, abbiamo assistito a normalizzazione dei valori di creatinemia e comparsa di marcata poliuria (6000 mL/24h) in assenza di glicosuria e di disionie; alla raccolta urine 24h: sodiuria elevata (465 mEq/24h) e proteinuria (0,7 g/24h). Successivamente la funzionalità renale si è mantenuta stabile e poliuria e sodiuria si sono ridotte progressivamente (alla dimissione Crea 1,31 mg/dL, diuresi 2800 mL/24h). Ridiscusso con i nefrologi il caso (inizialmente considerato una IRC riacutizzata in verosimile quadro settico), è stata posta l'ipotesi di una ATN da probabile danno virale diretto o da cytokine release syndrome in corso di sepsi CoVID19-associata.

Conclusioni: In corso di infezione da SARS-CoV-2 occorre indagare l'eventuale verificarsi di complicanze sistemiche da danno virale diretto anche a livello renale.

An infected kidney cyst?

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Background: In the presence of a corpuscular retro-renal and retroperitoneal collection, the differential diagnosis is between abscess, hemorrhagic cyst and urinoma.

Description of the case: A 79-year-old male arrives with fever, nausea and colicky pain in the right flank radiated to the back. The abdomen was tender on the right side. He presented elevated blood inflammation markers and worsening of renal function. On bedside ultrasound: considerable calico-pyelic dilatation with finely corpuscular retroperitoneal collection in the upper and middle third of the right kidney. On CT without contrast: calculus in the right ureter and absence of blood or abscess collections. Clinical and instrumental examinations suggest the diagnosis of urinoma, a marked calico-pyelic dilatation that causes a rupture in the renal parenchyma and a leakage of urine in the retroperitoneum. A double "J" stent was placed for the decompression of the excretory tract. We aspirated the fluid-corporuscular collection and sent the sample to the laboratory for testing, then the patient started antibiotics.

Conclusions: In a patient with signs of infection and colicky pain, ultrasound is essential to address the clinical suspicion. In our case it showed a hydroureteronephrosis and a retro-renal finely corpuscular fluid collection. These data, associated with the presence of a calculus in the ureter on CT, have guided us towards the diagnosis of urinoma. It is important to be able to recognize this pathology in order to improve the patient's therapeutic management and avoid the onset of complications.

Cutaneous purpura following CoVID-19 vaccination

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Case report: A 67-year-old male presented to our hospital with a sudden eruption of pruritic, erythematous-to-violaceous purpura and plaques distributed along the lower and upper extremities and low back. Ten days prior he was vaccinated with Vaxzevria. No systemic involvement or manifestation was perceived. He had no prior history of allergy or purpuric skin eruption and had not recently started any new medication. Laboratory tests (included autoimmunity screening) and instrumental examinations were normal, except for a mild pericardial effusion. Biopsies obtained from the left arm both showed a picture compatible with leucocytoclastic vasculitis. After discussing risks and benefits the patient was discharged with topical steroids and a prednisone taper.

Discussion: Vasculitis exacerbation has been reported secondary to multiple vaccines. However, this relationship is rare and it has yet to be determined. A possible mechanism might be vessel damage likely secondary to abnormal immunological activation with vaccine-related antigens promoting antibody development and immune complex deposition. Despite systemic steroids cause variable effects on immunity, up to 20 mg/day of prednisone seems to not have any effect on patients' immune response to vaccines. For the CoVID-19 vaccine, it is speculated that regardless of the type of vaccine, systemic corticosteroids have no or minimal risk in patients' immune response.

Conclusions: It is important for healthcare providers to be aware that the CoVID-19 vaccine can potentially precipitate or exacerbate cutaneous inflammation.

Immune response in CoVID-19 and cardiovascular risk factors

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Background and Aims: Although antibody presence is commonly equated with immunity, the actual relationship between antibodies and immunity varies by viral disease. The association of antibodies to SARS-CoV-2 with immunity to CoVID-19 remains not yet clear. Low-strength evidence suggests that older age and greater disease severity may be associated with higher antibody levels. Aim of our study was to assess relationship between antibody response and some cardiovascular (cv) risk factors.

Materials and Methods: Retrospective study on 40 patients in post CoVID follow-up 3 months after infection, of which 70% hospitalized during the acute phase and 17.5% with severe respiratory failure treated with C-PAP. We assess anti-SARS-CoV-2 IgG level and the severity of the pulmonary picture on chest CT by Lung Score (LS).

Results: The anti-SARS-CoV-2 IgG antibody titer (AT) was higher in diabetics (301.94±113.43 vs 142.68±114.91; p=0.001), in hypertensive patients (238.25±136,9 vs 112.69±89.75; p=0.001), in dyslipidemics (302.8±103.82 vs 184.3±138.6; p=0.029). The AT was directly related to older age (r=0.393; p=0.025). Furthermore, the AT was higher in patients with worse LS post-CoVID (r=0.376; p=0.044). Moreover, TA was almost double in CPAP-treated patients (300±137.2 vs 158.04±119.8; p=0.009).

Conclusions: Our data show that some cardiovascular risk factors and age are associated with a higher IgG titer, 3 months after the acute phase. AT is associated with the severity of the clinical state during acute disease and this association persists even in the post-CoVID.

Correlazione fra parametri ematici ed ecografia toracica nel monitoraggio del paziente CoVID-19 sub-acuto

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Premesse e Scopo dello studio: L'ecografia toracica (tUS) è una

metodica routinaria per la valutazione del paziente CoViD19 acuto, tuttavia risultano carenti i dati nel paziente con sintomi da più di 10 giorni. Lo scopo del lavoro è stato correlare tUS con i parametri laboratoristici del paziente CoViD-19 con più di 10 giorni di malattia.

Materiali e Metodi: Studio prospettico di coorte in singolo centro. Sono stati arruolati 66 pazienti consecutivi (età 74,9±14,1) con malattia da più di 10 giorni sottoposti all'ingresso (t0), dopo 7 giorni (t1) a tUS. Sono stati valutati i seguenti esami: Hb (13,2±1,8 gr/dl), Gb (7,1±3,5 mmcc), linfociti (1,1±0,6 mmcc), dDimer (1058 IQR 1008 ngr/ml), PCR (7,8 IQR 10,0 mg/dl), PCT (0,09 IQR 0,11 ngr/ml). Sono stati utilizzati il test di Spearman e t-Student in base al setting statistico.

Risultati: I valori di dDimero correlavano con tUS a t0 ($p < 0,000001$) e a t1 ($p < 0,01$) così come i livelli di PCR (t0 e t1 $p < 0,00001$). Non vi era correlazione significativa di tUS in t0 e t1 con i restanti parametri studiati. È stata osservata una variazione significativa in tUS fra t0 e t1 nei pazienti con dDimer >1000 ($p < 0,05$).

Conclusioni: tUS si rivela essere utile nel monitoraggio del paziente CoViD-19 dopo il decimo giorno di malattia e correla con gli stessi parametri della fase acuta (PCR e dDimer). Lo stretto rapporto fra tUS e dDimer suggerisce una possibile componente trombotica nella genesi degli addensamenti sub-pleurici osservati. La PCT, anche nel paziente CoViD-19 sub-acuto/cronico, non correla con la gravità dell'impegno polmonare.

Nuove linee guida vs Charcot

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Premesse: La colangite è un'infezione delle VB causata da un'infezione secondaria a ostruzione. Fattori di rischio: coledocolitiasi, procedure endoscopiche sulle VB, colangiocarcinoma, ampulloma, tumori pancreatici. Frequente negli anziani, si può complicare con shock settico, accessi multipli, pyleflemie. Mortalità 10%.

Descrizione del caso clinico: Uomo di 85 anni ricoverato per persistenza di febbre con saltuari episodi di disorientamento. EOG e EOR nella norma. Esami ematici: rialzo indici di flogosi-gGT 604 U/L-PCR 65500 mg/dL-PCT 0.7 ng/mL (sepsi possibile). In anamnesi pz iperteso, diabete, fibrillante, pregressa colicistectomia con sfinterotomia della papilla di Vater. Negativi HBV-HCV e marker tumorali epatobiliari. Ecoaddome: marcata aerobilia nelle VBI e VBP. Approfondendo lo studio dell'albero biliare e del dotto pancreatico la colangiografia evidenzia dilatazione VBP con 3 formazioni litiasiche e conferma aerobilia VBI. Il pz, trattato con terapia antibiotica ad ampio spettro e sottoposto, mediante CPRE, a drenaggio della VBP con resfinterotomia della papilla di Vater ed espulsione dei 3 calcoli, è stato dimesso in abs.

Conclusioni: Considerando le presentazioni atipiche di malattia correlate all'età e che la triade di Charcot ha bassa sensibilità, i nuovi criteri diagnostici: infiammazione sistemica, colestasi, imaging hanno permesso diagnosi certa di colangite acuta. La colangite è un'urgenza e il trattamento precoce entro 24-48h previene le complicanze e riduce l'ospedalizzazione nell'anziano fragile.

Cerebellar ataxia, an unusual symptom of CoViD pneumonia in an elderly patient

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Background: Neurological manifestations in SARS-CoV-2 are heterogeneous, ranging from mild symptoms such as anosmia and hyposmia/ageusia to more severe pictures such as stroke, seizures, ataxia, polyradiculoneuropathy, encephalopathy and movement disorders. Between the neurologic disorders, ataxia is a relatively uncommon manifestation of CNS involvement by SARS-CoV-2.

Description of the case: A patient with 78 years of age and other very good general conditions, was admitted to the emergency room after the onset of ataxia associated with the ideomotor slowdown. He had no active disease until the beginning of ataxia, and

occasionally he exercises very actively. He had as a single episode of fever (39 C). He performed nose pharyngeal swab, resulted positive. The value of his blood gas analysis was always acceptable, but he had a mild reduction of SpO2 during the walking test. During the hospitalisation, imaging included a chest computed tomography (CT) that showed pneumonia. A brain CT showed a mild hypodensity of the cerebral white matter as chronic cerebrovascular disease. He also performed a neurological consultation. Physicians chose to administer dexamethasone 6 mg iv and enoxaparin sodium 60 mg per Kg of weight subcutaneously, antibiotic therapy and a low flow of oxygen therapy.

Conclusions: The particularity of this case is the presence of ataxia as a single symptom of CoViD disease in an elderly patient with SARS-CoV-2 pneumonia. Typical presentations of CoViD-19 generally included symptoms such as fever, dry cough and dyspnoea; in elderly has been often reported the absence of these symptoms.

A rare case of visceral Leishmaniasis and CoViD-19 co-infection. Misdiagnosis in the CoViD era?

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Background: CoViD-19 is a global pandemic, with high mortality and morbidity. Leishmaniasis are protozoan diseases transmitted by phlebotomine sand flies, with increasing incidence worldwide. In the CoViD-19 pandemic era the focus was on the coronavirus infection but similarities in the febrile course and other manifestations of some diseases may lead to clinical misdiagnosis and can lead to patient harm from delay in the correct treatment.

Description of the case: We describe a case of a 28-year-old patient who was hospitalized for SARS-CoV-2 pneumonia. He presented a mild fever (37.7°), progressive weakness and headache. PCR test for CoViD-19 was positive, and there was ground glass opacities in the lower left lobe of the lung on computed tomography scan. On physical examination, patient was febrile and hepatosplenomegaly was noted. Laboratory investigation demonstrated pancytopenia with hemoglobin -8.9 g/dl, RBC 2.58 × 10⁹/μl, WBC 1 × 10³/μl, platelet count 63 × 10³/μl. A diagnosis of visceral leishmaniasis (kala-azar) was made based on the bone marrow aspiration cytology. The patient was treated by intravenous administration of antimonial B, he responded favorably to treatment.

Conclusions: This case demonstrated that the diagnosis and management of other infectious diseases can be challenging in times of this pandemic. The vigilance for timely diagnosis needed for patients suspected of having CoViD-19 is imperative but it should not deter us from recognizing possible differential diagnoses.

Citomegalovirus, l'insidia dell'immunocompromesso: un case report

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Premesse: Il citomegalovirus (CMV) è un herpesvirus che infetta la maggior parte delle persone; nella maggioranza dei casi non da sintomi di infezione, tuttavia nelle persone con un sistema immunitario compromesso (pazienti con AIDS, con tumori ematologici o in trattamento con chemioterapia o terapia immunosoppressiva) si possono presentare gravi complicanze con interessamento di vari organi tra cui l'occhio. La retinite da CMV in genere ha un esordio monolaterale (circa due terzi dei casi) con visione offuscata, miodesopsie e perdita della visione periferica. Senza trattamento l'infezione distrugge la retina e danneggia il nervo ottico fino a causare cecità.

Descrizione del caso clinico: Una donna di 77 anni ricoverata in seguito a dispnea e astenia in assenza di febbre o dolore toracico. In anamnesi ipertensione arteriosa in trattamento con ramipril e artrite reumatoide in terapia con metotrexato, prednisone e rituximab. Un giorno viene riferito dalla paziente improvviso calo del visus all'occhio dx con associata miopia fissa, in assenza di deficit di lato. La paziente veniva sottoposta a RM encefalo, risultata negativa, e a seguire a valutazione oculistica dalla quale emergeva quadro di retinite da CMV associata a sinechie dell'iride.

Conclusioni: L'infezione esogena o la riattivazione endogena da CMV può verificarsi accompagnata da complicazioni potenzialmente letali, è pertanto fondamentale sottoporre i pazienti a rischio ad un'adeguata profilassi e laddove sia necessario avviare subito trattamento con ganciclovir anche con iniezione intravitale.

Monoclonal antibody therapy for high-risk Coronavirus (CoViD-19) patients with mild to moderate disease presentation: an encouraging experience in Frosinone Hospital

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Background and Aim: The coronavirus disease 2019 (CoViD-19) pandemic has caused a worldwide crisis and encouraged an urgent search for prevention and treatment of infection. SARS-CoV-2 neutralizing monoclonal antibodies (NMA), that bind the viral spike glycoprotein, are a new treatment able to attenuate disease progression. In this observational study we reported our experience in the NMA treatment of early CoViD-19.

Materials and Methods: From March to May 2021 we enrolled patients affected by CoViD-19 with risk factors to develop severe disease and early onset of symptoms (preferably within 72 hours, not more than 10 days). All patients were subjected to phone monitoring up to 30 days after drug administration.

Results: We evaluated 40 patients (M/F 24/16; median age 58.5 years, IQR 12.25; median symptoms duration before treatment 5 days, IQR 2), of which 36 were treated with bamlanivimab/etesevimab association, 3 with casirivimab/imdevimab, 1 with bamlanivimab. Sixteen patients (40%) were affected by obesity, 21 (52.5%) by hypertension, 9 (22.5%) by diabetes, 8 (20%) by chronic lung disease, 7 (17.5%) by secondary immunodeficiency. Serious adverse events did not occur during infusion and follow up. Five patients (12.5%) developed severe CoViD-19 with lung failure and needed hospitalization. Of these, one patient died.

Conclusions: SARS-CoV-2 NMA could be a valid therapeutic option to decrease hospitalization and mortality rate. However we need to select eligible patient, evaluating risk factors and early timing of intervention.

Autoimmune hepatitis type 1: a danger hidden by a common case of ASH-related liver cirrhosis

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Background: AIH is a chronic liver disease that occurs especially in women, characterized by high levels of aminotransferases and autoantibodies, hypergammaglobulinemia, often associated with other autoimmune diseases. AIH can have an acute or insidious onset, so cirrhosis may already be present at the diagnosis. Treatments include corticosteroids alone or in combination with azathioprine.

Presentation of the case: A 38-year-old woman with history of alcohol abuse and absence of other diseases came to our department for sudden onset of jaundice. On admission we found pancytopenia with macrocytosis, mixed hyperbilirubinemia, high levels of aminotransferases and GGT, reduced total cholinesterase, hypergammaglobulinemia, hypoalbuminemia and coagulations disorders. Both abdominal CT and ETG showed hypertrophy of the left lobe and caudate with signs of portal hypertension; gallbladder appeared overdistended with thickened walls and lithiasic formations. This suggested a banal diagnosis of acute cholecystitis in chronic alcoholic hepatitis but elements such as female sex, young age, secondary amenorrhea with androgynous appearance and psychomotor slowdown led us to suspect a more complex syndromic picture. Therefore, after the exclusion of HBV or HCV infection, we found ANA and ASMA positivity so we made diagnosis of autoimmune hepatitis type 1 that we treated with azathioprine.

Conclusions: The study of a liver cirrhosis should consider all possible etiologies, including immunologic ones.

Stress and sweat: cholinergic stimuli for the development of a particular form of non-allergic urticaria

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Background: Cholinergic urticaria is a form of urticaria triggered by heat, physical exercise and emotional stress that increase body temperature with secretion of sweat that causes the skin rash.

Description of the case: A 36-year-old male reported sudden onset of small confluent erythematous lesions on the neck, thorax and upper limbs accompanied by itching and heat sensation. No history of atopy or allergic and irritant contact dermatitis were reported. The man was not taking medications or using new detergents. However, he described the onset of the rash, in a very hot day and he remembered to have eaten a substantial amount of dark chocolate. For three weeks the man was treated with cetirizine and prednisone with clinical benefit, but the lesions reappeared in the same regions in the following week. In the meantime, chocolate and other potential food allergens were excluded from the diet. At CBC there was no eosinophilia; moreover, we performed patch tests and pruritus test with negative results. Two weeks later, in complete therapeutic washout, the same skin rash reappeared. There was a common denominator: sun exposure in an abnormally hot day for the season and sweating, in a period defined as "stressful" for the patient.

Conclusions: This phenomenon was attributed to cholinergic urticaria, in which the development of skin rash depends on the release of histamine in response to the release of acetylcholine after the secretion of sweat.

Terapia combinata con IgG ev e octreotide in malattia di von Willebrand acquisita ed angiодisplasie intestinali

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Premesse: La malattia di von Willberand acquisita (AVWS) è un disordine raro. Ha le stesse manifestazioni cliniche della forma congenita e può associarsi a varie patologie. Il trattamento non è ben codificato ma la terapia sostitutiva è inefficace.

Descrizione del caso clinico: 80enne con note angiодisplasie intestinali ed artrite reumatoide in terapia steroidea. Durante ricovero per artroprotesi d'anca riscontro di allungamento dell'aPTT(1.98 ratio) da deficit di FVIII e del FVW (16.6% e 18%). Nessuna correzione dopo somministrazione di terapia sostitutiva (Haemate P 40U/kg e 60 U/kg ogni 12 h) dell'attività funzionale (RICOV) e parziale correzione del deficit antigenico (FVIII e FVW). Ipotizzata AVWS (anamnesi familiare negativa in senso emorragico e dosaggio del FVW e FVIII nei figli nella norma). Seguivano ricoveri per epistassi ed emorragia digestiva con emotrasfusioni. Intrapresa terapia con octreotide LAR ed immunoglobuline ev (IgG) associata a terapia steroidea, successiva stabilità clinica (schema di infusione 0.4 g/kg in tre somministrazioni consecutive ogni 3 settimane, successivo passaggio ad ogni 4 settimane). Follow up clinico negativo con rialzo dei valori di FVIII, FW e RICOV.

Conclusioni: Questo caso conferma i dati di letteratura a favore dell'utilizzo delle IgG ev nell'AVWS indotta da MGUS in portatore di angiодisplasie intestinali. Lo schema posologico delle IgG ev risulta inusuale, suggerendo che l'associazione con octreotide sc sia vincente nel controllo del sanguinamento intestinale consentendo l'utilizzo di uno schema terapeutico più breve ma efficace.

Embolia polmonare tardiva in infezione SARS-CoV-2 paucisintomatica

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Premesse: Le complicanze trombotiche nell'infezione da SARS-

CoV-2 sono frequenti e prognosticamente rilevanti in termini di mortalità e morbilità'. L'embolia polmonare è stata riscontrata e descritta in varie serie autoptiche oltre che in vari casi di insufficienza respiratoria in corso di polmonite interstiziale da CoVID-19. I meccanismi alla base dei fenomeni trombotici in corso di sepsi sono diversi e possono includere meccanismi immunomediati, l'attivazione del complemento, la sindrome da attivazione macrofagica, la sindrome da anticorpi antifosfolipidi. Il meccanismo predominante nei fenomeni tromboembolici in corso di CoVID-19 non è chiaro.

Descrizione del caso clinico: 32enne, due gravidanze a termine prive di complicanze trombotiche. Anamnesi familiare positiva in senso trombotico (madre con trombosi venosa nel post partum in due gravidanze su tre). Comparsa di sintomi CoVID-19 correlati, insorti dopo infezione sintomatica del suocero. A risoluzione dei sintomi, in pieno benessere insorgenza di dispnea e dolore dorsale con diagnosi di tromboembolia polmonare bilaterale (tratto più distale dell'arteria polmonare di destra ed in corrispondenza della divisione dell'arteria polmonare di sinistra), tampone SARS-CoV-2 positivo. Trattata con enoxaparina a dosaggio terapeutico e successivamente con edoxaban con buona evoluzione clinica. Allo screening trombofilico rilievo di deficit della proteina S, risultata pari a 14%.

Conclusioni: Questo caso risulta peculiare perchè suggestivo del potenziale protrombotico del CoVID-19 anche nelle forme paucisintomatiche dal punto di vista infettivo.

A particular case of ascites, lymphocytopenia and SIADH

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Description of the case: A 55-year-old male from Africa, came at our attention reporting a five-month history of abdominal pain, loss of weight and abdominal tension with fever. At clinical examination, we found severe ascites and bilateral pleural effusion; laboratory showed anaemia (Hb 7.5 gr/dl), severe lymphopenia (100/ul, with all class reduction at Lymphocytes Subset Panel), hyponatraemia (120 mEq/dl) with high urinary osmolality and sodium, elevation of C-Reactive-Protein and Procalcitonin. Interferon gamma release assay and serology for HIV were negative. At chest and abdominal CT we found bilateral pleural effusion and severe ascites, evidence of diaphragm nodulations and multiple lymphadenopathies. We performed a paracentesis, ascetic fluid analyses showed high proteins, normal glucose and lymphocytes, with positivity of PCR for M. Tuberculosis. Abdominal CT after paracentesis was suggestive for tuberculosis peritonitis. He started a five-drug therapy against tuberculosis with rifampicin, ethambutol, pyrazinamide, isoniazid and moxifloxacin. In two weeks lymphocytes, sodium and haemoglobin increased, and he started to gain weight. Cultural exam showed no antibiotic resistance so, after resolution of sepsis state, he discontinued moxifloxacin and continued with a four-drug therapy for two months followed by rifampicin and isoniazid.

Conclusions: The diagnosis was peritoneal and miliary tuberculosis with severe lymphopenia and secondary SIADH. The reason for negativity of interferon gamma release assay was probably severe immunodeficiency tuberculosis-induced.

CoVID-19: persistence of symptoms and lung alterations after 3-6 months from hospital discharge

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Aim: This prospective study aimed to evaluate the results of a follow-up program for patients discharged from a non-intensive CoVID-19 ward.

Methods: 3-6 months after hospital discharge, 59 of 105 CoVID-

19 patients (31 males, aged 68.2±12.8 yrs) were recruited in the study. Forty-six patients were excluded because of non-traceability, refusal or inability to provide informed consent. The follow-up consisted of anamnesis (including a structured questionnaire), physical examination, blood tests, ECG, lower limb compression venous ultrasound (US), thoracic US and spirometry with diffusion lung capacity for carbon monoxide (DLCO).

Results: 22% of patients reported no residual symptoms, 28.8% 1 or 2 symptoms and 49.2% 3 or more symptoms. The most frequently symptoms were fatigue, exertional dyspnea, insomnia and anxiety. Among the inflammatory and coagulation parameters, only the median value of fibrinogen was slightly above normal. A deep vein thrombosis was detected in 1 patient (1.7%). Thoracic US detected mild pulmonary changes in 15 patients (25.4%), 10 of which reported exertional dyspnea. DLCO was mildly or moderately reduced in 19 patients (37.2%), 13 of which complained of exertional dyspnea.

Conclusions: A substantial percentage of CoVID-19 patients (77.8%) continue to complain of symptoms 3-6 months after hospital discharge. Exertional dyspnea was significantly associated with the persistence of lung US abnormalities and diffusing capacity alterations. Extended follow-up is required to assess the long-term evolution of post-acute sequelae of CoVID-19.

Insomnia and obstructive sleep apnea syndrome in the elderly. Comparison of clinical-metabolic aspects

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Background and Aim: Few studies confirm the increased incidence of insomnia and respiratory disorders in sleep in the aging. There is a pathophysiological link between obstructive apnea and metabolic syndrome. Aim of the study was to examine the clinical aspects of insomnia and OSAS in the geriatric patient, with subjective, objective methods and the possible effects on the metabolic risk profile.

Materials and Methods: 283 patients, 146 males and 137 females, mean age 72 (72.3±6.7), all underwent subjective evaluation of daytime sleepiness and snoring, sleep quality, polygraphy, anthropometric and biochemical parameters. Exclusion criteria: hyper/hypothyroidism, chronic pulmonary and renal diseases, heart failure, gastroesophageal reflux, epilepsy, degenerative diseases, depression and headaches.

Results: 119 patients (86 M, 33 F) diagnosed with OSAS (AHI>5), 164 patients (60 M, 104 F) with insomnia. The prevalence of metabolic syndrome was: 65% in patients with OSAS (M: 56%, F: 88%), 52% in patients with insomnia (M: 45%, F: 56%) No risk factors for MS: 5% OSAS, <2% insomnia.

Conclusions: Higher incidence of OSAS in males and insomnia among females, Positive predictive value of the Epworth Scale (ESS) and of the Berlin questionnaire in identifying patients at risk of OSAS. Obesity is confirmed as a risk factor for OSAS regardless of gender, low HDL value is significantly correlated with OSAS. None correlation between short duration sleep (<6 hours) and MS. Severe snoring and unrefreshing sleep are significantly associated with low HDL and hypertriglyceridemia.

New inflammatory markers and non-dipping pattern in the hypertensive elderly patient: a case-control study

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Introduction and Aim of the study: Few studies define hypertension as a "state of chronic systemic low-grade inflammation". We looked for a possible association between the non-dipping pattern and increased values of the N/L ratio and MPV in elderly hypertensive patients.

Materials and Methods: 49 patients (25M and 24F, mean age 66 yo). Exclusion criteria: CAD, ESRD, cancer, autoimmune dis-

eases, chronic inflammation, use of antithrombotic, alpha blocker and beta-agonist drugs, insomnia. All patients underwent medical history: past or present smoking habit, sleep quality and duration; BMI, metabolic parameters, clinical BP, ABPM 24h.

Results: 14 normotensive, 35 hypertensive: 19 dipper, 16 non-dipper. The BMI of non-dipper group and the cholesterol of the dipper one are higher than normotensive group. MPV and N/L ratio of non-dipper group is higher than the other groups. PLT of non-dipper smokers were increased. MPV and N/L ratio blood levels were higher in non-dipper group than in the other two groups with increased CV risk. In the normotensive group smokers have a higher MPV than non-smokers while in the non-dipper group smokers have more PLT than non-smokers. Cigarette smoke can modify the MPV and PLT values increasing the thrombotic risk.

Conclusions: The non-dipping pattern leads to a high CV risk in elderly hypertensive patients. It is associated with an increased systemic inflammatory state where immunity and platelet activation play an important role. The correction of the nocturnal profile could reduce CV risk and give protection against chronic inflammation.

CoViD-19 misdiagnosis: a case report

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Background: In the CoViD-19 era any ground glass opacity is associated to SARS-CoV-2 pneumonia.

Description of the case: A 33-year-old man is referred to the emergency department for cough and diarrhea. The patient's vital signs are notable for an oxygen saturation of 93% in RT. His heart rate and blood pressure are normal. He has cachexia, but the remainder of the physical examination findings were normal. A complete blood cell count reveals lymphopenia and anemia. A thoracic CT scan shows a bilateral ground glass opacity. Molecular swab for CoViD-19 was positive with a high ct value. The patient is admitted to our Department for CoViD-19 pneumonia. He reports a long history of weight loss, weakness and diarrhea. His CRP, LDH and g-GT levels are elevated; remaining laboratory tests are all within normal limits. A peripheral blood smear shows rare schistocytes and activated lymphocytes. He is started to a large spectrum antibiotic therapy. The results of further workup for lymphopenia (HBV, HCV, HHV, Toxo, CMV and EBV, coproculture, parasitological stool exam) are negative. The molecular swab for CoViD-19 is persistently negative as well as the serological test. A *Candida albicans* infection is found in the sputum culture. The HIV test results positive and a genotyping is detected. He starts with antiretroviral therapy and antifungal therapy with improvement of clinical status.

Conclusions: The CT scan appearance in our patient was suggestive for SARS-CoV-2 infection, but the clinical history and laboratory findings directed our attention to different diagnosis and correct treatment.

A case of adult glucose-6-phosphate-dehydrogenase deficiency (G6PDd)

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Background: Evaluation for G6PDd is appropriate in individuals with Coombs-negative hemolytic anemia (HA).

Description of the case: A 33-year-old man is referred to our Dept with diagnosis of HA. His clinical history starts 2 day before, when he went to ED for a renal colic and macrohematuria associated to high levels of leucocytes and Hb of 13 gr/dl. He was treated with analgesics (acetomiphene-ketorolac) and antibiotics (fluoroquinolones). He refused hospitalization. The next day he came back for persistent symptomatology. The patient's vital signs were normal except scleral jaundice. A thoracic- abdomen CT scan was normal. The laboratory tests show a Hb of 10.3 gr/dl, increased LDH and bilirubin, low-normal haptoglobin, Coombs-negative. He reported an ingestion of fava beans few days before and

use of cocaine. The Hb decreased to 6 gr/dl, the blood pressure lowered and the patient underwent to blood transfusion. A G6PD test reveals a deficiency. An echocardiogram shows aortic valve vegetation. The fluoroquinolones administration was interrupted. An aggressive hydration, a folic acid-B12 vitamin supplementation and a large spectrum antibiotics were started with resolution of anemia and reduction of infection parameters.

Conclusions: The management of G6PDd is the avoidance of oxidative stress to RBCs. There may be instances in which an oxidant drug is required, or cases in which oxidative stress comes from an infection or other acute medical condition. In these settings, management depends on the severity of hemolysis and anemia and the patient's age and comorbidities.

An unconventional tumor

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Background: Pancreatic cancer is one of the tumors with the poorest prognosis (5-year survival rate <2%), due to late diagnosis. Point of care ultrasound (POCUS), as first-level imaging, can shorten the timing to detect and treat vague symptoms-related or underlying pathologies.

Description of the case: 74 yo patient hospitalized for epigastric pain, diarrhea and emesis. Medical history: ischemic heart disease, diabetes, hypertension, dyslipidemia. Blood tests: urea 90,3 mg/dL, creatinine 3,26 mg/dL, AST 86 U/L, ALT 198 U/L, GGT 907 U/L, ALP 568 U/L, direct bilirubine 0.44 mg/dL, Myo 2643 mg/L. This patient seemed to be affected by AKI due to a statin-induced rhabdomyolysis. On physical examination, no relevant findings. POCUS: kidneys with normal morphology, intra- and extrahepatic biliary ductal dilatation and overdistended gallbladder. Cholangio-MRI: post-hepatic cholestasis with an associated mass in the head of the pancreas (25x20 mm). Total-body CT confirmed the presence of the mass, reliable to a neoplasm located in the cephalic pancreatic portion. The patient so underwent surgery very quickly with complete eradication of the tumor.

Conclusions: POCUS has led to an anticipated diagnosis and therapy for a very poor prognosis pathology with vague clinical signs. POCUS can so be a valid help, as a first level imaging.

Just a lower back pain? No, a rare case of Bing-Neel syndrome

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Background: Bing-Neel syndrome (BNS) is a rare presentation of Waldenström macroglobulinemia (WM) characterized by lymphoplasmacytic cells infiltration into the central nervous system.

Description of the case: A 78-year-old patient with a known diagnosis of WM was previously treated in 2009 obtaining partial remission. His comorbidities included hypertension, chronic ischemic heart disease and hepatitis B reactivation. From March 2019 he developed episodes of leg weakness, falls and lower back pain. These were initially misinterpreted as muscular pain or drop attack at neurological assessment. The hematological disease was stable. Only in May 2020 magnetic resonance imaging (MRI) showed pathological leptomeningeal contrast enhancement from the medullary cone up to the level of D11. Flow cytometry of the cerebrospinal fluid showed a predominant population of kappa light chain-restricted B-cell CD19+, CD20+, CD5-, CD38+, CD56+; MYD88 L265P mutation was also detected. The patient showed a systemic disease progression: serum IgM levels 4935 mg/dL, monoclonal IgM kappa protein 2,5 g/dL, 30% bone marrow infiltration, abdominal lymphadenopathy up to 2,5 cm and splenomegaly. In June 2020 he was started on ibrutinib 420 mg/day. He had rapid improvement in walking and pain, still ongoing. By October 2020, MRI spine showed improvement of leptomeningeal thickening, monoclonal IgM kappa protein was at 0,7 g/dL.

Conclusions: A diagnosis of BNS should be considered in patients with WM in the case of any unexplained and persistent neurological manifestations.

The important role of Internist in the recognition of ANCA-associated vasculitis in an ordinary Internal Medicine ward

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Introduction: Antineutrophil cytoplasmic antibodies (ANCA)-associated vasculitides (AAV) are a group of systemic vasculitides that predominantly affect small vessels. Clinical phenotype is heterogeneous: kidney and/or pulmonary involvement is described in up to 75-90% of cases. Among these, rapidly progressive glomerulonephritis and diffuse alveolar haemorrhage are the most serious manifestations.

Description of the case: A 73-year-old man presented with 15 days history of fever, productive cough and fatigue (SARS-CoV-2 nasopharyngeal swab negative); antibiotic therapy prescribed was ineffective. Afterwards he developed necrosis of right hand distal phalanx, oedema of lower extremities, dyspnoea for mild exertion and acute renal failure, that needed dialysis. A lung HRCT showed ground glass opacities, blood tests underlined high inflammatory indices and high titre PR3-ANCA positivity. Diagnosis of PR3-ANCA associated vasculitis was made and glucocorticoid therapy with methylprednisolone (1mg/Kg/day) was started. For the occurrence of emoptysis, respiratory failure and anemization, suspecting diffuse alveolar haemorrhage, methylprednisolone pulse therapy (500mg/day for 5 days), plasmapheresis and rituximab (375 mg/m²/week for 4 infusions) were administered. There was a progressive clinical-laboratory improvement.

However the patient developed intestinal perforation and died.

Conclusions: AAV represent rare diseases, burdened by a poor prognosis. They need a "careful internist" and a multidisciplinary approach to ensure an early therapeutic intervention.

From bad to worse: two cases of spondylodiscitis complicated by psoas abscess

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Background: Spondylodiscitis complicated by iliopsoas abscess represents a rare but potentially life-threatening condition. We report two cases of psoas abscesses associated to lumbar spondylodiscitis that were admitted to our hospital.

Description of the cases: Case 1# A 74-year-old man was admitted to our ward with a 2-week history of low back pain and intermittent fever. Physical examination revealed bilateral lower limb hyposthenia and bilaterally Lasegue sign, rapidly worsened with lower limb hypoesthesia and hyporeflexia up to paraparesis. RachiCT and MRI scan reported spondylodiscitis at L3-L4 associated with extensive spinal epidural abscess from D8 to L4 and bilateral psoas abscess. Case 2# A 71-year-old woman was admitted to our hospital for low back pain and progressive lower limb muscle weakness. Spine CT and MR imaging showed an extensive spinal epidural abscess from D10 to L5 and left-sided psoas abscess combined with spondylodiscitis at L3-L4. Both patients underwent CT-guided percutaneous drainage of psoas abscess and were treated with intravenous broad-spectrum antibiotics for 6 weeks. No causative organisms were isolated. Repeat imaging showed a reduction in the epidural and psoas abscesses.

Conclusions: Psoas abscess represents a rare but fearsome complication of spondylodiscitis requiring percutaneous drainage and prolonged antibiotic therapy. High clinical suspicion should be rise in patients with backache, fever and lower limb pain. Similarly, spondylodiscitis should always to be considered in patients with psoas abscess as possible source of primary infection.

Autoimmune haemolytic anaemia behind systemic lupus erythematosus: unmasking "the great imitator"

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Background: Autoimmune haemolytic anaemia (AIHA) includes a heterogeneous group of immune system disorders characterized by the presence of autoantibodies directed against erythrocyte antigens. In 50% of cases AIHA is associated with other pathologies, in particular with autoimmune diseases (20%).

Description of the case: A 28-year-old woman comes to our attention for weight loss, weakness and diffuse lymphadenopathy. The thorax-abdomen CT showed slightly bilateral pleural effusion. Blood tests revealed the presence of pancytopenia with severe anaemia requiring continuous transfusion. The Coombs direct test was highly positive. Immunophenotype in peripheral blood not revealed qualitative changes in the lymphocyte and leukocyte subpopulations. We performed also a bone marrow biopsy and a LN biopsy that resulted negative for haematologic disease. So we collected a complete antibody panel that showed ANA 1: 1280 and high titre of anti-dsDNA. The clinical and laboratory scenery was indicative for systemic lupus erythematosus (SLE). We started steroid at high doses and subsequently IG vein because of slight improvement in blood counts.

Conclusions: AIHA is an acquired haemolytic disorder where antibodies directed against red blood cell surface epitopes, cause premature RBC destruction, which leads to anaemia. Females are reported to have an increased risk of developing AIHA, often explained by an increased prevalence of other autoimmune diseases commonly associated, such as SLE. In conclusion, we suggest that is important to evaluate for both SLE and ANA in patients presenting with AIHA.

Treatment and secondary prophylaxis of venous thromboembolism with anti-Xa in patients with severe hereditary thrombophilia

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Background: Deficiency of protein C, protein S, antithrombin III and homozygosity or combined heterozygosity for factor V Leiden and F II 20210A mutation represent severe hereditary thrombophilia (SHT) and are associated with higher risk of early onset venous thromboembolism (VTE). In literature few papers have described the efficacy and safety of therapy with anti-Xa in VTE occurring in patients with SHT.

Materials and Methods: In our setting, since March 2014, we identified 21 patients (11 M and 10 F) who have suffered from early onset venous thrombosis. VTE was treated with anti-X in all cases (13 rivaroxaban, 4 apixaban, 4 edoxaban) and after 3-6 months of anticoagulant therapy a complete screening for hereditary thrombophilia was performed.

Results: Three AT III deficiency, 4 PC deficiency, 4 PS deficiency, 3 homozygosity for FV Leiden, 2 homozygosity for F II 20210A and 1 combined heterozygosity for FV Leiden and F II 20210A were detected. Two patients underwent anticoagulant therapy for a variable period of 12-24 months before stopping, another one, after 24 months, shifted to anti-FX low dose therapy; all the others, for the severity of the disease, were assigned to a lifelong therapy with full-dose therapy. During the follow up, either recurrences of thromboembolic events or haemorrhagic episodes were not observed.

Conclusions: This report describes the efficacy and safety of therapy with anti-Xa in the treatment and secondary prophylaxis of VTE in patients with SHT.

Un complesso caso di ipercalcemia in un'anziana

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Descrizione del caso: Una paziente 87enne si reca al PS per vomito, rallentamento ideomotorio e disartria. Autonoma nelle BADL, in anamnesi: TVP in terapia con edoxaban e resezione gastrica per ulcera. All'esame obiettivo segnalata solo disidratazione e rallentamento. TC cranio negativa per lesioni ischemico/emorragiche; ecografia addome ed Rx torace nei limiti. Agli esami ematici creatinina 2.14mg/dL, sodio e potassio in range, GB 15.000/mm³, Hb, PLT, bilirubina, AST e ALT nei limiti. All'EGA equilibrio acido-base e scambi respiratori nei limiti, calcemia non dosabile. In reparto viene dosata la calcemia totale che risulta 24 mg/dL. Inviati elettroforesi delle proteine che mostra sospetta componente monoclonale in zona beta₂; IFEu e IFEs con rilievo di BJK >1 g/24h e alterato rapporto kappa/lambda. Eseguita BOM che conferma la diagnosi di mieloma multiplo. Inoltre rilevato incremento di PTH (2736 pg/ml) con vitamina D nei limiti. All'ecografia evidenza di lesione nodulare nella loggia paratiroidea con caratteristiche sospette per etp. Per età e comorbilità è stato escluso l'intervento chirurgico. La paziente è stata trattata con terapia farmacologica (bortezomib e cinecalcet).

Conclusioni: L'ipercalcemia è una condizione molto frequente nei pazienti ricoverati in Medicina. La presentazione clinica non sempre è eclatante, spesso paucisintomatica ed aspecifica soprattutto nell'anziano dove la causa più frequente è paraneoplastica. In letteratura sono descritti pochi casi di presenza contemporanea di mieloma multiplo e etp delle paratiroidi: nella maggior parte anziani e trattati con sola terapia medica.

GLP1-RA/basal insulin vs basal bolus in CoVID-19 type 2 diabetes in patients

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Background: During the CoViD-19 pandemic in type 2 diabetic patients (T2DM pts) present in our Medicine wards we administered a big amount of s.c. insulin through the basal bolus regimen in order to obtain a good metabolic control; often difficult to reach both for the septic state and steroid therapy. Since we administered almost 60 to 80 units/insulin per day (TDD), not always obtaining a good metabolic control, we thought to switch some of our in-patients treated with basal bolus insulin regimen to a bolus plus a fixed ratio combination of GLP1-RA/basal insulin trying to take advantage of both the antiinflammatory and slimming effect of GLP1-RA.

Results: Between October and December 2020 we evaluated 54 T2DM in-patients with CoViD-19 pneumonia. They were 41 males and 13 females aged 70±5 yrs, BMI 31±3kg/sm with an average HbA1c 8.3±1.2 and an insulin TDD of 70±11 s.c. compared to 40 matched (for sex, age, BMI and insulin TDD) "control" pts treated with basal bolus regimen.

Conclusions: We detected in the fixed ratio combination of GLP1-RA/basal insulin a faster and stable good metabolic control vs the basal bolus treated pts. We reduced the average amount of insulin TDD of 34% with great satisfaction of pts and nurses.

Paraneoplastic neuromyelitis optica spectrum disorder (NMOSD) associated with metastatic lung adenocarcinoma: a case report

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Background: NMOSD is an autoimmune disorder affecting the central nervous system associated with serum aquaporin-4 immunoglobulin G antibodies (AQP4-IgG). Clinical findings suggestive of NMOSD in elderly patients should arouse the suspicion of paraneoplastic etiology.

Description of the case: A 78-year-old woman complained of a 2-month history of dysarthria, progressive bilateral leg weakness, blurred vision and weakness of the left upper limb. Brain MRI re-

vealed diffuse meningeal enhancement. A whole-body CT scan showed a pulmonary neoformation of 5 cm in diameter in the median lobe with multiple distant metastasis. Pleural cytology revealed adenocarcinoma cells TTF-1/napsin-A positive with positive expression of PDL-1. Her symptoms exacerbated to complete paraplegia and sensory loss within four days. Contrast enhanced MRI showed a T2 hyperintense lesion extending from 1st cervical to 7th thoracic vertebrae. Cerebrospinal fluid analysis revealed increased protein level and no neoplastic cells. Serum ACQP-4 autoantibodies were detected while no other serum anti-neuronal antibodies were found. High-dose intravenous methyl-prednisolone therapy was started with no beneficial effect. The patient's condition rapidly deteriorated so that no other treatment was possible. **Conclusions:** Clinical signs of NMOSD in elderly patients should arouse the suspicion of paraneoplastic etiology. An early diagnosis is essential to guarantee the best possible outcomes. Treatment options include oncologic therapy and immunosuppressive therapy (intravenous steroids, immunoglobulins, azathioprine, rituximab).

Trombosi venosa profonda dell'arto superiore nei pazienti neoplastici: nostra esperienza

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Premesse e Scopo dello studio: Il rischio di tromboembolismo venoso (TEV) risulta aumentato di 4 volte nei pazienti neoplastici. La trombosi venosa profonda degli arti superiori (UEDVT) ha un'incidenza molto inferiore rispetto a quella degli arti inferiori. Una delle cause principali nei pazienti neoplastici è la presenza di catetere venoso centrale (CVC).

Materiali e Metodi: analizziamo retrospettivamente una casistica di 21 pazienti neoplastici con UEDVT, valutata presso l'ambulatorio di diagnostica vascolare, dal 2016 al 2020.

Risultati: Le neoplasie più rappresentate sono state i linfomi e il carcinoma mammario (entrambi 28,5%). Il vaso più frequentemente interessato è risultato la v. succlavia (71.4%). L'interessamento è stato più frequentemente multivasale (66.7%) che monovasale (33.3%). Il 52,4% dei pazienti ha ricevuto EBPM, il 14,3% fondaparinux, il 52,4% un NAO. Non abbiamo registrato casi di embolia polmonare, mentre abbiamo evidenziato un'incidenza di sindrome post trombotica del 33,3% e di recidiva trombotica del 19%. Per le complicanze relative alla terapia, abbiamo registrato un solo caso di emorragia maggiore, con enoxaparina, che ha richiesto la sospensione del trattamento e due casi di emorragia minore, senza necessità di sospensione del farmaco.

Conclusioni: Dai nostri dati ricaviamo che la UEDVT non è gravata da embolia polmonare in percentuale paragonabile a quella dell'arto inferiore, ma presenta un'incidenza non trascurabile di SPT. Il trattamento anticoagulante, anche con i NAO, risulta relativamente sicuro in questa popolazione di pazienti fragili.

Una CID che non quadra: importanza del follow-up in pazienti con coagulopatia di origine apparentemente indeterminata

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Premesse: Le sindromi paraneoplastiche spesso precedono le manifestazioni cliniche della neoplasia primitiva.

Descrizione del caso clinico: Riportiamo il caso clinico di una paziente di sesso femminile, di anni 82, che si presenta in Pronto Soccorso con un quadro caratterizzato da anemia, piastrinopenia, e diatesi emorragica da circa un mese. Agli esami ematochimici reperti suggestivi di CID cronica. Inizia terapia con plasma. In seconda giornata comparsa di cefalea con deficit del visus, per cui viene effettuata angio-tc del cranio che evidenzia un quadro di trombosi venosa del seno retto, con lesione emorragica parieto-occipitale bilaterale. Le indagini volte a svelare l'eziologia della CID risultano negative per infezioni, malattie ematologiche, e per neoplasie (EGDS

e colonscopia negative, TC con mdc e PET total body negative). Alla luce di un incremento del ca 125, si pratica una RMN pelvica, negativa per ca ovarico. La paziente migliora clinicamente, residua un parziale deficit del visus. La diatesi emorragica scompare ma persistono anomalie della coagulazione per cui viene inviata a centro di secondo livello. Dopo un mese circa compare ascite massiva. Si effettua paracentesi diagnostica che evidenzia cellule maligne di origine ovarica.

Conclusioni: La peculiarità di questo caso sta nel fatto che la manifestazione paraneoplastica ha generato un quadro clinico molto severo prima che la neoplasia primitiva fosse evidente a metodiche di imaging avanzate. Pertanto, in questi pazienti con CID cronica sine materia, risulta necessario uno stretto follow-up, al fine di individuare cause sottostanti non evidenti ab initio.

Pustolosi acuta esantematica generalizzata: un raro caso clinico

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Premesse: La pustolosi esantematica acuta generalizzata o AGEP (acute generalized exanthematous pustulosis) è una rara eruzione cutanea eritemato-pustolosa diffusa, causata principalmente da farmaci, quali alcune classi di antibiotici ed antimicotici. Molto rari, seppur descritti in letteratura, sono i casi di AGEP indotti dalla idrossiclorichina (HCQ), farmaco antimalarico utilizzato prevalentemente in ambito reumatologico.

Descrizione del caso clinico: Donna di 47 anni, affetta da connettivite indifferenziata, in trattamento con HCQ, ricoverata per comparsa di rash pustoloso insorto 20 giorni dopo l'inizio della terapia con HCQ. Agli ematochimici leucocitosi neutrofila, incremento VES e PCR, procalcitonina nella norma, emo-urinocolture negative. Nonostante la sospensione della HCQ le lesioni cutanee si sono estese risparmiando solo le mucose genitali ed orali ed è comparsa febbre. La diagnosi differenziale include la psoriasi pustolosa, la necrolisi epidermo tossica e la sindrome DRESS (Drug reaction with eosinophilia and systemic symptoms).

Alla biopsia cutanea quadro compatibile con AGEP. Dopo avvio di terapia con prednisone 1 mg/kg, supporto idrico e nutrizionale si è assistito ad un netto miglioramento clinico.

Conclusioni: Le reazioni avverse da farmaci con coinvolgimento cutaneo e sistemico sono rare.

L'insorgenza tardiva e la non responsività alla sospensione di HCQ hanno reso il nostro caso di AGEP severo ed atipico. La prognosi è comunque buona, anche nei casi severi, se prontamente trattati con cortisonici.

Il passaggio di consegna infermieristica con implementazione del metodo SBAR: studio osservazionale

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Premesse e Scopo dello studio: Nelle realtà assistenziali viene data grande importanza agli interventi per il miglioramento della comunicazione tra il personale. Per evitare di provocare eventi avversi, il passaggio consegne infermieristico deve essere eseguito con scrupolo e precisione. Si vuole quindi dimostrare l'efficacia dell'utilizzo del metodo strutturato SBAR in rapporto al normale passaggio consegne.

Materiali e Metodi: Lo studio osservazionale ha avuto come setting un reparto di Medicina Interna, dove un precedente studio del 2018 aveva già valutato la qualità delle informazioni trasmesse durante il passaggio di consegne senza metodo strutturato. Nello stesso reparto è stato introdotto successivamente (2020), il metodo di consegna SBAR, la cui efficacia rispetto alla normale consegna libera è stata valutata con una raccolta dati eseguita con lo stesso metodo del 2018.

Risultati: Dal 6/8/20 al 5/9/20 sono state ascoltate 641 consegne, per un totale di 27 turni di lavoro. Molti parametri analizzati, come i dati riguardanti l'anagrafica dei pazienti, la diagnosi di entrata, la storia clinica, l'attività/riposo, l'alimentazione, l'eliminazione, il planning del futuro dell'assistito ecc. sono stati condivisi maggiormente dall'applicazione del metodo rispetto alla forma libera e il tempo medio a paziente per la discussione risulta diminuito.

Conclusioni: Dopo l'introduzione del metodo SBAR alla realtà assistenziale del reparto di Medicina Interna è stato riscontrato un aumento della qualità delle informazioni scambiate al momento del passaggio consegne.

Long-CoViD e remdesivir: un acceleratore di guarigione anatomica (ecografica) con riduzione della sintomatologia e miglioramento della qualità della vita

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Premesse e Scopo dello studio: Il long-CoViD descrive un insieme di sintomi che si protraggono dopo la remissione della patologia acuta da SARS-CoV-2. Scopo dello studio è dimostrare che l'utilizzo del remdesivir contribuisca a ridurre gli stessi ed accelerare la risoluzione anatomica (ecografica).

Materiali e Metodi: Lo studio è stato condotto su un campione di 96 pazienti, visitati ambulatorialmente a 45 giorni dalla dimissione. Tutti avevano sviluppato polmonite interstiziale bilaterale ed erano stati trattati con terapia steroidea, anticoagulante ed ossigenoterapia. Di questi 46 erano stati trattati con remdesivir. A tutti veniva eseguita ecografia toracica, messa a confronto con quella eseguita alla dimissione e veniva somministrato questionario EQ-5D-5L sulla qualità della vita.

Risultati: Nei pazienti trattati con remdesivir nel 64% dei casi c'era stata risoluzione completa del quadro ecografico, nel 32% un miglioramento dello stesso. Nel 4% un quadro sostanzialmente sovrapponibile. Nei restanti pazienti il 52% andava incontro a risoluzione ecografica, il 38% ad un miglioramento, il 10% presentava un quadro sovrapponibile. Al questionario sulla qualità della vita dei pazienti trattati con antivirale il 16% non lamentava disturbi, il 31% riferiva sintomi legati ad 1 o 2 item, il 13% a 3, l'8% a 4 su 5 e l'1% a 5 su 5. Nei restanti pazienti il 4% non lamentava sintomi, il 32% lamentava sintomi legati ad un item, il 34% a 2, il 16% a 3, il 10% a 4 ed il 4% a 5.

Conclusioni: Il remdesivir contribuisce alla riduzione dei sintomi del long-CoViD ed accelera la risoluzione anatomica (ecografica).

Multiple sclerosis and glioblastoma: a diagnostic-therapeutic challenge

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Background: Multiple Sclerosis (MS) is a demyelinating neurodegenerative disease of the CNS on an autoimmune basis, whose lesions involve the white matter, with a predilection for the periventricular areas, cerebellum, brainstem, spinal cord and optic nerves. MS patients can develop space-occupying lesions that can be mistaken for neoplasm, and this form of MS is termed "tumefactive MS", but in rare cases, however, there may be a coincidence of MS and CNS neoplasm in the same patient. We report a case of a patient with coexistence of MS and glioblastoma.

Description of the case: A 61-year-old woman with MS for about three years receiving ocrelizumab, an anti-CD-20 monoclonal antibody, approved by the FDA in 2017. For sudden onset of right hemiplegia and dysarthria, the patient underwent brain MRI with contrast medium with evidence of a primary cerebral neoplasm of the glial series, infiltrating, multifocal and high grade. Stereotactic brain biopsy confirmed the diagnosis of glioblastoma multiforme. The patient, due to the symptoms, the volume and multifocality of the disease was a candidate for hypofractionated whole brain radiotherapy.

Conclusions: The occasional development of gliomas in MS cases is now a fact, but the number of reported cases is still small. Our

case, as well as others, emphasizes the importance of considering brain tumors in the differential diagnosis of primary demyelinating disease presenting with a cerebral mass lesion and reiterates the need to carefully evaluate symptoms and brain MRI, even in well-documented individuals with MS.

The impact of the CoViD 19 pandemic on cancer

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Background: During the CoViD-19 pandemic, cancer screening has been suspended, routine diagnostic work deferred, and only urgent symptomatic cases had priority for diagnostic intervention. This disruption to cancer screening services may have a significant impact on patients, health care practitioners, and health systems. In this study, we estimated the increase of diagnosis of cancer in our department of Clinical Medicine.

Methods: In this retrospective cohort study, we collected data on patients with active or previous malignancy, aged 18 years and older, admitted to our Unit of Clinical Medicine from 1 January 2021 to 31 March 2021 (Group A) compared with pre-pandemic figures from 1 January 2020 to 31 March 2020 (Group B).

Results: We collected data of 239 patient from Group A, 121 (50.6%) were female. Median (interquartile range) age was 65.0 (56.0-70.0) years, median (interquartile range) hospitalization was 16 day (12-20), 43/239 (18%) were hospitalized due to cancer or its complications. Compared with pre-pandemic figures (Group B), we estimate an increase in hospitalizations of patients with newly diagnosed advanced cancer and/or complications of previous cancer.

Conclusions: Substantial increases in the number of new cases of cancer in our wards of Internal Medicine are to be expected as a result of diagnostic delays due to the CoViD-19 pandemic. Urgent interventions are necessary, particularly the need to manage the backlog within routine diagnostic services to mitigate the expected impact of the CoViD-19 pandemic on patients with cancer.

Il processo del consenso informato: uno studio osservazionale trasversale

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Premesse e Scopo dello studio: Il consenso informato (CI) è un processo che consente ai pazienti di esercitare il principio di autodeterminazione e di prendere parte al processo decisionale favorendo la relazione con il personale sanitario. Dal punto di vista infermieristico, però, il ruolo rivestito nel processo non sempre risulta chiaro. L'obiettivo dello studio è descrivere la conoscenza degli infermieri e la percezione del ruolo che gli infermieri rivestono nel processo del CI.

Materiali e Metodi: La raccolta dei dati è avvenuta attraverso un questionario auto-compilato in due unità operative di un ospedale universitario.

Risultati: Hanno partecipato allo studio 32 infermieri. Il 62% si sente sempre/spesso a suo agio nel coinvolgere un paziente nel processo di CI e nel rispondere a domande o aiutarlo; il 91% usa un linguaggio semplice e accessibile facendo attenzione al paziente ed il 94% ha dichiarato di assicurarsi che il paziente comprenda correttamente le informazioni, ma il 78% afferma di non avere a disposizione le risorse necessarie per farlo e il 75% che il coinvolgimento dell'infermiere avviene poco/raramente (75%). Per il 16% il ruolo nel processo di CI è di facilitatore, per il 31% è di natura impiegatizia e per i restanti è di testimone o non esiste un ruolo definito.

Conclusioni: È importante implementare la consapevolezza rispetto al ruolo rivestito, la formazione riguardo al processo di CI, ma anche la partecipazione durante il processo stesso. Linee guida sulla gestione del processo potrebbero guidare l'infermiere nella pratica clinica.

La qualità della vita dei caregiver dei malati oncologici: uno studio osservazionale trasversale

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Premesse e scopo dello studio: La diffusione del cancro è in aumento determinando un aumentato fabbisogno di assistenza erogata da parte dei caregiver (CG). Questi forniscono fino al 90% dell'assistenza a lungo termine. Questo può influire negativamente sulla loro salute e peggiorarne la qualità della vita (Quality of Life - QoL). Lo studio ha lo scopo di descrivere i livelli di QoL dei CG che assistono i pazienti e identificare le variabili che possono influenzarla per aiutare a sviluppare un modello di cure che si prenda carico non solo del malato, ma anche della sua famiglia.

Materiali e Metodi: I soggetti arruolati nello studio sono stati invitati a compilare il questionario Adult carers quality of life questionnaire (AC-QoL). È stato utilizzato un modello di regressione logistica multivariata per identificare quali variabili contribuiscono alla QoL del CG.

Risultati: Sono state arruolate 37 coppie CG/paziente. La mediana dei punteggi di AC-QoL è 79, un valore che indica una QoL di livello medio. Le caratteristiche dei CG e dei pazienti che influiscono sulla qualità di vita dei CG sono risultate il genere dei pazienti assistiti e il loro livello del dolore su scala NRS. I domini del ACQoL maggiormente influenzati dal ruolo di assistenza sono risultati essere il caring choice, i money matters e il sense of value.

Conclusioni: I risultati di questo studio potrebbero essere utili per il personale sanitario degli ambulatori di Cure Palliative per identificare i CG maggiormente a rischio di sviluppare disturbi quali ansia, depressione e insonnia.

Long-CoViD in a hub Hospital: a new model for diagnosis of post-acute CoViD-19 syndrome. An interim analysis

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Background and Aim: The lasting effects of SARS-CoV-2 infection in survivors of severe CoViD-19 are largely unknown. Our aim is to describe a new model of care in the setting of an Internal Medicine outpatient clinic for survivors of severe CoViD-19, and to evaluate their long-term respiratory sequelae.

Materials and Methods: Patients affected by severe CoViD-19 pneumonia were enrolled into a 2-step follow-up at 5 months. Patients with multiple comorbidities who are unable to walk were excluded. In the first step clinical evaluation, chest X ray (CXR), 6 minutes walking test (6MWT) and validated questionnaires (mMRC, BFI test) were assessed. The second step included chest computed tomography, pulmonary function tests, and echocardiography. A chest x-ray severity score (CXRSS) was used to compare CXR before and after the discharge.

Results: Among 340 patients discharged for severe CoViD-19, 153 showed exclusion criteria, and 187 patients were eligible. Until now, the first evaluation has been done in 45 patients (mean age 67 yrs). When compared before and after discharge, the CXRSS showed a significant improvement ($p < 0.001$). The median 6MWT was 420 m (20-540), BFI was 10 (0-64), mMRC was 1 (0-4). Only 7 patients were planned to a second step evaluation.

Conclusions: After 5 months from hospital discharge, the majority of severe CoViD-19 survivors showed a resolution of pulmonary CXR reports and a good functional status. A 2-step clinical evaluation strategy in an Internal Medicine setting helps in early identification of patients at risk of developing respiratory sequelae.

Superficial lymphadenopathies: the central role of the Internist and bedside ultrasound in the instrumental diagnostics process

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Background: The characterization of a superficial lymphadenopathy can be obtained through 3 methods: excisional biopsy, ultrasound-guided fine needle aspiration cytology (FNAC) and ultrasound-guided core needle biopsy (CNB). The choice is influenced by different aspects: clinical suspicion, invasiveness and risk of complications. The echographic study identifies the lymph node stations suspected of malignancy and the relationships with the surrounding anatomical structures; it also identifies the easiest place for the surgeon to perform the excisional biopsy. The purpose of the study is to focus the attention on the centrality of the clinician in choosing the best diagnostic-instrumental approach.

Materials and Methods: The study was conducted in 10 patients in the period between 05/2019 and 05/2021. All patients underwent CT scan and bedside ultrasound in order to look for pathological superficial lymph nodes. In cases of possible metastatic lesion, FNAC was performed; in the suspicion of lymphomatous disease, surgical excision and, if not practicable, CNB were performed.

Results: 6 excisional biopsies were performed (5 lymphomas and 1 lung cancer metastasis); 2 CNB (2 melanoma metastases) and 2 FNAC (thyroid carcinoma metastases). No false negatives have been found.

Conclusions: The diagnostic process of lymphadenopathy is still not codified. Our experience confirms the centrality of bedside ultrasound and of the Internist in the best diagnostic choice; this approach allows a more rapid classification of the pathology and reduces false negatives.

Campylobacter jejuni bacteraemia in a patient on low dose steroid treatment

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Background: *Campylobacter jejuni* is one of the most common causes of bacterial gastroenteritis worldwide. Bacteraemia is a rare complication of *Campylobacter* infection and usually occurs in immunosuppressed patients or those with other comorbidities

Description of the case: A 89-year-old woman presented with fever, diarrhea and abdominal pain. She referred history of diverticulosis of the colon and rheumatoid arthritis on chronic oral steroids (prednisone 5 mg/die). Blood tests showed WBC $14.48 \times 10^3/\mu\text{l}$, creatinine 1.52 mg/dl, CRP 6.38 mg/dl, potassium 3.2 mg/dl. A total body CT revealed diverticulosis of the sigmoid, perivisceral flogosis and inflammatory wall thickening of descending colon along with minimal reactive effusion. Stool culture was negative. On day 6 of admission blood cultures were positive for *Campylobacter jejuni*. She refused to undergo colonoscopy. She was treated with ciprofloxacin on the basis of antibiogram. One month after discharge she referred well and her blood tests were normal.

Conclusions: *Campylobacter jejuni* bacteremia is an uncommon (in Western countries has been reported <1% of *Campylobacter* infection) but severe disease. It occurs more frequently in elderly and immunocompromised patients, including those on immunosuppressive steroids. Our case reminds that low dose corticosteroids demand a greater attention as immunosuppressive agents. Fragile patients presenting with enteritis might hide invasive *Campylobacter* infection, thus prompt diagnosis and treatment are mandatory, bearing in mind the increasing rate of antibacterial resistance among this species.

Multifocal extramedullary plasmocytoma of the bone: a rare presentation of multiple myeloma

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Background: We describe a rare case of multiple myeloma occurring with disseminated osteolytic lesions in the absence of diffuse bone marrow infiltration.

Description of the case: A 80-year-old man presented with bilateral costal pain. He suffered from COPD and prostatic hyperplasia. A

CT and a bone scintigraphy before admission had revealed multiple bone secondarism and ribs fractures. A total body CT showed a tumor mass (55 mm) of L4 vertebra and psoas muscle with diffused bone secondarism. Blood tests showed Hb 10.7 g/dl, creatinine 1.83 mg/dl, calcium 11.3 mg/dl. Protein electrophoresis and immunofixation showed a IgG lambda monoclonal protein (peak 0.9 g/dL). Lambda FLC were 235 mg/dl and kappa/lambda FLC ratio was 0.07. Bence Jones proteinuria wasn't found. Bone marrow aspirate and biopsy showed normal findings. A total body 18F-FDG PET/CT confirmed the presence of a paravertebral right mass and diffuse bone lesions with elevated metabolism. Needle biopsy of the paravertebral mass was consistent with bone localization of IgG/Lambda multiple myeloma. Treatment with bortezomib, bisphosphonate and dexamethasone was started with good response at six months.

Conclusions: Our patient presented with multifocal osteolysis described as bone secondarism at bone scintigraphy and PET/TC. Multiple myeloma was suspected on the basis of blood tests. However, bone marrow biopsy resulted normal and the final diagnosis was made only with the biopsy of the vertebral mass. Our atypical case reminds that multiple myeloma is a heterogeneous disease which might require a challenging diagnosis.

Monoclonal antibody treatment of CoVID-19: the experience of the Internal Medicine at the SS Trinità Hospital, Cagliari

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Background: Available studies suggest that patients treated with monoclonal antibodies therapy (MAT) for CoVID-19 show a significant reduction of the viral load in nasopharynx. Studies are ongoing to better define clinical benefits of this therapy.

Materials and Methods: We retrospectively studied the seventeen patients (seven females mean age 71.14 and ten males mean age 63.7) treated with MAT between April and May 2021 in our Internal Medicine ward. We followed the national guidelines for the administration of MAT. All patients were treated within five days after their first positive swab samples (RT-PCR). 10 patients presented hypertensive cardiomyopathy, 4 type 2 diabetes mellitus, 3 asthma, 1 end stage renal disease and 1 Shawman diamond syndrome. Ten patients were treated with casirivimab/indevimab, six patients with bamlanivimab/etesevimab, one patient with bamlanivimab only.

Results: 30 days after MAT, we contacted the patients to evaluate side effects and disease development. The symptoms referred were diarrhea (4 cases), fever (3 cases) and fatigue (2 cases), probably due to CoVID infection more than MAT. The only patient hospitalized for CoVID-19 pneumonia was that one treated with bamlanivimab alone, a 60-year-old man with severe previous conditions such as triple ischemic stroke and triple acute coronary syndrome. Anyway he underwent non-invasive ventilation and didn't need intensive therapy.

Conclusions: Our data suggest that MAT for CoVID-19 infection is safe and can avoid the worsening of symptoms and hospitalization in frail patients with recent infections.

Comorbidità preesistenti in pazienti ricoverati in reparto CoVID a bassa intensità di cura

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Premesse e Scopo dello studio: E' nota la frequenza di comorbidità nei pazienti CoVID-19 che necessitano di ricovero. Scopo di questo studio è valutare le comorbidità appartenenti ad un gruppo di pazienti ricoverati all'interno di un reparto CoVID a bassa intensità di cura, predisposto dalla nostra ASP per i pazienti provenienti dai reparti per acuti, in fase di stabilità.

Materiali e Metodi: E' stato eseguito uno studio osservazionale retrospettivo su tutti i pazienti transitati dal 14/11/2020 al 31/03/2021 nel Reparto CoVID a bassa intensità di cure dell'ASP RC. Le variabili raccolte riguardavano: età, comorbidità preesistenti, esito del ricovero.

Risultati: Nel periodo di studio sono transitati all'interno del reparto 121 pazienti, aventi età media di 67 anni e con le seguenti caratteristiche: 45% portatore di 4 comorbidità, il 25% di 3, il 22% di 2; il 21% di 1 e il 12% di nessuna. Comorbidità principalmente presenti: 50% ipertensione arteriosa, 33% diabete mellito, 26% insufficienza cardiaca cronica, 23% pneumopatie, 12% valvulopatie; 10% obesità e disturbi della tiroide. Altre patologie erano presenti in percentuale inferiore al 10%. 1 paziente è deceduto ed 1 è stato trasferito in rianimazione.

Conclusioni: Lo studio conferma la correlazione tra la presenza di comorbidità preesistenti e la gravità dell'infezione da SARS-CoV-2. Considerando l'alta percentuale di outcome positivo, potrebbe rivelarsi interessante il confronto delle comorbidità tra la nostra casistica con studi paralleli raccolti tra pazienti ricoverati in reparti per acuti o in terapia intensiva.

Is it possible to predict early the outcome of CoVID-19 patients? Prognostic value of Troponin-I (Tn-I)

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Aim of the study: Aim of the study was to identify an early predictor of poor outcomes in CoVID-19 pneumonia and, in particular, the role of Tn-I.

Materials and Methods: An observational retrospective study was performed by analyzing clinical, laboratory and instrumental features from 155 hospitalized patients for CoVID-19 pneumonia in our General Medicine and Semi-intensive Care Units.

Results: At the time of hospital admission, 20.3% had an abnormal Tn-I value (cut-off 17.5 ng/l) excluding patients affected by ischemic myocardial injury; 10.3% had an abnormal Tn-I excluding also the ones with renal failure (creatinine > 1.2 mg/dl). Tn-I was significantly higher in patients transferred to ICU or died ($p < 0.001$), in patients treated by non-invasive ventilation ($p = 0.007$). Tn-I had a positive correlation with NT-proBNP ($p < 0.001$, $r = 0.353$); myoglobin ($p = 0.020$, $r = 0.232$); QTc interval ($p < 0.001$, $r = 0.301$); creatinine ($p < 0.001$, $r = 0.358$); serum proteins in alpha-1 electrophoretic band ($p = 0.008$, $r = 0.260$); FiO₂ ($p = 0.019$, $r = 0.211$) and lactate ($p = 0.11$, $r = 0.229$). Tn-I had a negative correlation with pO₂ ($p = 0.029$, $r = -0.197$) and P/F ratio ($p = 0.033$, $r = -0.192$) on arterial blood gas analysis. In patients with higher Tn-I values, patients were older ($p < 0.001$), had higher creatinine ($p < 0.001$); CPK ($p = 0.001$); inflammation biomarkers were worst (LDH, $p = 0.002$; ESR, $p = 0.037$; CRP, $p = 0.004$); arterial blood gas analysis was worst (lower pO₂, $p = 0.034$; lower sO₂, $p < 0.001$; higher lactate, $p = 0.002$).

Conclusions: Therefore, elevated Tn-I level at admission is a risk factor for the severity and mortality of CoVID-19.

Sinus bradycardia in patients with severe CoVID-19

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Aim of the study: Aim of this study was to analyse the relations between SB and severe CoVID-19 pneumonia (Pneumonia Severity Index > 90).

Materials and Methods: An observational retrospective study was performed by analyzing clinical, laboratory and instrumental features from 155 hospitalized patients for CoVID-19 pneumonia in our General Medicine and Semi-intensive Care Units.

Results: Bradycardia (heart rate < 60 bpm) was found in the 32.2% of the study population, as described in literature. Neither clinical and laboratory characteristics of myocardial damage, thyroid impairment or electrolytes abnormalities were diagnosed among these patients. This cohort of population had only a higher amount of smokers ($p = 0.001$) and blood neutrophils count ($p = 0.032$) without anymore differences compared to the cohort with normal heart rate. The incidence of bradycardia was same in patients treated by remdesivir or not ($p = 0.495$). When viral nucleic acid tests turned negative, the SB disappears.

Conclusions: Therefore we speculated that the inhibitory effect of SARS-CoV-2 on sinus node activity was the main cause of sinus bradycardia in these patients.

Impact of SARS-CoV-2 vaccination on a population of healthcare professionals

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Background and Aim: In January 2021, vaccination against CoVID-19 was started in Italy. F. Miulli Regional Hospital, in Acquaviva delle Fonti (BA), has prepared a vaccination plan in order to cover the entire health care population which, starting from January 6, 2021, led to the vaccination of 1,700 subjects. Purpose of the study was to evaluate the impact of SARS-CoV-2 vaccination on healthcare personnel. Primary outcomes were: the number of infections detected after vaccination and hospitalizations for SARS-CoV-2 infection.

Materials and Methods: Nasopharyngeal swabs were analyzed with reverse transcription-polymerase chain reaction techniques. Vaccination campaign was carried out in the period January-February 2021. The data were compared according to three periods: time 0: March-April 2020; time 1: October 2020-January 2021; time 2 (post vaccine): February-April 2021.

Results: The swabs analyzed were respectively: Time 0: 1.077; Time 1: 9.043; Time 2: 4.013. The positive tests and their percentage, relative to the swabs examined in the three times, are: Time 0: 17 cases (1.57%); Time 1: 137 cases (1.51%); Time 2: 15 cases (0.37%). Furthermore, none of the positive subjects at time 2 required hospitalization, compared to 3.2% of hospitalizations which occurred between time 0 and time 1.

Conclusions: Vaccination against SARS-CoV-2 resulted in a 75.3% reduction in infections in vaccinated subjects and a 100% reduction in hospitalizations, indicating a high protective effect for both infection and disease expression.

Coagulopatia nel paziente cirrotico: caccia aperta al microbiota

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Premesse: La cirrosi epatica rappresenta il quadro terminale di diverse epatopatie croniche. La prognosi dei pazienti cirrotici è correlata alle complicanze che possono instaurarsi.

Descrizione del caso clinico: Il paziente giungeva presso il nostro Nosocomio per grave anemizzazione (Hb 3.6 g/dL) e contestuale ematoma spontaneo dell'arto superiore destro. Risultava affetto da cirrosi epatica dismetabolica diagnosticata durante pregresso ricovero ospedaliero per quadro clinico analogo. All'ingresso presso la nostra Struttura si eseguivano emotrasfusioni di GRC e TC di arto superiore destro che escludeva rifornimento dell'ematoma. Gli esami ematici evidenziavano quadro coagulativo compatibile con emolisi intravascolare in corso di CID frusta da insufficienza epatica. Si otteneva parziale arresto dell'emolisi con somministrazioni di plasma fresco congelato e piastrene, interrotte per segni di sovraccarico cardiaco. Pertanto si tentava terapia quotidiana con probiotici per rimodulare la composizione del microbiota intestinale e valutarne l'impatto sulla funzione epatica. Si assisteva a normalizzazione del pattern coagulativo e stabilizzazione della crasi ematica (Hb 10.2 g/dL). Dato il miglioramento dei parametri epatici (MELD da 26 a 23) si concordava la presa in carico del paziente da parte del Centro Trapianti di Ancona.

Conclusioni: Nei pazienti cirrotici è stato evidenziato che la riduzione delle specie batteriche commensali si accompagna alla crescita di batteri patogeni le cui tossine possono causare l'insorgenza di severi quadri infiammatori e pro-coagulativi.

Una febbre solitaria

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Descrizione del caso clinico: Paziente che lamenta da circa un mese febbre (38°C) serotina che recede per crisi dopo assunzione

di antipiretico, nessun altro sintomo associato. Agli esami ematici indici di flogosi elevati (VES, PCR, alfa1 ed alfa2 globuline, fibrinogeno) con lieve leucocitosi e anemia in assenza di piastrinosi, senza ipergammaglobulinemia. Gli esami microbiologici (virus epatitici, HIV, Borrelia, CMV, EBV, Leishmania, PB19, Leptospira, Coxiella b, SARS-CoV-2, etc.), le emo/urinocolture prelevate su picco febbrile e il pannello auto-anticorpale risultano negativi. Manifestandosi così un caso conclamato di FUO, viene eseguita TC torace-addome con mdc ed eco-cardiogramma che non evidenziano reperti patologici e PET che referta soltanto una leggera captazione a livello esofageo compatibile con quadro di esofagite poi confermata all'EGDS. Nel sospetto di una forma di arterite di Horton in fase iniziale, sebbene il paziente presentasse solo lo stato piretico serale senza altra sintomatologia correlabile (cefalea, disturbi visivi, claudicatio masticatoria, dolore al collo od al cuoio capelluto) è stata eseguito ECD dell'arteria temporale che ha descritto un ispessimento, significativo per vasculite, a carico del tronco comune e delle principali branche descrivendo così, seppure ai limiti dei criteri diagnostici, un quadro compatibile con il sospetto di arterite gigante-cellulare. La diagnosi è stata confermata tramite referto istologico ed intrapresa terapia specifica.

Conclusioni: Il sospetto clinico, seppur non supportato da un corredo sintomatologico classico ha permesso una diagnosi precoce di arterite gigante-cellulare.

Simultaneous presentation of thyroid storm and diabetic ketoacidosis: the case report of a young woman, finally diagnosed with polyglandular autoimmune syndrome type 3

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Background: Thyroid storm (TS) and diabetic ketoacidosis (DKA) are life-threatening conditions. The simultaneous development of these disorders is rare, but it can occur in polyglandular autoimmune syndromes (APS).

Description of the case: A 22-year-old woman, with history of T1D, celiac disease and psoriasis, presented to our hospital because of fever, anorexia and vomiting. Physical examination showed fever, tachycardia, decreased skin turgor and bibasilar lung crepitations. Laboratory studies showed elevation of blood glucose, glycosylated hemoglobin, CPR and neutrophilic leukocytosis. Glycosuria, ketonuria and metabolic acidosis were detected. Chest X-Ray showed right basal lung consolidation. Serologic tests demonstrated recent Chlamydiae pneumoniae infection. Since DKA triggered by atypical pneumonia was diagnosed, we started fluid replacement, insulin therapy and azithromycin. Although the clinical improvement of pneumonia, DKA and tachycardia persisted. A thyroid dysfunction was suspected. Levels of FT3 and FT4 were elevated, TSH below the detectable limit. TRAb was positive. The Burch & Wartofsky TS score suggested an impending storm. Administration of methimazole and propranolol resulted in prompt relief of glycometabolic control and tachycardia.

Conclusions: We present the case of a young woman with a final diagnosis of APS type 3. TS associated with Graves' disease was covered by DKA. Whether pneumonia triggered DKA or TS first it is unknown, but each disorder strengthened the other. It is essential to keep in mind the possibility of the coexistence of these two conditions.

Prevalence of gastro-intestinal functional disorders in patients with eating disorders: a meta-analysis

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Background and Aim: Eating disorders (DCA) are frequent in women and young people, and are burdened by gastrointestinal

symptoms. The aim of the present study was to relate pathologies related to eating behavior with functional gastrointestinal disorders (DFGI).

Methods: One cohort study (>100 patients) and 7 studies with caseloads of less than 50 patients present on PubMed and published in the last 25 years were considered the subject of analysis. The DFGIs were classified according to the Rome IV criteria. The data obtained were correlated with each other with the Fisher test considering statistically significant values of $p \leq 0.05$.

Results: A total of 316 individuals were enrolled, 315 female (99.7%) and a male (0.3%). A total of 52 patients had esophageal symptoms, while gastrointestinal symptoms were present in 195 patients. A group of 20 patients reported two or more symptoms. Presence of esophageal disorders in anorexia is significantly higher than bulimia (OR:2.52; 95% CI: 1.11-5.73; $p=0.03$). Gastro-intestinal symptoms were present in 30 patients with bulimia, with a prolongation of gastrointestinal transit times to anorexia in which prevails cyclic vomiting (53 out of 92) and functional dyspepsia (39 out of 92) (OR: 0.43; 95%CI:0.23-0.78; $p=0.0058$).

Conclusions: In patients with DCA are more present symptoms related to gastro-esophageal symptoms while in bulimia is prevalent the diminution of gastro-intestinal transit time.

Managing edoxaban overdose in patients with posternale acute kidney injury: a case report

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Background: Approaching DOACs related bleeding/urgent surgical need is a frequent challenge.

Description of the case: A 90-year-old woman was admitted to our hospital with asthenia and abdominal pain. She was taking edoxaban (30 mg/day) for atrial fibrillation and had undergone hysterectomy 4 months previously (undifferentiated sarcomatous ADK). Laboratory test revealed acute kidney injury (creatinine levels 19 mg/dL, hyperkalemia 6,8 mEq/L). Abdomen ultrasound showed bilateral hydronephrosis, given the presence in the left iliac fossa of a mass (7x4 cm). Considering the need for nephrostomy and the bleeding risk, we proceeded to defer surgery for about 36 hours. Coagulation panel showed: PT 2,12, aPTT 28,7 and antiXa activity of edoxaban 142 ng/mL (n.v.: <45 ng/mL). We tried to control hyperkalemia with salbutamol and sodium polystyrene sulfonate. Being edoxaban not removed by dialysis and given the lack of a specific reversal agent, we treated our patient with phytomenadione and 3-factor prothrombin complex concentrate (50 UI per kg). We used perioperative tranexamic acid (loading dose 1 g intravenously, after procedure 2 g over 5 hours). After percutaneous nephrostomy catheter placement we observed moderate bleeding for about 24 hours (Hb 11,1 ->8,6 g/dL), and decreasing creatinine level (19 ->3 mg/dL).

Conclusions: The use of anticoagulants in cancer patients is debated, being challenging due to the risk of bleeding and altered renal function or frequent urgent invasive procedures. Effective reversal strategies are needed.

Ultrasound in CoViD-19 not only for the lung: work-up of a case of acute kidney injury

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Background: Acute kidney failure (AKI) is not an infrequent complication of CoViD 19 infection, especially in severe forms. Several pathogenic mechanisms could provoke AKI in CoViD 19: some aspecific (dehydration, post-renal, rhabdomyolysis), other directly related to virus toxicity (tubulopathy, endothelial damage, coagulopathy), other to immune response. Ultrasound findings in AKI in CoViD 19 are poorly reported in literature at this moment and could help in diagnostic workup.

Description of clinical case: A 72-year old hypertensive man born

in Senegal¹ was admitted for respiratory failure from CoViD-19, requiring NIV support. Starting creatinine levels slightly elevated (1,25 mg/dl) rapidly grew in the next days (2,74 mg/dl), although adequate crystalloid support; micro-hematuria and glycosuria were present with absence of relevant proteinuria; glycemic levels were high and HBA1c (7%) revealed previous diabetes. Ultrasound reveals normal dimension kidneys with preserved parenchymal thickness, but diffused hyper-echogenicity; Doppler study showed parenchymal IR in the upper range of normality (0,67-0,70). Renal function gradually improved with respiratory condition and patient was discharged 28 days after admission.

Conclusions: AKI in CoViD-19 has relevant prognostic implications and ultrasound evaluation could inform about previous nephropathy, current renal damage and prognostic prevision through measurement of parenchymal IR, known to be related in several AKI conditions with prognosis and reversal of AKI condition.

Acute peripheral arterial thrombosis and Takotsubo cardiomyopathy in a patient with CoViD-19 infection

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Background: The most frequent clinical manifestations of CoViD-19 are related to the respiratory tract. However variable clinical manifestations are often observed ranging from asymptomatic cases to the most serious complications. We report a case showing that the patient's genetic predisposition and comorbidities are likely strong influencer of the severity of CoViD-19 extra-pulmonary manifestations.

Description of the case: We report a case of Takotsubo cardiomyopathy in a 81-year old woman affected by CoViD-19 without a pre-existing cardiac condition. After 25 days of hospitalization, the patient experimented fever, respiratory insufficiency and acute right lower limb ischaemia requiring urgent amputation. 4 days later, electrocardiogram and ultrasound showed myocardial suffering and kinetics alterations respectively, suggestive for Takotsubo cardiomyopathy. Despite a gradual recovery of ventricular function, patient's lung function worsened, death occurred at day 34.

Conclusions: The patient experimented acute lower limb ischaemia as a vascular complication of virus infection, although it was treated with enoxaparin. We demonstrated that there was a prothrombotic predisposition: levels of homocysteine and anticoagulation proteins C and S were reduced. This case highlights a link between prothrombotic predisposition and CoViD-19-associated peripheral arterial disease.

Livelli aumentati di ICOS e ICOS-L sono associati a ipertensione arteriosa polmonare in pazienti con connettivopatie

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Premesse: In questo studio abbiamo indagato il potenziale ruolo diagnostico di "inducibile co-stimolator" (ICOS) e del suo ligando (ICOS-L) nell'identificazione della ipertensione polmonare primitiva (PAH) in pazienti affetti da connettivite (CTD).

Materiali e Metodi: Abbiamo reclutato 109 pazienti: 97 affetti da CTD, di cui 13 con CTD - PAH, e 12 pazienti con sola PAH. Tutti sono stati sottoposti ad analisi clinico-laboratoristica, ecocardiogramma e valutazione quantitativa dei valori sierici di ICOS e ICOS-L mediante ELISA.

Risultati: Le concentrazioni sieriche di ICOS e ICOS-L sono risultate significativamente più elevate nei pazienti con PAH e CTD-PAH rispetto a pazienti con sola CTD (p=0.0001 per entrambi i biomarcatori). Considerando i soli soggetti con CTD, i pazienti con

malattia complicata da PAH presentavano livelli sierici più elevati sia di ICOS (440 [240-600] vs. 170 [105 - 275] pg/ml, p=0.0001) che di ICOS-L (6000 [4300 - 7000] vs. 2450 [1500 - 4100] pg/ml; p=0.0001); tale associazione risulta indipendente da età e funzionalità renale alla regressione logistica. Abbiamo infine evidenziato come entrambe le molecole presentino una buona capacità diagnostica come dimostrato dalle rispettive curve ROC (ICOS: AUC: 0.843; CI95% (0.754-0.909); p<0.0001; ICOS-L: AUC: 0.818; CI95% (0.726-0.889); p<0.0001).

Conclusioni: Il nostro studio evidenzia che ICOS e ICOS-L sono significativamente aumentati nei pazienti affetti da PH, questo suggerisce il loro potenziale utilizzo nello screening di PH nei pazienti con CTD.

Non ce n'è CoViD!

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Premesse: Da un potenziale ed "inflazionato" paziente CoViD, ad una diagnosi inaspettata.

Descrizione del caso clinico: Un paziente di anni 31, giunge alla nostra osservazione dal Pronto Soccorso, per dolore toracico. Negava traumi recenti e/o ipertensione. Non manifestava angor nè dispnea. Dagli esami ematochimici si rilevava un incremento dell'urea e della creatinina con lieve rialzo degli indici di flogosi (PCR; VES). Nella norma l'ECG e gli indici di citonecrosi miocardica. Si eseguiva l'EGA che mostrava una severa acidosi metabolica. Si sottoponeva il paziente a Tc torace che rilevava pneumomediastino e polmonite interstiziale SARS-CoV-2 RNA negativa.

Conclusioni: Un raro caso di pneumomediastino, associato a polmonite interstiziale SARS-CoV-2 RNA negativo, in paziente affetto da pseudo-ostruzione intestinale intestinale cronica (CIPO) sottoposto ad ileostomia e a nutrizione parenterale domiciliare. La CIPO è una malattia rara della motilità gastrointestinale, caratterizzata da episodi ricorrenti simili a un'ostruzione meccanica, in assenza di disturbi organici, sistemici o metabolici e di ostruzioni fisiche rilevate dalle radiografie o da un intervento chirurgico. Alla base della disfunzione motoria e del transito intestinale ci possono essere anomalie del sistema nervoso enterico e/o estrinseco (neuropatia viscerale), della muscolatura liscia (miopatia viscerale) e delle cellule interstiziali di Cajal (mesenchimopatia intestinale).

It just looked like CoViD

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Background: The SARS-CoV-2 pandemia has often oriented the diagnosis of complex pathologies towards CoViD with complications while the main diagnosis could be different.

Description of the clinical case: A 76 yo man was hospitalized for confusion and heart failure; in the emergency department, CoViD Ab testing and PCR swab were positive with focal interstitial pneumonia; then splenomegaly, bilateral splenic and renal infarcts and thrombosis of the superior mesenteric artery were confirmed by chest-abdomen CT scan, Doppler US found thrombosis of brachial artery. Antithrombotic therapy was intensified but a new episode of confusion with fever occurred. Brain CT revealed multiple target lesions with hemorrhagic areas, suspected to be neoplastic. LMW heparin was suspended, blood cultures came back positive for Enterococcus faecalis; echocardiography showed a vegetation on the aortic valve; thus the patient's history was reconsidered based on the findings of bacterial endocarditis. When he tested negative, he underwent valve replacement with bioprosthesis. A new positive CoViD swab interrupted the cardiological rehabilitation but finally he was discharged.

Conclusions: SARS-CoV-2 pneumonia in this patient was complicated by aortic endocarditis with systemic septic embolization. The antibiotic and steroid therapy administered upon admission

may have covered or favored sepsis, that could have been perhaps already onsetting at the time of patient presentation in the ER. The patient's overall hospital stay was 80 days due to recurrent swab positivity even though in the absence of specific symptoms.

Post-CoViD neurological sequelae

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Background: The World Health Organization declared the coronavirus a global health emergency because of its rapidly transmissible nature and increasing mortality rate. Long-term sequelae of SARS-CoV-2 infection have become increasingly recognized and need and huge effort to prevent and care.

Methods: We set up a 3-month follow-up of 160 patients, 82 women and 78 men, admitted in the Emergency-Medicine-CoViD from October 2020 to March 2021. The mean age was 60. Asthenia, fever, cough, myalgia, headache, anosmia, ageusia are the most common primary symptoms.

Results: All the patients performed blood-test, neuroimaging, respiratory and neurological assessment. We noticed a decrease in the laboratory findings inflammatory response. The chest CT showed that 70 patients had significant pulmonary fibrosis. 80 patients had a neuropsychological consequence associated with infection, depression, sleep impairment, anxiety, loss of memory and concentration, ageusia, anosmia, headache and asthenia. Patients with pre-existent disease experienced a worsening, especially those with cognitive decline.

Conclusions: Currently, as we are still experiencing the pandemic and its effects, it is too early to describe the full clinical picture of post-CoViD syndrome. We need for more long-term clinical follow-up data to prevent long-term sequelae and post-CoViD neurological syndromes. We need ongoing neurological cognitive and affective monitoring of all cases of CoViD-19 to formulate relevant prevention and intervention strategies. Finally, the economic impact of this disorder, together with patient care, must be worked out in advance.

Neurological involvement in CoViD-19 infection, data from a small community Hospital

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Background: A comprehensive review of the neurological disorders reported during the current CoViD-19 pandemic demonstrates that infection affects the central nervous system, the peripheral nervous system and the muscle.

Methods: In this retrospective, observational study, we enrolled 748 patients, with laboratory confirmed diagnosis of severe acute respiratory syndrome from coronavirus infection. Data were collected from March to May 2020 and from October to April 2021 and were extracted from electronic medical records. Neurological symptoms included central nervous system headache, dizziness, impaired consciousness, acute cerebrovascular disease, epilepsy, peripheral nervous system symptoms, hypogeusia, hyposmia, hypopsia and neuralgia, and skeletal muscle injury. Data of all neurological symptoms were checked by a multidisciplinary team.

Results: Of 814 patients admitted to the Urgency Medicine ward, 284 were severe and 530 were non-severe patients. Severe patients were older, and showed less typical symptoms. 633 patients had neurologic manifestations hypogeusia, hyposmia, neuralgia, headache, 29 patients had stroke, 2 myastenic syndrome, 2 Guillaine Barre, 1 encephalitis.

Conclusions: The SARS-CoV-2 pandemic has implications for all areas of medicine. SARS-CoV-2 infection is associated with an increased incidence of neurological manifestations. Involvement of the nervous system carries a poor prognosis. The pathobiology of these neuroinvasive viruses is still incompletely known, and it is therefore important to explore the impact of CoV infections on the nervous system.

"L'aria che toglie l'aria" in un caso di polmonite CoViD-19

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Premesse: Il CoViD-19 è una patologia con caratteristiche peculiari che solo in parte ricordano l'ARDS. Sappiamo che nella ARDS la pronazione migliora l'ossigenazione. Nella polmonite CoViD 19 sono stati descritti rari casi di pneumomediastino anche in pazienti non sottoposti a ventilazione come nel nostro caso clinico.

Descrizione del caso clinico: Si ricovera un uomo di 50 anni per insufficienza respiratoria acuta da polmonite interstiziale CoViD-19. Inizia subito O2 terapia con maschera di Venturi 60% ottenendo nei primi tre giorni SpO2 di circa 96% in posizione supina. Al quarto giorno SpO2 in posizione supina 88% per cui inizia HFNC con flusso di 50 L/min e FiO2 90% ottenendo SpO2 di 96%. Improvviso dolore toracico dopo tosse e nuova desaturazione a 89% pertanto pratica TC torace che oltre a mostrare un peggioramento del TC score da 10 a 16/25 evidenzia discreta quota di pneumomediastino ed enfisema dei tessuti sottocutanei del collo. Il paziente inizia pronazione continua, riduciamo flusso dell'HFNC a 25 L/min e manteniamo FiO2 del 90%. La pronazione giova subito al paziente con SpO2 costantemente superiore a 95% (in posizione supina la SpO2 non raggiungeva 90%). Dopo 5 giorni esegue TC torace di controllo con evidenza di risoluzione dello pneumomediastino e lieve miglioramento del TC score. Riduciamo gradualmente la O2 e passa a cicli di pronazione. Al ventiduesimo giorno di ricovero il paziente non necessitava più di O2 terapia a riposo.

Conclusioni: Il nostro paziente è riuscito a superare la grave e rara complicanza della polmonite CoViD-19 e a risolvere la insufficienza respiratoria grazie alla pronazione.

Hypercalcemia and chronic renal failure: a case of tertiary hyperparathyroidism

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Background: Hyperparathyroidism is a clinical condition related to the excessive synthesis and secretion of the parathyroid hormone secreted by the parathyroid glands. It exerts a hypercalcemic effect. We distinguish three forms of hyperparathyroidism: primary, secondary and tertiary.

Description of the case: We report the case of a 79-year-old woman who came to our observation for asthenia, osteoarticular pain, and anaemia, suffering from chronic renal failure (IV stage). During hospitalization, the patient performs blood chemistry tests with evidence of macrocytic anaemia and vitamin B12 deficiency, esophagogastroduodenoscopy, abdominal ultrasound. Blood chemistry tests show macrocytic anaemia with normal reticulocytes and haptoglobin, and vitamin B12 deficiency, increased creatinine, azotemia, and hypercalcemia. An ultrasound scan of the thyroid and parathyroid glands is then performed, showing a hypoechoic nodule of possible parathyroid relevance in the right lobe in the basal area. A high parathyroid hormone dosage is performed; therefore, parathyroid scintigraphy is performed with Ses-tamibi, confirming the suspicion of parathyroid adenoma. We then performed the cytological examination of the nodule at the base of the right thyroid lobe and intranodular dosage of the parathyroid hormone. Both samples were consistent with the diagnosis of adenomatous/hyperplastic parathyroid nodule.

Conclusions: The authors investigated the finding of hypercalcemia and chronic renal failure to identify parathyroid hyperplasia, a condition that identifies tertiary hyperparathyroidism.

Predicting CoViD-19 hospitalized patients' outcome with homocysteine

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Background: Homocysteine (Hcy) has been reported as a potential predictive biomarker for CoViD-19 infection severity in many studies. Hyper-homocysteinemia is related to many virus infection outcomes, including HEV, HPV and HIV. Recent data confirmed the value of Hcy in predicting the risk of severe pneumonia.

Materials and Methods: Our retrospective cohort study, including 313 CoViD-19 hospitalized patients (female 34.8%; mean age 62 years), also included a broad panel of clinical laboratory data collected. Of the enrolled patients, 10.9% died during hospitalization (3% were transferred to other hospitals and were lost to follow-up).

Results: Hcy was found to be the strongest predictor of CoViD-19 critical-progression leading to death. Univariate analysis demonstrated that age (OR 1.04), Hcy (OR 1.06), and neutrophil/lymphocyte count ratio (OR 1.03) were significant predictors of critical progression leading to death and RBC (OR 0.68) and lymphocytes count (OR 0.23) with benign outcome. ROC analysis indicated Hcy cut off of 16 $\mu\text{mol/L}$ for predicting CoViD-19 infection outcome (sensitivity 40% and specificity 84%); patients with Hcy levels $>16 \mu\text{mol/L}$ had significantly increased risk of in-hospital mortality ($p=0.002$) both as a continuous and dichotomic value.

Conclusions: Our results demonstrate that Hcy is an effective predictive biomarker for hospitalized CoViD-19 patients' outcome. Hcy may be a valuable biomarker to help clinicians to identify patients who are at higher risk for severe CoViD-19 infection.

Sugar might taste bitter with alcohol

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Background: Wernicke encephalopathy (WE) is an acute syndrome caused by thiamine deficiency requiring emergent treatment to prevent death and neurologic morbidity. It is characterized by mental confusion, ophthalmoplegia and gait ataxia. Associated conditions include chronic alcoholism, anorexia, systemic malignancy and dialysis.

Description of the case: A 73-year old man with a history of alcohol abuse was admitted to our hospital with progressive gait ataxia and an episode of presyncope. On physical examination he showed slight ideomotor slowdown, hyposthenia and areflexia of lower limbs with impossibility to stand upright, no other neurological deficits. Lab studies showed marked lactic acidosis and initial signs of liver failure. Ammonium was normal. Brain MRI showed nonspecific cortical atrophy and periventricular gliosis, lumbar puncture showed normal cerebrospinal fluid, EMG findings were compatible with alcoholic polyneuropathy, EEG was normal. During hospitalization clinical worsening with marked disorientation and development of nystagmus occurred after glucose administration. In the suspicion of WE glucose was stopped and high dose iv thiamine was started with rapid improvement of symptoms. On discharge he was oriented, no nystagmus, inferior limb hyposthenia persisted.

Conclusions: The diagnosis of WE is difficult to confirm and, untreated, most patients progress to coma and death. Although lab studies and neuroimaging can be helpful WE is primarily a clinical diagnosis. Institution of early thiamine replacement takes priority and response to treatment may be diagnostic.

One thing, two ways

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Background: Pulmonary arteriovenous malformations (PAVM) are abnormal communications between pulmonary arteries and veins. The most common symptoms are dyspnea and hemoptysis. Patent foramen ovale (PFO) is a congenital cardiac lesion that frequently

persists into adulthood. Both conditions can manifest as platypnea and orthodeoxia and are associated with cryptogenic stroke.

Description of the case: A 70-year old woman was admitted to our hospital because of sudden onset of left hemiparesis, hemianesthesia and hemianopsia. Angio CT showed occlusion of the right posterior cerebral artery; she underwent systemic thrombolysis with progressive neurological improvement. On physical examination she complained about exertional dyspnea since a young age and had platypnea and orthodeoxia. Blood tests showed poliglobulia. Thus arteriovenous shunt was suspected and TEE and chest CT were performed. TEE showed atrial septal aneurysm and a large right to left shunt after Valsalva while chest CT revealed a large PAVM with feeding artery diameter of 10 mm in the right inferior lobe. On lower limb ECD left femoral vein thrombosis was detected and anticoagulation was started. After stabilization the patient underwent angiographic embolization of the PAVM after which she had no more dyspnea. She will be evaluated soon by the heart brain team for closure of the PFO.

Conclusions: PAVMs are associated with significant morbidity and mortality (eg. stroke, cerebral abscess, massive hemoptysis). When indicated, embolotherapy is the mainstay of treatment as most PAVMs can be successfully treated with this therapy.

Multi-parameter (muscle ultrasound, bioimpedance analysis and antropometry) assessment of sarcopenia in patients admitted to an Internal Medicine ward

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Background: Hospitalization of elderly, frail, malnourished patients with reduced mobility to an Internal Medicine ward is associated with increased risk of sarcopenia. We evaluated whether bed rest results in variations of qualitative and quantitative muscle parameters.

Materials and Methods: 58 patients were assessed upon admission to the ward and after 7-10 days of hospitalization. Muscle analysis included: ultrasound measurements of the area and diameter of the rectus femoris muscle (RFM), ecointensity levels of the rectus femoris area, estimation of the pennation angle of the vastus lateralis (PAVL), measurement of calf circumference (CC), handgrip strength (HGS) and bioelectrical measurements of resistance (RZ) and reactance (XC) obtained by bioimpedance. In addition, clinical scores of malnutrition and sarcopenia (MNA-SF, SARC-F) were studied.

Results: Statistically significant reductions were observed in CC (28 to 26 cm; $p < 0.001$), diameter and area of the RFM (6.3 to 5.3 mm, $p < 0.001$ and 1.5 to 1.2 cm^2 , $p < 0.04$ respectively) and PAVL ($p < 0.012$). Risk of or frank malnutrition (MNA-SF ≤ 11 in 56 patients) and risk for sarcopenia (SARC-F ≥ 4 in 36 patients) were associated with reduced CC.

Conclusions: Our study showed deterioration of muscle structure in both quantitative (CC, area and diameter of RFM) and qualitative parameters (HGS, RZ and XC, pennation angle and ecointensity level). CC, diameter and area of the RFM were the most sensitive parameters to assess sarcopenia in conditions of bed rest and malnutrition.

A strange case of mixed hyperbilirubinemia

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Background: Leptospirosis is a potentially fatal zoonosis caused by the bacteria *Leptospira*, stored in renal tubules of infected animals. The disease is due to direct or indirect exposure to infected reservoir host animals. Symptoms can be mild or none (headache, asthenia, kidney injury); otherwise, leptospirosis can manifest as jaundice.

Description of the case: A 43 year-old man came to our attention for asthenia, myalgia and low-grade fever occurred in the previous month, treated at home with high doses of nimesulide (6 sachets per day), paracetamol and amoxicillin/clavulanic acid, without

benefit; then he developed jaundice, nocturnal itch and epigastric pain. He was thus admitted to our department. Biochemical exams showed hyperbilirubinemia (24 mg/dl, direct 12.8 mg/dl), little increase of transaminases (AST: 56 U/l), leukocytosis (14.040/mm³), PCR 8.5 mg/l. HBV and HCV markers were negative. We performed an abdominal ultrasound, an abdominal CT scan and an MR cholangiopancreatography: all negative for hepatobiliary diseases. The patient, living in a farm, referred he dealt with rat urine contaminated ground. He was tested for IgM leptospira antibodies, which resulted positive. He was treated with ceftriaxone and doxycycline, ursodeoxycholic acid plus colestiramine, antihistamine for itch control.

Conclusions: Leptospirosis usually presents as a non-specific, acute febrile illness, but sometimes hepatitis or jaundice can occur. Besides clinical signs and symptoms, anamnestic data is fundamental to suspect leptospirosis.

Constrictive pericarditis as a linking between heart failure and congestive liver disease

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Background: Pericarditis is the most common form of pericardial disease. The diagnosis is based on clinical criteria, pericardial rub, electrocardiographic recurrent patterns and ultrasounds. Constrictive pericarditis is a relatively uncommon form of clinical heart failure. Etiology can be varied (idiopathic, post viral, tuberculous, post-surgical, radiation-induced etc).

Description of the case: A 26-year-old female born in Africa went to the Emergency Department for abdominal pain in right hypochondrium. Gynecological and surgical emergencies were excluded. Exams showed modest increase of transaminases (GOT 151 U/L; GPT 130 U/L), no signs of cholestasis. A CT scan revealed a radiological pattern suggestive for acute hepatitis. She was thus admitted to our department. Hepatitis markers, immune markers, malarian and HIV antibodies, Quantiferon test were all negative. A MRI abdomen scan revealed hepatitis with vascular parenchymal alterations consisting with congestive disease. Ultrasound of the heart was thus performed, showing dilatation of the right ventricle, D-shaped left ventricle with septal bounce and hyper-reflective pericardium. A low dose of diuretic was started with improvement. The patient then performed a heart MRI which confirms the diagnosis of constrictive pericarditis.

Conclusions: The diagnosis of constrictive pericarditis may be insidious. A congestive liver disease resulting in abdominal pain can be caused by a heart failure; this condition can lead to the diagnosis of pericarditis, which can be underestimated.

An exotic host and a complex clinical syndrome: a novel diagnosis of AIDS complicated by talaromyces

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Background: Fungin infection in patients with HIV represents a worrisome complication. In severe immunocompromised it may cause systemic syndrome with complex clinical presentation. We present a case of a patient with respiratory failure, mental confusion and severe lymphocytopenia.

Description of the case: A 27-year-old student from China, was admitted to our Hospital for altered mental status and weakness. His medical history was silent apart from a recent trip to southern China. On blood gas analysis a type 1 respiratory failure was present. A chest CT scan revealed diffuse interstitial lung disease. On head CT scan two focal lesions were present of uncertain origin. Blood tests showed severe lymphocytopenia (0.25*10³/mm³), normochromic normocytic anaemia and C-reactive protein 7.14 mg/dL. Admitted to the floor a diffuse maculo-papular rash and cognitive impairment were revealed. Despite the lack of fever, blood cultures were drawn. HIV DNA was positive. The brain MRI revealed the brain lesion as infective. After 1 week blood culture were positive for *Talaromyces marneffei*. A therapy with voriconazole was started

and the patient was transferred to infectious disease ward. The patient was discharged after a 54-day hospital stay.

Conclusions: Talaromyces due to *Talaromyces marneffei* is an endemic infection in Southeast Asia, but rare in Europe, where observed cases are mainly imported. Despite its rarity, talaromyces present typical stigmata that should induce to clinical suspicion especially in patients from Southeast Asian countries.

Be gentle, pneumomediastinum is behind the corner: the need of gently ventilation in non-invasively ventilated patients during SARS-CoV-2 pandemic

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Background and Aim: CoViD-19 patients with mild to severe ARDS, need to be treated with invasive or non-invasive ventilation (NIV); among those pneumomediastinum (PNM) is a frequent complication. The objective of our retrospective study is to identify predisposing factors and risk factors for PNM in a population admitted to Internal Medicine ward.

Materials and Methods: We analyzed 304 CoViD patients from 17th October 2020 till 25th January 2021: 176 males (57.9%) and 128 females (42.1%), with a mean age of 69.6 years. During hospitalization, 129 patients (42.4%) needed NIV. Of these, 5 (3.8%) presented PNM.

Results: PNM was associated with higher in-hospital stay (27±7 days vs 8±4 days) and in-hospital mortality (40% vs 16.7% p=0.04). Among NIV patients, higher inspiratory positive airway pressure (IPAP) and positive expiratory end pressure (PEEP), were associated with higher incidence of PNM at point-biserial correlation (p=0.042). There were no statistically significant differences between bilevel and CPAP (p=0.160) or according to pressure support (PS) ≥8 cmH₂O (p=0.509) or days of ventilation (p=0.869).

Conclusions: An increased lung frailty in CoViD-19 pneumonia could partially explain the incidence of barotrauma: however, the incidence is also related to a more aggressive ventilation, when higher pressure support are used. A gentle ventilatory approach aimed to avoid excessive high pressure should be pursued, supporting a "gentle ventilation" and permissive hypoxemia.

Multiple strokes as complications of SARS-CoV-2 interstitial pneumonia

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Background: SARS-CoV-2 infection is a respiratory pandemic illness whose linking with thromboembolic complications has been underlined. Sometimes, stroke can be a complication in CoViD-19 patients.

Description of the case: A 62-year-old male came to our attention after a week of asthenia, fever, nausea, dry cough; no cardiovascular risk factors nor other diseases were reported in his clinical history. An RT-PCR test for SARS-CoV-2 was positive. A chest X-Ray showed bilateral pneumonia with widespread interstitial involvement. He was immediately treated with dexamethasone, low molecular weight heparin and oxygen therapy. Because of desaturation (pO₂ 38.2 mmHg) non-invasive ventilation – CPAP was started, associated to prone positioning. After two days of initial good response with NIV, the patient was found unresponsive with respiratory acidosis (pH 7.25, pCO₂ 69 mmHg). He was then intubated and centralised to the Intensive Care Unit; there, trying to extubate the patient because of the respiratory improvement, he was still unresponsive. A brain CT scan found multiple supra and subtentorial strokes, even involving the cephalic trunk, with secondary hydrocephalus. An epiaortic CT angio scan showed occlusion of carotid siphons, vertebral arteries and Willis' polygon. The patient, unresponsive with mydriasis and areflexic, tetraplegic, was diagnosed with "cerebral death".

Conclusions: Thromboembolic complications in SARS-CoV-2 interstitial pneumonia, even in patients without comorbidities or cardiovascular risk factors, can result as strokes with high morbidity and mortality.

Severe hyponatremia as small cell lung cancer prime manifestation

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Background: Hyponatremia is the most common electrolyte disorder related to lung cancer tumors. In particular, syndrome of inappropriate antidiuretic hormone secretion (SIADH) is frequently the first manifestation that can lead to small cell lung cancer (SCLC) diagnosis. Based on literature, hyponatremia is considered a negative prognostic factor.

Description of the case: A 71-year-old male patient was sent by his general practitioner to the emergency department (ED) for severe hyponatremia (Na^+ 109 mEq/L); true plasma osmolality was 239 mOsm/L; urine osmolality was 440 mOsm/L; the patient was euvolemic. The diagnosis of SIADH was made. In the diagnostic workup we found pancytopenia and the CT scan showed a mediastinal mass surrounding the trachea (size: 7,6 x 7,4 x 7,3 cm), suggestive for a lymphoproliferative disorder. The PET-CT described high glucose metabolism of the mediastinal mass (SUV max 13.87) and of a supraclavicular lymph node, consistent with neoplasia. The patient performed a paratracheal mass biopsy which diagnosed the presence of SCLC (CAM 5.2 +, TTF1 +, Chromogranin A and Synaptophysin +, ki-67 >95%). After the diagnosis, the patient presented superior vena cava syndrome and upper limbs edema. It was performed chemotherapy with carboplatin and etoposide, well tolerated by the patient.

Conclusions: Hyponatremia is very common in everyday clinical practice; thus it is important not to underestimate electrolyte disorders because they can be the clue that can lead to the diagnosis.

Rischio di diffusione di SARS-CoV-2 in Medicina Interna

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Premesse e scopo dello studio: Molti pazienti sembrano aver rinunciato alle cure durante la attuale pandemia, per paura di contrarre l'infezione da SARS-CoV-2 in ospedale. Lo scopo del nostro studio è cercare di quantificare il rischio di acquisire l'infezione da SARS-CoV-2 in strutture ospedaliere.

Materiali e Metodi: Sono state analizzate la prevalenza e la mortalità del CoViD-19 acquisito in ospedale nei reparti di Medicina Interna adibiti al trattamento del CoViD-19 e nel reparto CoViD-free dell'ospedale "San Giovanni di Dio" di Gorizia.

Risultati: Dal 15 Novembre 2020 al 15 Aprile 2021, un totale di 680 e 535 pazienti è stato ricoverato rispettivamente presso i Reparti di Medicina Interna-CoViD e le unità CoViD-free. Una prevalenza di 2.4% di CoViD-19 certamente acquisito in ospedale è stata riportata nei reparti CoViD-free. Tale numero ha rappresentato l'1.9% di tutti pazienti ricoverati nei reparti CoViD. Inoltre, una più alta mortalità è stata riportata nei pazienti con CoViD acquisito in ospedale rispetto ai pazienti affetti da CoViD acquisito in comunità (31% vs 15%).

Conclusioni: Sebbene i risultati ottenuti necessitano di ulteriori conferme da parte di altri studi, la bassa prevalenza di infezione acquisita nel reparto di Medicina Interna CoViD-free è incoraggiante poiché dimostra che strette misure intraospedaliere di controllo possono ridurre il rischio di acquisire l'infezione in ospedale, confermando la sostenibilità di avere, nella stessa struttura ospedaliera, reparti di Medicina Interna dedicati alla cura del CoViD, ma anche delle altre patologie.

Non sempre è uno scompenso cardiaco

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Descrizione del caso clinico: Uomo di 84 anni giunge in PS per dispnea e astenia. In anamnesi trombocitopenia non meglio speci-

ficata, progressi TIA, ipertensione arteriosa. Agli esami severa anemia normocitica e piastrinopenia, leucocitosi modesta, coagulazione normale, modica elevazione degli indici di flogosi, modesta insufficienza respiratoria con rx torace positivo per infiltrato alveolo-interstiziale acuto in prima ipotesi riferibile a edema polmonare acuto. In reparto esclusa la presenza di CID o PPT, impostata terapia steroidea endovena (metilprednisolone 2mg/kg/die), diuretico, ossigenoterapia, antibiotico terapia a largo spettro. Emotrasfuso con emazie con scarsa risposta laboratoristica nonostante assenza di sanguinamento clinicamente rilevabile, iniziale lenta risposta alla terapia steroidea sulla conta piastrinica. Successivo peggioramento del quadro respiratorio con riduzione degli indici di flogosi e pro-BNP nella norma, eseguita dunque TC torace con dimostrazione di diffuso infiltrato alveolo-interstiziale compatibile con quadro di alveolite emorragica subacuta.

Conclusioni: L'alveolite emorragica è una rara complicanza emorragica della trombocitopenia autoimmune, ne sono descritti solo 2 casi in letteratura entrambi in persone anziane. Il nostro paziente rispose molto bene alla terapia steroidea e trasfusionale senza necessità di ricorrere a somministrazione di immunoglobuline, con normalizzazione dell'emocromo e progressivo svezzamento dall'ossigenoterapia.

Fattori prognostici per la negatività del tampone rinofaringeo per SARS-CoV-2

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Premesse e Scopo: La diagnosi di CoViD-19 è effettuata con il riscontro di RNA virale alla PCR su tampone nasofaringeo. In alcuni pazienti l'esame risulta falsamente negativo, mentre risulta positivo quello effettuato su altri campioni biologici. Lo scopo dello studio è individuare le caratteristiche e i fattori prognostici per la negatività del tampone nei pazienti CoViD-19 con malattia confermata al BA.

Materiali e Metodi: Studio multicentrico retrospettivo caso-controllo su pazienti ricoverati per CoViD-19 tra Marzo e Novembre 2020 in due Medicine Interne dell'AOU Careggi e nella Medicina Interna dell'Ospedale di Varese. Arruolati pazienti di età ≥ 18 anni ricoverati per CoViD con isolamento di RNA virale su campione biologico, considerando come casi i pazienti negativi al tampone ma positivi al BA. Per ogni caso quattro controlli positivi al tampone all'ingresso.

Risultati: Inclusi 95 pazienti, 19 casi e 76 controlli. Età media avanzata, prevalenza del sesso maschile. Tempo medio tra insorgenza dei sintomi e tampone è di $2,65 \pm 1,9$ giorni nei casi, con una differenza statisticamente significativa rispetto ai controlli ($5,53 \pm 3,75$ giorni). Durata media di degenza superiore ed outcome avverso più frequente nei pazienti con tampone negativo che nei controlli.

Conclusioni: L'esecuzione del tampone entro breve dall'esordio dei sintomi è un fattore predittivo per falsi negativi. I pazienti con tampone ripetutamente negativo hanno un quadro clinico peggiore con tempi di degenza più lunghi, maggior necessità di ventilazione non invasiva e maggior frequenza di outcome avverso.

The connection between rheumatoid factor, heart and cancer: a real life scenario

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Background: The association between bacteremia from *Streptococcus gallolyticus*, infective endocarditis and colon cancer is well known. Therefore infective endocarditis could be a marker of an underlying hidden carcinoma.

Description of the case: A 73-year old woman was admitted with a 1-year history of seeking medical care for weakness, weight loss and intermittent fever together with edema, pain of the ankles and palpable purpura of the legs. A rheumatologic disorder was suspected because of anaemia with positive direct Coombs test, consumed C3 and C4 and positivity of rheumatoid factor. At

admission, a systolic cardiac murmur Levine IV/VI was audible on all the areas, radiated to the left axilla. Transthoracic echocardiography revealed multiple vegetations located on 3 valves (aortic, mitral and tricuspid) causing moderate to severe insufficiencies. Total-body CT scan showed splenomegaly as well as numerous embolization sites. Blood cultures were positive for *Streptococcus gallolyticus*; colonoscopy was then performed, revealing a sub-stenosing cancer of the descending colon. Therefore the patient underwent trivalvular substitution followed by left hemicolectomy, in addition to antibiotic therapy with ceftriaxone plus vancomycin.

Conclusions: Clinical presentation of subacute infective endocarditis includes longstanding nonspecific symptoms, leading to destructive clinical scenarios. It is associated with colon cancer, so prompt recognition of the infection and research for a pathological change in the large intestine are mandatory.

Enema of aloe vera gel for achieving remission in active ulcerative proctosigmoiditis: a randomized, double-blind, placebo-controlled trial

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Background and Aim: To date, no data are available in regard to the Aloe vera gel formulation as topical therapy in active ulcerative colitis. Aim of the study was to investigate the efficacy and safety of aloe vera gel enema in a randomized, double-blind, placebo-controlled trial in patients with onset diagnosis of mild to moderate active ulcerative proctosigmoiditis.

Methods: Forty-four ulcerative colitis (UC) patients were enrolled in the study and randomly allocated to treatment, for 4 weeks, with oral mesalazine (800 mg three times daily) and enema (60 ml aloe vera gel, once daily) (n=22, Group A) or enema (60 ml placebo, once daily) (n=22, Group B).

Results: At the end of the trial, the DAI (Disease Activity Index), obtained in 10 patients in Group A and in 4 patients in Group B, was used to evaluate clinical and endoscopic remission. The relative difference was statistically significant (55.5% vs. 19%, p=0.024). The average score, calculated from the beginning to the end of the trial, was considered statistically significant in Group A (6.66±1.75 vs. 3.27±2.07, p=0.002) while not in Group B (6.19±1.63 vs. 5.90±2.16, p=0.780).

Conclusions: This present study, conducted in patients suffering from mild and moderate distal active UC, shows how the enema of aloe vera gel is superior to placebo in inducing the remission of symptoms with irrelevant side effects. Comparative studies, with topical mesalazine in a greater number of patients, are needed to reach definitive conclusions.

A case report of fearsome infection from CoViD-19 that after the lungs also affected the heart!

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Background: Takotsubo cardiomyopathy (TC) is an acute and reversible form of heart failure, originating from acute stress and probably due to increase in circulating catecholamines, presenting with a transient balloon-like modification of the left ventricular apex, resembling as the octopus basket used by Japanese fishermen, visible with echocardiography or cardiac RMI.

Description of the case: A 61-aged female hypertensive patient with CoViD-19 infection for two weeks was admitted to our Department for sudden chest pain, precordial discomfort, cardiopalmus onset in the previous hours. Cardiac clinical evaluation: normal. All vital parameters: normal except body T 37°C, O₂ Sa 96%. ECG-1: V1-V2 slight ST and T-waves changes. Laboratory

data: slight leucocytosis, rise of CRP, D-dimer, positive IgM-Ab anti-CoViD-19 test; negative myocardial enzymes. Chest-X-ray: interstitial bilateral pneumonia. Echocardiogram: akinesia/hyperkinesis of the LV. Coronary-angiography: non-obstructive coronary arteries but apical ballooning on ventriculography consistent with TC. Treated on methylprednisolone, tocilizumab and NIV, she improved within 2 weeks with normalization of all laboratory findings and she was discharged in healthy.

Conclusions: SARS-CoV-2 has resulted in a viral pandemic with high mortality rate and possible involvement of myocardium since the patients can experience acute myocarditis, pericarditis, TC and acute myocardial infarction. Given all this, we should probably expect an increase in cases of myocardial diseases in the coming years as a complication of the CoViD-19 viral insult!

The unforgettable our last year...myocarditis as a dangerous complication of a case of bilateral interstitial pneumonia CoViD-19-related in a 90-year-aged patient...

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Background: Myocarditis, clinically presenting with fatigue, breathlessness, palpitations, tachycardia-arrhythmia, chest pain, fever, joint pain, is an inflammatory disease of the myocardium. It can be due to autoimmune disorders, exogenous agents or infections and among the latter, in this unforgettable our last year, to CoViD-19 viral injury!

Description of the case: A 90-year-old asthmatic and arthropathic female patient, vaccinated against CoViD-19 virus (only first dose), but afflicted with bilateral interstitial pneumonia CoViD-19-related for two weeks, was admitted to our Department for sudden chest pain, precordial discomfort and cardiopalmus. Normal resulted the clinical cardiac evaluation as vital parameters except body T 37°C and O₂ Sa 94%. ECG: V1-V6 ST and T-waves changes. Chest-X-ray: bilateral interstitial pneumonia. Laboratory data: leucocytosis and anaemia, PCR and ESR rise, IgM-Ab anti-CoViD-19 positive test, negative myocardial enzymes. Echocardiogram pointed out the presence of myocardial hypokinesis of apex and septum and slight systolic dysfunction (FE 50%) as in acute myocarditis. Treated on corticosteroids, O₂, ACE-inhibitors, beta-blocker, diuretics, antibiotics, remdesivir, she gradually improved and a month later she celebrated in healthy her 91 birthday!

Conclusions: Since the beginning of the pandemic, the infection due to the new coronavirus SARS-CoV-2 has caused not only respiratory but also cardiac serious consequences with complications, such as arrhythmias and decompensation, acute myocarditis, pericarditis, TC and acute myocardial infarction!

Ematoma spontaneo del muscolo ilioepsoas come complicanza di terapia anticoagulante con enoxaparina in paziente con polmonite interstiziale SARS-CoV-2: case report

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Premesse: I pazienti critici con CoViD-19 sono a maggior rischio di sviluppare uno stato di ipercoagulabilità. L'anticoagulazione con EBPM è raccomandata per ridurre il rischio trombotico. L'ematoma del muscolo ilioepsoas è una complicanza non comune della terapia con anticoagulanti. Si manifesta con dolore addominale ed agli arti inferiori per compressione del nervo femorale e può progredire verso complicazioni potenzialmente letali.

Descrizione del caso clinico: Uomo di 66 anni con fattori di rischio CV, ospedalizzato per polmonite interstiziale SARS-CoV-2 e fibrillazione atriale di nuovo riscontro. Lamenta dolore localizzato in fossa iliaca destra e difficoltà ad urinare dopo 11 giorni di terapia con eparina a dosaggio anticoagulante in un quadro clinico con improvvisa ipotensione arteriosa con sincope ed anemia severa. La angio-TC ha evidenziato raccolta ematica retroperitoneale destra con ematoma del muscolo ilioepsoas di destra. Il paziente è stato trasfuso e sottoposto a trattamento

conservativo dopo rivalutazione del radiologo interventista. Degenza ospedaliera in corso.

Conclusioni: Gli ematomi retroperitoneali spontanei sono una patologia rara, ma potenzialmente fatale. Si presentano come complicità di terapia con anticoagulanti orali dallo 0,1% al 6% dei casi, mortalità del 19,1% a 6 mesi. La TC è il gold standard; il riconoscimento dei segni di sanguinamento attivo è la caratteristica cruciale per il trattamento. Sebbene molto raro, l'ematoma dello iliopsoas, può verificarsi in pazienti sani sottoposti a terapia anti-coagulante con INR in range terapeutico.

Changes in admissions to Internal Medicine for acute respiratory infections during 2015-2020 and burden of the SARS-CoV-2 pandemic

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Background and Aim: Respiratory infections are a leading cause of admission to Internal Medicine (IM) wards, and the 2020 SARS-CoV-2 pandemic dramatically increased this burden. Aim of our study was to assess the changes in admissions to IM for respiratory infections over the past 5 years and the impact on patient outcomes.

Methods: All admissions to IM for acute pneumonia (AP) during 2015-2020 were included in a prospective database. Demographic and clinical data, length of stay (LOS) and outcome were analysed. Testing for SARS-CoV-2 began for all febrile patients in March 2020.

Results: 745 admissions for AP were included in the analysis (males, 50.8%, mean age 76.5±15.4 years, median LOS 9 days, range 0-57). Admissions to IM for AP rose from 14.7% in 2015 to 20.1% in 2019 (18% overall), vs 27.2% in 2020 (p<0.001). In 2015-2019, 32% of admissions occurred in the first quarter vs 24.1% in 2020 (p=0.001). During 2020, 56 AP were SARS-CoV-2-positive (38.6%, 95% in the fourth quarter). SARS-CoV-2 patients were younger and had a higher rate of intensive care therapy. Mean LOS in 2020 was 12.7±10.0 vs 10.9±7.6 days in 2015-2019 (p=0.01). In-hospital mortality was not significantly different, although negative outcomes in the fourth quarter were significantly higher in 2020 (28.1% vs 15.1%, p=0.02).

Conclusions: Admissions to IM for AP have been increasing even before the onset of the SARS-CoV-2 pandemic. In 2020 urgent admissions for AP were significantly higher than in previous years, requiring greater LOS, although SARS-CoV-2 infections were concentrated in the fourth quarter.

Efficacia di un intervento di educazione terapeutica sul self care dei pazienti con scompenso cardiaco: uno studio randomizzato controllato multicentrico

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Premesse e Scopo dello studio: Numerosi studi descrivono l'educazione terapeutica sul self care dei pazienti con scompenso cardiaco come un fattore determinante gli esiti sensibili all'assistenza infermieristica, quali: morbilità, mortalità, reingressi in ospedale e qualità della vita. Lo scopo dello studio è valutare l'efficacia di un intervento di educazione terapeutica sul self care dei pazienti affetti da questa patologia.

Materiali e Metodi: Studio randomizzato controllato multicentrico: nel gruppo di intervento i pazienti vengono assistiti con interventi strutturati di educazione terapeutica, mentre in quello di controllo con l'assistenza standard. L'outcome primario è il livello di self care valutato attraverso la EHFSBS, quello secondario la prevalenza dei comportamenti di self care al follow up. I dati sono raccolti all'ingresso in ospedale, alla dimissione, a 10-15 giorni, a 3 e 6 mesi.

Risultati: Sono stati arruolati 68 pazienti (34 gruppo di intervento e 34 gruppo di controllo) con un'età media di 81 anni. Si è riscontrata, alla dimissione e a 3 mesi, una differenza statisticamente significativa tra la capacità di self care nel gruppo che ha ricevuto l'educazione terapeutica rispetto al gruppo di controllo (p T2<0,0001 e p T3=0,01).

Conclusioni: L'educazione terapeutica è tra le principali competenze e responsabilità dell'infermiere. Nonostante l'ampio riconoscimento della sua importanza, le iniziative nell'ambito sono limitate e purtroppo la maggior parte dei pazienti con malattie croniche non sono sottoposti ad alcun programma di educazione terapeutica.

La fidelizzazione alle nuove realtà assistenziali negli operatori sanitari coinvolti in prima linea nella lotta al Coronavirus

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Premesse e Scopo dello studio: L'emergenza sanitaria, conseguente la pandemia di SARS-CoV-2, ha determinato l'organizzazione di strutture specifiche per la cura dei pazienti colpiti dal virus. Gli operatori coinvolti hanno sviluppato profondo senso di appartenenza a tali realtà e fidelizzazione alle stesse. Questo studio si è proposto di delineare i meccanismi che intervengono nella fidelizzazione degli infermieri in servizio nelle unità operative di emergenza COVID.

Materiali e Metodi: Ricerca qualitativa con metodologia Grounded Theory (GT). Sono state condotte 25 interviste semi-strutturate ad infermieri che hanno prestato servizio nelle Unità Operative di Medicina d'Urgenza COVID, reclutati attraverso un campionamento di convenienza e successivamente teorico. Le interviste sono state studiate attraverso tre livelli di analisi per giungere alla forma di astrazione del processo più elevata.

Risultati: È stato identificato un modello teorico basato su quattro categorie concettuali che si sono sviluppate in parte in sequenza tra loro ed in parte contemporaneamente: "consapevolezza dell'importanza del proprio ruolo", "sicurezza acquisita", "soddisfazione dell'attività svolta" e "relazioni instaurate".

Conclusioni: Le categorie si intersecano profondamente nel processo di fidelizzazione, risultando fortemente correlate ed interdipendenti tra loro, tanto da renderle imprescindibili. Le relazioni instaurate tra gli operatori e con i pazienti vengono identificate come elemento fondamentale e portante del processo divenendo la core category del modello stesso.

SARS-CoV-2 infection and cardiovascular disease: analysis of hospitalized patients in high intensity care unit

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Background and Aim: COVID-19 patients with pre-existing cardiovascular disease (CVD) are at the most high-risk for virus infection and developing severe disease. Pathophysiological mechanism is characterized by viral link to angiotensin-converting enzyme 2 (ACE2) and involvement of the endothelial system with the release of cytokines and direct damage of myocardium, microthrombosis, oxygen diffusion alterations. Aim of the study is to analyze clinical course and outcome in patients with pre-existing CVD.

Materials and Methods: Out of 1100 patients admitted to Internal Medicine COVID Unit of "Castelli Hospital", ASL RM6, Lazio, Italy, we analyzed 602 M 330/ F 272, mean age 71 (M 69/F 74) with complete data set. Of 100 (M 58/F42) patients with pre-existing CVD were evaluated length of the stay (LOS), oxygen therapy, type of hospital discharge compared with all patients.

Results: Most common CVD pathologies were heart failure (HF):

102 (M 45/F57), atrial fibrillation (AF): 31 (M19/F12), myocardial infarction (MI): 17 (M11/ F6) and associations among them. 100% of CVD patients underwent non-invasive ventilation (NIV). AF was linked with increased LOS (31 days) compared to HF (26 days) and MI (18 days). Overall LOS was 16,5 days. 36% of death patients had CVD. 67,4% (11,2% with CVD) were discharged at home, 43,6% (16,6% with CVD) transferred to step down care, and 9% to Intensive Care Unit.

Conclusions: Timely identification and evaluation of patients with pre-existing CVD are fundamental for adequate treatment based on the severity and state of illness and for risk reduction.

Tocilizumab for patients with severe respiratory failure in SARS-CoV-2-related interstitial pneumonia

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Background: Severe respiratory failure associated with SARS-CoV-2-related interstitial pneumonia is burdened by high mortality. Despite initial unfavourable evidence, recent clinical trials showed that the anti interleukin-6 receptor tocilizumab (TOCI) could improve prognosis in these patients. We report our experience about this topic.

Materials and Methods: We retrospectively analyzed in-hospital mortality of patients firstly admitted to Internal Medicine wards for severe SARS-CoV-2-related interstitial pneumonia treated with off-label intravenous or subcutaneous TOCI administration on top of standard therapy. Severe pneumonia was defined as PaO₂/FIO₂ ratio <250 and requiring noninvasive ventilation and/or high flow nasal cannula.

Results: Study population included 141 patients, 36 females, mean age 64.5±11.7 years. 72 patients received TOCI in the first pandemic wave, 69 in the second or third wave. Mean age of treated patients was 69 years in the first wave, 60.4 years in the second-third wave. Overall, 41 patients (29%) were transferred to Intensive Care Unit (ICU), and in-hospital mortality was 12%. In-hospital mortality was 16.6% in the first wave, 5.9% in the second-third wave. ICU transfer rate was 29.1% in the first wave compared with 28.9% in the second-third wave.

Conclusions: TOCI was associated with a low in-hospital mortality rate, especially in the second-third pandemic wave. Lower age and the earlier administration of TOCI in hospitalized patients requiring rapidly increasing oxygen needs could explain the lowest in-hospital mortality in the second-third wave.

What if we remove a tablet?

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Background and Aim: Older adults often receive inappropriate prescriptions whose risks outweigh the benefits, with an increased risk of an adverse drug reaction (ADR), a lower compliance for difficult multiple regimens (Morinsky scale), important interactions and a high anticholinergic cognitive burden (ACB), which is linked with dementia and increased mortality. The number of drugs is also an item of Brass index, scale to screen complex discharge. This study proposes to identify a method to focus on older adults' polypharmacy admitted to our ward.

Materials and Methods: Retrospective study with subjects aged ≥65 years. Features included: age, ACB score, ADR risk, interactions drugs at admission and discharge, Brass and Morisky scale. Patients were also divided into three groups based on the number of drugs taken at home to highlight differences between the samples and the management of therapy.

Results: Patients enrolled were 150, 31 patients with ≥4 home medications, 57 between 5 and 8 drugs and 62 ≥8. Basically 87% from home and other residents in nursing home. The mean age was 81±8, the average number of drugs at admittance were of

7±3. They had a total of 53% high risk of ADR, 10% of ACB and a 30% of severe interaction. Morisky scale evaluated that 19% was not compliant. More than 50% had elevated probability of complex discharge and mortality (Brass index).

Conclusions: Doctor and nurse had to increase attention about drugs, reduce risk of adverse reactions, avoid "prescribing cascade" and improve adherence and home management of elderly frailty patients.

Non solo CoViD: la sindrome di Hamman Rich

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Premesse: La sindrome di Hamman-Rich, o polmonite interstiziale acuta, è una forma di polmonite interstiziale idiopatica rapidamente progressiva, spesso fatale. E' caratterizzata da danno alveolare diffuso (DAD). Il quadro clinico è rappresentato da dispnea, tosse secca e febbre, ma può portare rapidamente a insufficienza respiratoria acuta con ipossiemia, ARDS e exitus. Sono presenti lesioni bilaterali simmetriche, con aree a vetro smeriglio e opacità alveolari, bronchiectasie da trazione e distorsione dell'architettura parenchimale. La diagnosi è istologica. Non esiste attualmente un trattamento mirato.

Descrizione del caso clinico: Maschio, 52 anni. Da 14 giorni dispnea sotto sforzo e febbre; tampone NF per SARS-CoV-2 negativo, insufficienza respiratoria ipossiêmica-ipocapnica. TC torace: aree di addensamento parenchimale con aspetto a vetro smeriglio a distribuzione bilaterale. Laboratorio: GB 7,52 mila/uL, LDH 397 U/L, PCR 216.39 mg/L, ric Ag urinari Legionella/Pneumococco negativa, tampone SARS-CoV-2 negativo. Broncoscopia: pervi tutti i rami bronchiali-negativa la ricerca di patogeni. Esame istologico: polmonite interstiziale acuta, verosimilmente idiopatica, in fase tardo-essudativa ed organizzativa.

Conclusions: In caso di polmonite interstiziale, in un periodo storico in cui la prima ipotesi diagnostica è rappresentata dalla polmonite da SARS-CoV-2, bisogna pensare anche alla sindrome di Hamman-Rich, una forma di polmonite interstiziale acuta rapidamente ingrossante e spesso fatale, che dev'essere precocemente riconosciuta e trattata.

Acute paraparesis: anti HU neuropathy

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Background: Paraneoplastic syndromes are disorders associated with cancer but without a direct effect of the tumor mass or its metastases on the nervous system. Small cell carcinoma of lung associated with paraneoplastic sensory neuronopathy and/or paraneoplastic encephalomyelitis with the presence of anti-Hu antibodies has been termed "anti-Hu syndrome."

Description of the case: 72-year-old patient with a history of ileal neuroendocrine tumor with liver metastases treated with octreotide. 2018 lung lesion finding: large cell lung cancer. Performs cycle with capecitabine, Folfox. He is admitted to our AAIL paraparesis unit. Performs brain CT on suspicion of brain metastasis (negative), brain MRI: vascular leukoencephalopathy, EMG AAIL: severe mixed sensory polyneuropathy, mainly axonal. - severe axonal motor neuropathy of SPE with signs of denervation (acute). Sampling is sent for onconeuron abs research: positive in the blood. Steroid therapy is started with minimal benefit, after 3 weeks the cycle with immunoglobulins begins (performs only one administration). Patient died 3 months later.

Conclusions: Small cell lung cancer is found in more than 90% of patients with cancer and positive Hu abs. There are two types of treatment: the first is to treat the cancer, the second is to suppress the immune reaction with the use of corticosteroids, cyclophosphamide, azathioprine, plasma exchange, intravenous immunoglobulin. Our case is interesting because it emphasizes the diagnostic delay in the search for metastatic lesions and for the EMG picture of motor neuropathy rarely present in the literature.

Association between non-O blood group and the risk of venous thromboembolism due to oral contraceptive therapy

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Background and Aim: The association between nonO blood group and the risk to develop a venous thromboembolic event (VTE) is known from literature. However the role of nonO blood type and its interactions with inherited thrombophilia (*i.e.* antithrombin, protein S and C deficiencies, factor VLeiden and prothrombin variant) as possible risk factors for VTE in women undergoing oral contraceptive therapy (OCT) remain unclear. We aimed to retrospectively evaluate the prevalence of non-O blood type and inherited thrombophilia in a group of women with a VTE due to OCT.

Materials and Methods: 223 women with a personal history of VTE due to OCT referred to the Medical Department of Padova University Hospital between December 2009 and December 2019 were enrolled. Women under 18 yrs and those with acquired thrombophilia were excluded. 223 healthy women underwent OCT for at least 6 months acted as controls. The Odds Ratios (ORs) and 95% confidence intervals (CIs) were calculated as an estimate of VTE developing.

Results: 75% of cases had nonO blood group and its prevalence was significantly higher in cases than controls ($p < 0.001$). Inherited thrombophilia was observed in 86 (39%) cases and it was significantly associated with the risk to develop OCT related VTE ($p < 0.01$). The combination of non-O blood type and inherited thrombophilia was associated with a 4.4-fold (CI 95% 1.98-9.78) increased risk to develop OCT related VTE.

Conclusions: Either nonO blood group or inherited thrombophilia are associated with an increased risk to develop OCT related VTE. The combination of these conditions further increase this thrombotic risk.

Un caso di gangrena di Fournier in paziente diabetico in terapia con canaglifozin

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Background: La gangrena di Fournier (GF) è una rara emergenza urologica. Recentemente in letteratura sono riportati casi di associazione tra GF e terapia con SGLT2i, antidiabetici orali.

Descrizione del caso clinico: Uomo, 62 anni con DM in terapia con canaglifozin da circa 40 giorni. Ricoverato in seguito ad episodio presincopale dopo evacuazione e addominalgia; febbrile e in stato confusionale. Agli esami leucocitosi neutrofila, rialzo della creatinina, di PCR e PCT. All'EO riscontro di area indurativa, eritematosa a livello del gluteo sinistro: eseguita TAC addome con riscontro di "aspetto addensato del tessuto adiposo con falde fluide in sede pararettale sn e a livello dei tessuti molli della regione glutea omolaterale con associata estesa componente aerea nel contesto dei tessuti molli perianali". Iniziata terapia con amoxi/clav e clindamicina. Trasferito in Chirurgia e sottoposto ad intervento di incisione a livello del gluteo sn con fuoriuscita di abbondante materiale purulento e debridement dei tessuti. Veniva poi trasferito in Rianimazione per deterioramento delle condizioni cliniche. A 7 giorni dall'intervento comparsa di insufficienza renale acuta, per cui veniva sottoposto ad emodialisi. Esami colturali positivi per *Escherichia coli* ed *Enterococcus avium*, confermando una GF polimicrobica. In seguito stabilizzazione emodinamica con ripresa della diuresi; mantenuta terapia insulinica; sostituita terapia anticoagulante con warfarin.

Conclusioni: In considerazione dell'elevato grado di mortalità e morbilità associati a questa sindrome, diventano fondamentali una precoce diagnosi e trattamento nei pazienti con elevato sospetto clinico.

CoViD-19 and complications: pectoral hematoma, a rare condition

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Background: Patients with CoViD-19 pneumonia have hyperactive coagulation status and one of the main causes of death is pulmonary embolism. They also suffer from hypoxia, so they need respiratory support and prone positioning.

Description of the case: A 59-year old woman (weight 100 Kg, BMI 32) came to our hospital reporting fever and dyspnea. Chest X-ray: extensive parenchymal thickenings in the subpleural regions of both lungs. Analysis: hemoglobin 14.7 g/dl, creatinine 1.18 mg/dl, D-Dimer >10000 ng/dl, pO₂/FiO₂ 124. Treatment: antibiotics, hydroxychloroquine, tocilizumab, high flow oxygen alternating with NIV, dexamethasone, enoxaparin 8000 U bid and alternating supine and prone position. Eighteen days after admission we noticed a swelling in her breast. A thoracic CT scan showed a leveled hematoma (16x10cm) below the left pectoralis major muscle, an arterial spread from the lateral thoracic artery, a thromboembolic image in a subsegmentary branch of the pulmonary artery and extended bilateral ground glass. The patient underwent blood transfusions for acute anemia (hemoglobin 6.9 g/dl) and multiple arterial embolizations.

Conclusions: We hypothesized that the pro-inflammatory endovascular condition, in a severe CoViD-19, and the anticoagulant treatment have determined fragility of the vascular wall. In addition, the continuous changes of posture have probably led to a repeated traumatism and rupture of blood vessels. Therefore in obese women, whose lateral thoracic artery is large and emits mammary branches, pronosupination should be personalized taking into account enoxaparin dosage.

Dal Moschovitz all' "ematoma panmidollare" fino alla protesi d'anca bilaterale...il ruolo chiave dell'Internista

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Descrizione del caso clinico: Uomo di 43aa. In anamnesi 2016 medulloblastoma cerebellare operato FU negativo. A novembre 2020 ricovero per stato confusionale acuto e anemia emolitica con presenza di schistociti. Azzerato ADAMST13 a conferma diagnostica di PTT. Trattato con plasmateresi+caplacizumab+steroidi con successo. Complicante il ricovero sepsi da MSSA a partenza dal CVC. FU ematologico proseguito con prednisone 100 mg/die+plasmateresi. A febbraio 2021 nuovo ricovero per dolore acuto in sede inguinale bilaterale, migrato in sede lombo-sacrale con limitazione funzionale. Non riferita iperpiressia. E.O: marcata atrofia muscolare AAIL in assenza di deficit stenici, ROT presenti. Assenza di porpora. Es. ematochimici: leucocitosi neutrofila, PCR 7.3, PCT negativa. Schistociti <5 /1000, aptoglobina >200. Effettuata RMN rachide: vasto "ematoma" canale spinale. Escluse indicazioni NCH. Una settimana dopo il ricovero netto peggioramento clinico con paraparesi flaccida, ileo paralitico e quadro di sepsi severa. Intrapresa idratazione, terapia antibiotica a largo spettro e antimicotica. Ripetuta RMN del rachide: peggioramento con compressione da D2 a D7-D8 e L2-L4. Effettuata laminectomia d'urgenza: drenaggio di abbondante pus. Colturale: MSSA+. Intrapresa FKT con mobilizzazione. Recrudescenza dolore inguinale bilaterale per cui effettuata TC/PET+RMN bacino: osteonecrosi d'anca bilaterale. Intrapresa terapia con bifosfonati e posta indicazione ad intervento di artroprotesi bilaterale d'anca.

Conclusioni: Dalla PTT all'ascesso panmidollare fino a osteonecrosi d'anca, il ruolo dello steroide nel pz immunodepresso e l'abilità dell'Internista.

Neutralizing monoclonal antibodies for outpatients with mild or moderate CoViD-19: our clinical experience

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Background and Aim: Patients with mild to moderate CoViD-19 at high risk for progressing to severe CoViD-19 or hospitalization

may benefit from neutralizing monoclonal antibody (MAB) therapies. We describe our experience and outcomes of 19 pts who received MAB infusion therapy at CoViD Department (Internal Medicine of Jesi Hospital).

Materials and Methods: This is a descriptive study of adult outpatients with a clinically and laboratory confirmed diagnosis of CoViD-19 who received MAB therapy between March 23 to May 10, 2021.

The primary outcome was rate of hospitalization within 28 days; additional evaluations included the time of negativity of the molecular buffer and the safety.

Results: During the study, 19 adult pts (58%M, 42%F) received MAB infusion. The hospitalization rate was 10,5% for pts who received MAB therapy within 0-7 days, 0% within ≥8-28 days of symptom onset. The negativity of molecular swab was observed in 47% of the pts within 7 days, and in 89% within 30 days. No adverse events were observed. During the study period, two pts were hospitalized: the first on day 7 due to dyspnea which required oxygen therapy for a few days and he was discharged after 7 days; the second for hyperpyrexia which arose on the same day of the infusion that did not require oxygen therapy and she was discharged after 5 days.

Conclusions: While this therapy may be an important treatment option for early mild to moderate CoViD-19 in high-risk pts, further investigations are needed to define the optimal timing of MAB therapy in order to reduce hospitalization.

Predisposizione ed attuazione della campagna vaccinale per CoViD-19 presso l'Azienda Ospedaliera beneventana

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Premesse: L'A.O. "San Pio" ha elaborato un Piano Operativo specifico per la vaccinazione per CoViD-19 degli operatori sanitari dell'A.O. "San Pio" di Benevento e di tutti coloro che svolgono attività collaterali ad essa.

Metodi: La popolazione target è stata composta da 1400 soggetti (dipendenti ed altri operatori presenti nell'A.O.). Il vaccino usato è il CoViD-19 mRNA BNT162b2. La tracciabilità prevedeva la registrazione dei dati del paziente e del medicinale, le segnalazioni di eventuali reazioni avverse. Le sedute vaccinali, comunicate preventivamente, hanno avuto inizio a dicembre, sulla base dell'elenco del personale (dipendente ed esterno). È stata fornita anticipatamente informativa specifica a tutto il personale per documentarsi e per esprimere il proprio consenso informato alla somministrazione.

Risultati: Tutti i soggetti che operano a vario titolo nell'A.O. San Pio sono stati vaccinati. Tra questi erano compresi anche gli operatori che sono stati positivi/malati. La campagna vaccinale, per supportare l'attività territoriale, è stata estesa a tutti i soggetti c.d. fragili che avevano avuto accesso all'A.O. "San Pio" triplicando il numero dei vaccinati previsti inizialmente.

Conclusioni: La campagna vaccinale anti-SARS-CoV-2 promossa dall'A.O. "San Pio" di Benevento ha avuto la piena partecipazione da parte dei propri operatori e di tutti coloro che svolgono attività collaterali ad essa. Inoltre l'apertura della vaccinazione ai soggetti fragili, ricoverati presso l'A.O. San Pio, ha contribuito all'immunità di massa ed al rallentamento della diffusione del virus.

Dolore toracico al DE: rivalutiamo gli scores

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Premesse e scopo dello studio: Il dolore toracico è una sfida per il medico emergentista, tra rischio di mancata diagnosi e rischio di ospedalizzazione inappropriata. Scopo dello studio è valutare la performance dei clinical prediction rule (CPR) nella gestione del dolore toracico in PS.

Materiali e Metodi: Analisi retrospettiva di pazienti che si sono presentati presso il PS Ospedali Riuniti di Ancona con dolore toracico, dal 01/01/2016 al 31/12/2016. Abbiamo analizzato: tempi di attesa e processo, esito di valutazione clinica, ECG, esami di laboratorio e management. Quando possibile abbiamo calcolato Chest Pain Score(CPS), HEART, TIMI e GRACE score.

Risultati: Inclusi 1370 pz (743, F 627) età mediana 56 (IC95%: 55-57) anni; differente tra M e F (58 vs 52 p<0,001), incremento di troponina alla prima o alle determinazioni successive fu riscontrato in 213 pz (15,5%) GRACE e HEART (calcolato togliendo l'apporto della Troponina) furono maggiormente correlati a questo incremento; (AUC 0,78 e 0,77 rispettivamente); HEART fu lo score maggiormente correlato alla decisione di ricovero (AUC 0,87). Nel follow-up, 314 ebbero recidiva di dolore toracico, più frequentemente essi avevano HEART score >=4. Nel follow-up 16 pazienti sono deceduti (1,06% nei rinvii a domicilio; 2,2% nei ricoverati).

Conclusioni: I dati ribadiscono la difficoltà a identificare i casi a rischio in una popolazione a bassa prevalenza di SCA e che il ricovero non modifica sostanzialmente la prognosi. Gli score di rischio sono utili strumenti in questo setting. HEART score ci è parso il più utile e semplice.

The antisynthetase syndrome as a diagnostic challenge: a case report

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Background: Idiopathic inflammatory myopathies are a heterogeneous group of pathological conditions characterized by muscle inflammation, and sometimes by inflammatory involvement of other organs, such as skin (in dermatomyositis) and lungs (pulmonary interstitial disease).

Description of the case: 54-year-old woman, turns to the Emergency Room of Miulli Hospital in March 2021 for worsening dyspnea. In medical history: previous recent SARS-CoV-2 infection. She is admitted to Medicine Unit, where the characteristic signs and symptoms of myositis were objected: myasthenia affecting the proximal muscles, myalgias, plantar desquamation of the feet ("climber's foot") and fingers ("mechanic's hands"), Gottron's papules. There are also: pericardial effusion, signs of pulmonary hypertension on echocardiogram, consolidating pulmonary parenchymal changes with fibrotic evolution on HR chest CT. She is transferred to the Rheumatology Unit of the Policlinico di Bari to perform specific autoantibody panel (positivity of ANA, anti Jo-1, anti Ro52), electromyography (signs of myogenic suffering), MRI of the thighs (hypotrophy and adipose replacement of the muscles of the posterior lodge) and muscle biopsy, indicative of muscle inflammation. Therapy with steroid boluses and cyclosporine 5mg/kg/day, shows quick effectiveness, and she is discharged with the diagnosis of antisynthetase syndrome.

Conclusions: The diagnosis of antisynthetase syndrome is not always easy, due to the clinical heterogeneity of the disease and the need for specific instrumental and laboratory tests.

The impact of gender differences on the efficacy/safety of pharmacological therapy in SARS-CoV-2 infection

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Background and Aim: We currently do not have a specific therapy for SARS-CoV-2 infection; experimental therapies have been improved with various drugs such as lopinavir/ritonavir, hydroxychloroquine, tocilizumab with controversial data about efficacy.

The aim of the study is to highlight any gender differences in the response to the aforementioned therapies.

Materials and Methods: Retrospective analysis of 234 patients, 96 F and 138 M, referring to our CoViD UNIT from March 2020 to April 2021, divided into groups based on the administered drug. **Results:** Lopinavir/ritonavir: in the overall cohort (M+F) the drug reduces the risk of death/ICU admission ($p=0.01$); this impact on the outcome is not significant in the individual groups M and F when analyzed separately. On the other hand, considering mortality alone, in the collective group this was lower in treated patients, an efficacy figure that does not differ in the two sexes after stratification by gender.

Hydroxychloroquine: considering the whole cohort there is a reduced mortality in the treated ($p < 0.001$). The impact of the drug on the risk of death/intensive care admission is comparable in the two sexes.

Tocilizumab: the drug does not change the risk of death/ICU admission in the overall group; the subgroup analysis is lacking due to the small number of samples.

Conclusions: The gender difference does not show a significant impact on the efficacy of the drugs considered. New studies, on larger cohorts, are needed to confirm or refute these preliminary data.

CoViD-19: prevalence of interstitial pneumonia's lung ultrasound signs in asymptomatic and mildly symptomatic patients – Case study from a CoViD Territorial Center

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Background and Aim: SARS-CoV-2 disease is mildly or moderately symptomatic in most cases, but a significant number of patients develop severe interstitial pneumonia. Interstitial pneumonia's symptoms are nonproductive cough and dyspnea, but its course can be also asymptomatic or mildly symptomatic. The gold standard for diagnosis is lung CT. Lung ultrasound (LUS) is very efficient, with sensitivity and specificity being higher than chest X-Ray. LUS requires a fast training and can be performed on an outpatient basis. The aim of the study is to evaluate the prevalence of signs of pneumonia at LUS in asymptomatic or mildly symptomatic patients.

Materials and Methods: The CoViD Territorial Center (CTC) in Garbagnate M. evaluates positive CoViD patients sent by the General Practitioner and considered at moderate risk, as defined by the Lombardy DGR (19/11/20). The assessment included the detection of vital signs, physical examination and LUS; arterial blood gas analysis and/or walking-test were also possible when required. Interstitial pneumonia's symptoms and US signs were defined respectively based on ATS criteria and LUS score. A specific database was used.

Results: From January to May 2021, 130 consecutive patients were evaluated: 73 (56%) had US signs of interstitial pneumonia, of which 15 (20%) didn't have specific symptoms.

Conclusions: Our data, in agreement with literature, show a not negligible prevalence of asymptomatic CoViD pneumonia. These subjects were followed-up as symptomatic patients, also in consideration of a possible onset of long-term complications.

Caso di insufficienza cardiaca e respiratoria

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Premesse: L'insufficienza cardiaca e respiratoria sono una delle cause più frequenti di mortalità nel paziente anziano (seconda e terza causa di morte nella fattispecie).

Descrizione del caso clinico: Vi descriviamo il caso clinico di una donna di 64 anni affetta da destrocardia e da chiusura di un difetto interatriale avvenuta circa 20 anni prima *in situ* viscerum *inversus*, inoltre portatrice di cifoscoliosi dorsale. Viene ricoverata nel nostro reparto di Medicina per insufficienza respiratoria acuta multifattoriale: BPCO riacutizzata e scompenso c.c. in corso di F.A. ad elevata frequenza. Le viene praticata terapia antibiotica (ceftriaxone 2 g/di), diuretica (furosemide 120 mg al di), steroidea

(metilprednisolone 20 mg al di) e cardioattiva (digitale) con ottimi risultati clinici nell'arco di pochi giorni, cioè cinque dall'ingresso in reparto.

Conclusioni: Non avendole somministrato né farmaci sperimentali né nuovi nella farmacopea, umilmente ci è venuto di pensare alla sua malattia cronica e cioè a come il suo organismo, come quello di tanti pazienti cronici, si è in effetti adattato nel tempo a tollerare e superare al meglio le malattie. La cronicità ha permesso alla paziente di rimodellarsi e far sì che rispondesse bene alla terapia pur in presenza di severe condizioni basali cliniche (PAP 38-40 mmHg e spirometria caratterizzata da s. mista con componente ostruttiva di grado medio solo parzialmente reversibile dopo somministrazione di Beta2). Anche un brutto anatroccolo può diventare un cigno e la giraffa sopravvivere adattandosi alle necessità imposte dall'ambiente.

Lemierre syndrome: a "forgotten disease" at the time of CoViD-19 pandemic

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Background: Lemierre syndrome is a potentially life-threatening sequela of head/neck district infection, typically due to *Fusobacterium necrophorum* infection, characterised by thrombophlebitis of internal jugular vein with possible septic embolisation to different organs. Typical treatment involves prompt antibiotic therapy and surgical drainage of infected collections, while the role of anticoagulation is controversial.

Presentation of the cases: Two previously healthy young males were admitted to our Internal Medicine Department, within a few weeks from each other, with an initial diagnosis of suspected meningococcal infection in the course of SARS-CoV-2 infection. Symptoms reported at home were only fever and headache. In both cases brain MRI showed intraluminal filling defect in the internal jugular vein, in addition to acute sinusopathy in one case, and peritonsillar abscess in the other. First patient had blood cultures positive for *Fusobacterium necrophorum*, while they were negative in the second one. Ceftriaxone and metronidazole and anticoagulant therapy were started, with gradual clinical improvement.

Conclusions: We describe two delayed presentations of Lemierre syndrome in two young males, with an atypical onset, in which SARS-CoV-2 infection has made diagnosis even more difficult: on one hand, the initial, nonspecific symptoms can lead to a focus on ongoing viral infection; on the other, the postponement of routine medical visits during the CoViD-19 pandemic can lead to a delay in the diagnosis, leading to more serious and complex presentations at a later date.

Occult HBV-infection: between a too much forgotten diagnosis and the importance of a correct anamnesis

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Background: Diagnosis of viral infectious diseases can often be missed or forgotten because of their clinical behavior: in fact, many times clinical manifestations are underhand. A meticulous anamnesis is absolutely mandatory to avoid medical mistakes, especially in particular clinical settings.

Description of the case: We report the case of a 79-year old man who was admitted to our department for a recent onset of jaundice, asthenia and hyporexia. The patient presented a history of leucemized non-Hodgkin lymphoma since two years for which he underwent to a recent cycle of chemotherapy treatment with rituximab. Laboratory exams showed a clear condition of acute cholestatic hepatitis. A careful anamnesis revealed that the patient was a carrier of occult HBV-infection. Therefore, our diagnostic hypothesis was that the recent chemotherapy could have acted as a trigger leading to an overt liver HBV-infection. This was confirmed through the quantitative HBV-DNA analysis, resulted enormously positive. Hydration, parenteral nutrition and antiviral therapy with entecavir allowed us to gain a marked improvement of the patient's clinical conditions.

Conclusions: In the general assessment of a patient we must not forget to investigate about viral infections; about that, anamnesis, in all his facets, is maybe the most important medical act that can help the physician to achieve a correct diagnosis and to anchor him in the reality of the best medical practice.

Non solo CoVID

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Premesse: La rimodulazione dei reparti di Medicina Interna in reparti CoVID ha trasformato un'attività clinica varia in monoterapica. Le patologie concomitanti mantengono vivo l'interesse internistico.

Descrizione del caso clinico: Ad aprile 2021 si ricovera un ragazzo di 22 anni sulla base di un tampone orofaringeo positivo per SARS-CoV-2 e di una TAC torace che descriveva due piccoli addensamenti polmonari alla base destra. Era in terapia cortisonica. Non era ipossiemico. Nulla al laboratorio tranne una glicemia di 150 mg/dl. Ricovero inappropriato, ma la sua storia clinica è intrigante. A fine gennaio 2020, tornando dalla Germania aveva avuto anosmia, ageusia, febbre per una settimana. Era rimasto in isolamento a casa da solo per un mese per una sindrome influenzale che stentava a passare. L'inizio ufficiale dell'infezione da SARS-CoV-2 in Germania è stato il 27/1/20. Riteniamo che il paziente abbia contratto allora il CoVID e che la descrizione alla TAC siano segni radiologici dell'infezione pregressa. Quindici mesi dopo ne era venuto nuovamente in contatto senza sintomi eclatanti. Un'emoglobina glicata di 8,1% e un'anamnesi familiare indicativa ci hanno fatto concludere per un MODY.

Conclusioni: La gestione dei pazienti CoVID ha migliorato le competenze pneumologiche dell'Internista senza cancellarne l'impostazione olistica.

Un insolito caso di ipoalbuminemia

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Premesse: L'ipoalbuminemia è una condizione comune nei reparti di Medicina Interna che necessita di un inquadramento eziologico.

Descrizione del caso clinico: Uomo, 78 anni ricoverato per polmonite interstiziale CoVID. In anamnesi pregressa microchirurgia derivativa linfatico-venosa e fibro-lipo-linfoaspirazione arto inferiore sinistro lymph vessel sparing. Agli esami ematici: linfociti 0.23 migl/mmc, ipoprotidemia 4.7 g/dl con albumina 2.2 g/dl; all'ecografia toracica versamento severo bilaterale. Veniva impostato trattamento con supplementazione albuminica. Per definire l'eziologia dell'ipoalbuminemia (nota da anni e mai indagata) venivano eseguiti proteinuria 24 ore - dosaggio prealbumina - conta assoluta linfociti CD3/4/8 - screening celiachia - immunofissazione proteine urinarie tutti negativi, Tc addome-torace negativa. Nel sospetto di sindrome da malassorbimento ed in particolare linfoangectasia intestinale venivano eseguiti colonscopia negativa, esofagogastroduodenoscopia con riscontro di linfoangectasie nella seconda porzione duodenale, enteroscopia con microcamera ingeribile che evidenziava dal duodeno discendente sino all'ileo diffuse linfoangectasie con alcune erosioni, l'esame istologico duodenale mostrava infiltrato linfoplasmacellulare della lamina propria, focali ectasie vascolari. Confermato il sospetto diagnostico, veniva intrapreso trattamento nutrizionale con dieta iperproteica e priva di grassi con stabilizzazione clinica e biomorale.

Conclusioni: Nello studio dell'ipoalbuminemia una corretta diagnosi differenziale deve comprendere anche le cause rare.

Antibiototerapia intralesionale come adiuvante nel trattamento degli accessi addominali in soggetti immunocompromessi

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Premesse: Gli accessi intraddominali nel paziente immunocompromesso sono associati ad elevata mortalità e spesso necessitano di multiple linee terapeutiche, includendo la toilette chirurgica. Non sono noti ulteriori trattamenti mininvasivi in grado di ridurre il tasso di complicità e mortalità.

Descrizione del caso clinico: Femmina, 74 anni, giungeva in PS. per febbre, nausea e diarrea. In anamnesi: carcinoma dell'endometrio con multipli secondarismi intra ed extraddominali in corso di chemioterapia adiuvante. All'esame obiettivo addome difeso, dolente, Blumberg +. Agli esami ematochimici: rialzo degli indici di flogosi. Alla luce dell'obiettività addominale si richiedeva TC addome con riscontro di ascessualizzazione di secondarismo della parete addominale. Si posizionava drenaggio ecoguidato e si iniziava antibiototerapia empirica, poi risultata efficace sui ceppi isolati dal materiale purulento drenato. Nonostante un'iniziale risposta terapeutica, ai controlli ecografici seriati non si rilevavano sostanziali riduzioni nelle dimensioni dell'ascesso, con drenaggio giornaliero >50cc di materiale purulento. Si decideva dunque di effettuare instillazioni di antibiototerapia topica attraverso il drenaggio addominale. Al controllo ecografico eseguito a 3 giorni dall'inizio della procedura sperimentale, si assisteva ad una netta riduzione della componente liquido-purulenta in favore di quella tissutale.

Conclusioni: Nei pazienti immunocompromessi, la somministrazione di antibiototerapia topica potrebbe essere un valido adiuvante nella risoluzione degli accessi addominali.

FUO in polisierosite da CoVID 19

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Premesse: Le sierositi possono essere su base autoimmune, virale o paraneoplastica. Sintomi sono algie, febbre e flogosi.

Descrizione del caso clinico: Pz 41aa con iperpiressia, poliartralgie, gonfiore addominale da 15gg insensibili a cefalosporine. Esami: GB 5.46; GR 4.23; Hb 13.2; PLT 204; AST 50; ALT 95; GGT 28; PCR 74 HAVIgM+ CoVID19 IgG+ mentre HIV, HCV, HBVr, EBV, HAVIgM, Treponema, Leishmania, Borrelia, Widal Wright, CMV, Parvovirus B19, Mycoplasma, Legionella, Pneumococco, Quantiferon; TAS; Bartonella; ANAr, citrullina, FR, cANCA, pANCA, ferritina, B2-microglobulina, ASMA, AntiLKM colture e tamponi vaginali: tutti negativi. Eco, TC, RM addome: cisti semplice cefalopancreatica, due adenopatie reattive sub centimetriche perilari e un sottilissimo film liquido periepatico; varicocele pelvico. EcoTV: idrosalpinge (3 cm) e minima faldia periovarica dx. PET due aree focali di iperfissazione a livello celiaco/ilare epatico (suvmax 5). RCS; EGDS e BOM negative. Ecocardiogramma TT versamento pericardico anteriore al ventricolo dx (10 mm) in parte organizzato, senza compressione. Si inizia ibuprofene 600 mgx2 e colchicina 0.5 mg ½ x 2 e poco dopo si osserva risoluzione degli indici di flogosi e della febbre. Ecocardiogramma due mesi dopo riduzione (4mm) del versamento pericardico e scomparsa del liquido peritoneale. Suggestiva quindi la diagnosi di polisierosite da CoVID19. Follow-up: benessere progressivo.

Conclusioni: Trattasi di polisierosite da CoVID19; manifestazioni infiammatorie prolungate (long-CoVID) si possono osservare dal 10% al 20% dei pz entro i sei mesi dalla guarigione.

Una rara localizzazione di TVP associata al CoVID 19

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Premesse: La trombosi ovarica è rara e talora relata a trombofilia. Ecco una trombosi ovarica dx, relata a CoVID-19 che conferma lo stato di ipercoagulabilità indotta.

Descrizione del caso clinico: Donna, 47 aa, ipotiroidea con co-

lelitiasi. APR negativa per fenomeni tromboembolici. Giunge in PS per dolore addominale, febbre, vomito e diarrea. Quindici giorni prima polmonite interstiziale da CoViD-19 con negativizzazione da 2 gg. EO: pallida, sudata, febbrile, addominalgia alla palpazione superficiale e profonda in FIDX con Blumberg+ sospetti per appendicopatia. All'ETG fango biliare, versamento nel Douglas e un minimo ispessimento mesenteriale periileale. TC addome con mdc esclude appendicopatia e mostra difetto di riempimento della vena ovarica dx fino alla confluenza in VCI anche in tardiva, come da trombosi dato confermato da RM. L'angio-TC esclude TEP. Trattata con metronidazolo ev ed EBPM a dosaggio terapeutico secondo peso e GRF, si apprezza un immediato miglioramento clinico. Risultano negativi: la ricerca della mutazione della protrombina G20210A e del fattore V Leiden Alla dimissione l'EBPM è sostituita con apixaban 5mgx2/die.

Conclusioni: Vi abbiamo descritto un caso di trombosi ovarica dx post CoViD-19 trattata efficacemente con EBPM e successivamente con DOAC con immediata regressione. Il CoViD-19 predispone a TVP anche in sedi rare, dovute a risposta infiammatoria con stato di ipercoagulabilità, stasi ematica e danno endoteliale. Il dato anamnestico CoViD-19 va sempre ricercato in casi ad esordio acuto e spesso i fenomeni trombotici a sede rara può simulare altre patologie.

What is known in male gender, comorbidity and age during CoViD-19 pandemia?

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Background: On March 2020, WHO declares the world pandemic by CoViD-19. In this report we report the CoViD-19 infection, related to male gender, comorbidity and special population.

Methods: We describe the published studies by PubMed, Medscape and Scopus between December 2019 to May 2020. Keywords used: male/man gender, sex differences, CoViD-19, comorbidity, diabetes, hypertension, elderly, pregnancy, children.

Results: The elderly population and infants are a population at higher risk. The comorbidities are risk factors for the development of a more severe form of disease. There may be a sex predisposition to CoViD-19 infection, with men more prone to be affected. 83.9% of CoViD-19 patients with chronic kidney disease (CKD) and 57.3% of CoViD-19 patients with liver diseases, have a severe disease.

Conclusions: Older age, infants, male gender and comorbidity describe a crucial role for severity of CoViD-19 disease. Future studies are need for the management of these patients.

Glucose-6-phosphate dehydrogenase deficiency: a diagnosis without anamnestic data

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Background: Glucose-6-phosphate dehydrogenase deficiency is the most common inherited red blood cell (RBC) enzymatic defect, present in more than 400 million people worldwide. The most frequent clinical presentation is neonatal jaundice or haemolytic anaemia (HA), usually triggered by an exogenous agent. The diagnosis of favism, an X-linked hereditary defect of G6PD gene, could be insidious without the anamnestic suspect.

Description of the case: A 61-year-old female patient went to the Emergency Department for asthenia, epigastric pain irradiated to the right ipocondrium, jaundice and cola-colored urine. Biomoral exams showed anemia (Hb 5.5 g/dl, MCV 100 fl), normal platelets and creatinine and a total bilirubin of 10.87 mg/dl, predominantly unconjugated; LDH 1268 U/l. An abdomen CT scan showed a little distension of right intrahepatic biliary tract. The patient was initially admitted to the Surgery Department. She was transfused with 3 units of RBC; she performed an MRI cholangiopancreatography and an ERCP, both negative for neoplastic lesions. The patient was then brought to our attention and referred to our Department. Coombs test was performed (negative). Patient revealed that she ate fava beans some days before; the G6PD dosage resulted reduced consistent with an heterozygote favism.

Conclusions: G6PD deficiency is a common pathology in those areas where malaria distribution was endemic (as Mantua Oltrepo). The presence of HA often suggests an autoimmune origin (which must always be excluded) this clinical case demonstrates that we must not forget RBC enzymatic defects.

Splenic abscess: a time bomb to be diagnosed quickly

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Background: Splenic abscess is an uncommon and potentially lethal disease. Symptoms are mostly nonspecific: fever, asthenia and abdominal pain. Usually, splenic abscess is not considered in the initial work-up. Thus, the diagnosis can be delayed and the treatment postponed carrying to an extremely high mortality (about 70%), which drops to 1% if correctly assessed.

Description of the case: A 65-year-old man affected by psoriatic arthritis treated with adalimumab and methotrexate went to the Emergency Room for suspected urinary sepsis and fever (39°C), dyspnea and asthenia for a month. 30 days earlier the patient underwent arterial destruction with Fogarty catheter for critical lower limb ischemia. The patient performed an abdomen ultrasound to study the urinary tract which found a 16 cm oval formation in the left hypochondrium. The CT scan showed a hypodense formation suggestive for a splenic abscess, associated with left pleural effusion. Biomoral exams showed WBC 22200/mm³ with CRP 244 mg/L. An abdominal drain was placed to reduce the collection of pus with benefit. The culture of pus showed the growth of *Escherichia coli*. A second CT scan showed a thoracic fistula. The patient was then centralized and a splenectomy was performed.

Conclusions: The presentation of a splenic abscess can be very insidious. Luckily, ultrasound and CT scan can easily diagnose this potentially lethal pathology. The therapy is less obvious: the approach can be medical therapy, surgery or both, and the timing of the diagnosis and treatment is one of the most important prognostic factors.

Peripheral nervous system affection in SARS-CoV-2 infection: a case of post-CoViD acute inflammatory demyelinating polyradiculoneuropathy with bilateral facial nerve palsy

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Background: Peripheral nervous (PNS) system involvement in SARS-CoV-2 infection has been described as a consequence of direct neurotropic invasion or parainfectious autoimmune spinal nerve demyelination in the clinical form of acute inflammatory demyelinating polyradiculoneuropathy (AIDP). Few cases have been described with cranial nerves involvement too.

Description of the case: A 62 year-old male patient was admitted in March 2020 to our CoViD Unit in Miulli Hospital in Acquaviva delle Fonti (Bari) for recent onset of cough, fever, with interstitial pneumonia with peripheral and central ground glass opacities and consolidation at lungs CT. Oropharyngeal swab tested positive for SARS-CoV-2. Despite an early clinical and radiological remission, the swab became negative after two months. In May, he came back to our attention for chest pain and fever with echocardiography documenting pericardial effusion; SARS-CoV-2 swab was positive again. Some weeks later, he presented weakness in both legs ascending to arms, with severe fatigue and iporeflexia followed in a few days by bilateral facial palsy. Cerebrospinal fluid (CSF) analysis and electromyography (EMG) were suggestive for AIDP, so we started infusion of human immunoglobulins, with immediate partial recovery followed by complete recovery in a few weeks after rehabilitation.

Conclusions: The persistence of SARS-CoV-2 induces an abnormal immunological activation that may result in neurologic issues such as involvement of peripheral nervous system (PNS) with spinal - and in some cases - cranial nerves inflammatory demyelination.

JAK2-related myeloproliferative neoplasm with eosinophilia and extensive tissue involvement: a case report

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Introduction: Eosinophilia associated to myeloproliferative neoplasm (MPN) is a clonal eosinophilia which may be related to FIPL1-PDGFRB, PDGFRB, FGFR1 and PCM1-JAK2 mutations, the latter presenting heterogeneously as MPN, myelodysplastic syndrome (MDS) or MPN/MDS overlap.

Presentation of the case: We report a case of a 73-year old Caucasian woman who was admitted to our department with a history of diarrhea, low-grade fever, anasarca and major eosinophilia. Parasitological, allergic, vasculitic and iatrogenic diseases were excluded. Endoscopic and CT-RM studies showed marked inflammation of the whole GI tract with histological evidence of eosinophilic infiltration. The same high eosinophilic count was observed in cutaneous, bladder and bone marrow biopsies. Additional blood studies testing levels of serum tryptase and mutation screening for FIPL1-PDGFRB and BCR-ABL mutations were negative. A critical point was the evidence of JAK2 mutation, which led to the conclusion that the patient could suffer from a JAK2-related myeloproliferative syndrome with eosinophilia and extensive tissue infiltration. Only partial clinical response was obtained with steroid therapy; thus, vinblastine was administered with efficient control of signs and symptoms.

Conclusions: Our case report highlights the importance of conducting a mutation screening workup when dealing with a clonal eosinophilia since different abnormalities can predict better or less favorable response to current treatments.

Remdesivir for the treatment of adult with CoVID-19: our clinical experience

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Background and Aim: Remdesivir (RDV) is the only antiviral drug registered currently for treatment of CoVID-19 after a few clinical trials with controversial results. We describe our experience and clinical course of adult patients who received RDV therapy at CoVID Department (Internal Medicine of Jesi Hospital).

Materials and Methods: This is a retrospective study of adult patients with a clinically and laboratory confirmed diagnosis of CoVID-19 who had received RDV (according to the AIFA criteria) for 5 days between November 2020 to May 2021. The primary end-point of effectiveness was the discharge within 10 days. The secondary end-points included the clinical improvement and the mortality rate within 30 days, hospitalization period (HP), the need to increase oxygen therapy (HFNC or C-PAP) or the need to mechanical ventilation.

Results: During the study period, 170 adult patients (69 F, 101 M) received RDV therapy. Discharge within 10 days was observed in 46,4% of patients. Clinical improvement was observed in 73,5% and the mortality rate within 30 days was 4% (7/170 patients). The average hospital stay was 12 days. The need for increase oxygen therapy was observed in 24,5% of patients (10% switch to HFNC, 11% to C-PAP and 3,5% to IOT). There were no severe adverse events requiring treatment discontinuation.

Conclusions: Data collected in this retrospective, real world study supported use of RDV for treatment of SARS-CoV-2 infection according to AIFA criteria. Further studies are warranted and awaited to confirm RDV effectiveness for CoVID-19.

The long-CoVID: a multidisciplinary approach to understand the impact of pandemic

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Background and Aim: CoVID-19 has been associated with long-term symptoms, the so-called "long CoVID"; these symptoms are rising but little is known about prevalence and risk factors. The aim of this study was to describe the long-term health consequences and investigate the associated risk factors.

Materials and Methods: We organized a multidisciplinary assessment for CoVID-19 pts discharged from CoVID Department of Jesi H. Service brings together various disciplines with specialist skill sets to provide targeted individualized interventions. All pts were interviewed with questionnaires (MMSE, IES-R and SF-36) for evaluation of cognitive order, psychiatric symptoms and health-related quality of life. Statistical tests were used to evaluate the association between disease severity, length of hospital stay and long-term health consequences.

Results: During the study (June 20-April 21) the first 250 pts had completed the post-discharge multidisciplinary assessment. Among them, 54% still complained fatigue, 12% dyspnea and 20% experienced post-traumatic psychological consequences (insomnia, anhedonia and irritability the most frequent). Significantly elevated rates of long-term symptoms were identified in those requiring ventilator support and a long hospital stay.

Conclusions: These findings highlight the importance of following up survivors of CoVID-19. A multidisciplinary approach is fundamental to respond to a complex array of long-CoVID, to understand the direct and indirect impact of the pandemic and to look for effective solutions.

Altered mental status in a woman with CoVID-19: a case of SARS-CoV-2 related encephalitis

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Background: CoVID-19 has been shown to impact a variety of organs, including the CNS. The definition of Neuro-CoVID encompasses different pathologic conditions on a clinical, pathophysiological and prognostic level, which need a timely and accurate diagnosis.

Presentation of the case: A 69-year-old woman was admitted 6 days after a diagnosis of SARS-CoV-2 infection with fever, moderate hypoxemic respiratory failure, and altered mental status (disorientation, lethargy, aphasia). No focal neurologic signs or nuchal rigidity were present. Brain MRI was unremarkable. The patient underwent EEG (generalized slowing) and CSF sampling, which showed hyperproteinorrachia (70mg/dl) and pleocytosis (9 cells/ μ l), with negative Gram staining. A diagnosis of encephalitis was made, and empiric treatment with dexamethasone, remdesivir, acyclovir, ampicillin was started. Screening for HIV and syphilis were negative. The day after the patient presented partial seizure and levetiracetam was added. A negative result was obtained from CSF culture and molecular testing for herpesvirus, Toscana virus, and SARS-CoV-2. The patient experienced gradual improvement in 10 days, obtaining normalization of mental status (Rankin scale 0).

Conclusions: The present case adds to several reports of CoVID-19-related encephalitis. The disease course is variable, with different patterns in neuroimaging and clinical presentation. Testing for SARS-CoV-2 on CSF is often negative, and neuroinflammatory or autoimmune responses could play a major role in brain damage. However, a direct viral CNS invasion cannot be excluded.

Una complicanza inaspettata

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Premesse: Farmaci che utilizziamo routinariamente possono in-

durre gravi complicanze che dobbiamo sospettare e trattare tempestivamente.

Descrizione del caso clinico: Donna di 52 anni, con recente diagnosi di MM micromolecolare Kappa, complicato da embolia polmonare necessitante trombectomia. Trattato inizialmente con CCS e allopurinolo con importante riduzione della componente monoclonale e successivo inizio del primo ciclo chemioterapico con schema VTD (bortezomib, talidomide, desametasone) associato a profilassi antivirale con aciclovir e antipneumocistis con sulfamometoxazolo/trimetoprim. Il quarto giorno dall'inizio di tale terapia insorge febbre, insufficienza renale acuta e acidosi metabolica normocloremica. Il giorno successivo la paziente sviluppa un eritema cutaneo diffuso con presenza di bolle flaccide e coinvolgimento mucoso. Nel sospetto di S. di Steven-Johnson/ necrolisi epidermica tossica (SCORTEN score 4) la paziente ha intrapreso il trattamento con metilprednisolone 1 mg/Kg con peggioramento clinico nelle successive 24-36 ore; è stato quindi deciso di incrementare il dosaggio corticosteroideo a 1 g/die con rapido miglioramento delle lesioni cutanee e delle condizioni generali.

Conclusioni: La sindrome di Steven-Johnson è una grave patologia associata alla somministrazione di farmaci di uso comune che dobbiamo essere pronti a trattare tempestivamente per evitare un'evoluzione infausta.

CoViD-19 associated invasive pulmonary aspergillosis: case report

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Background: In the literature, the rates of bacterial or fungal infection during SARS-CoV-2 infection are reduced (8%). Invasive aspergillosis has always been considered typical of immunocompromised and the finding in immunocompetent as a form of colonization. A systematic review of cases of invasive pulmonary aspergillosis associated with influenza (IAA) showed that most of the patients had at least one of the classic risk factors, but 28% had a muted medical history due to other relevant comorbidities.

Description of the case: A 48-year-old male with muted medical history, hospitalized for CoViD-19 pneumonia. Clinical, laboratory and radiological improvement was not observed despite therapy and ventilatory support at 7 days. Positive galactomannan assay (BAL and serum) compatible with IAA performed. Treatment started with voriconazole 6 mg/kg/bid on day 1, then 4 mg/kg/day until clinical-radiological improvement (12 days). Continued oral therapy (400mg/os/bid) with markedly improved radiological follow-up.

Conclusions: The incidence of IAA in patients with CoViD-19 is not known, and is mostly found in critically ill patients on mechanical ventilation. A superinfection mechanism similar to that of patients with severe influenza related critical illness is hypothesized. Galactomannan on BAL is more sensitive than cultures and together with the serum dosage increases the diagnostic probability, distinguishing invasive forms from colonizations. The high level of clinical suspicion and a timely diagnostic-therapeutic approach are essential.

Diagnostic challenge of early cardiac amyloidosis in multiple myeloma: a case report

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Background: Multiple myeloma is the most common type of multifocal plasma cell proliferation in the bone marrow. Renal amyloidosis is commonly associated to the light-chain disease, whereas amyloid involvement of the heart is easily miss-diagnosed and mistreated due to lack of specificity.

Description of the case: Herein we report a 53-year old woman with suspect of systemic amyloidosis who presented with dyspnea, anginous pain with increase of cardiac biomarkers, absence of structural abnormalities of cardiac kinesis and nephrotic-range proteinuria lasting 4 years. At first a cardiac involvement was excluded with cardio-RM imaging and coronary angiography; protein

electrophoresis showed an increased level of κ microglobulin and blood exams revealed an impaired κ and λ ratio and proteinuria. The patient underwent a kidney biopsy that revealed presence of renal amyloidosis. A bone biopsy was performed and no amyloidosis was found. After two months, the patient referred the occurrence of peripheral edema and a cardiac involvement was considered. Multiple myeloma with renal and cardiac amyloidosis were diagnosed.

Conclusions: Probably the most common early manifestation of cardiac amyloidosis of any type is dyspnea on exertion, which progresses rapidly, often followed by peripheral edema. Unfortunately, the disease is frequently asymptomatic until a late stage and the symptoms can be very nonspecific. In a multiple myeloma with renal amyloidosis, a cardiac involvement should be considered when marks of congestive heart failure occurred.

Guillain-Barrè syndrome-associated SIADH with Reset Osmostat causing severe and untreatable hyponatremia

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Background: It is known that Guillain-Barrè Syndrome (GBS) could be associated with the development of SIADH. Reset Osmostat is a subtype of SIADH consisting of a change in the normal plasma osmolality threshold inducing either hypo- or hypernatremia.

Description of the case: We report a case of a 78-year old Caucasian man with no significant recent medical history admitted to our Hospital for lower limbs weakness, pain, dyspnea and fever (T 38.5°C). A diagnosis of deep vein thrombosis associated with pulmonary embolism was promptly made and anticoagulant and antibiotic therapy started. Nonetheless, the weakness rapidly grew into a frank paraplegia associated with dysarthria and dysphagia. Clinical context and cerebrospinal fluid testing led to the diagnosis of GBS; adequate treatment was started. Meanwhile, blood tests revealed a severe hyponatremia (serum Sodium 119 mmol/L), found to be non-responsive to water restriction nor to increased sodium intake, nor to tolvaptan. Despite thorough evaluation and therapeutic efforts, natremia never exceeded 132 mmol/L. Finally, after repeatedly testing serum ADH levels a pattern was observed: ADH levels were inappropriately normal when natremia was lower (i.e. ADH 8, 9.6 and 9.9 pmol/L with a sodium of 121, 122 and 123 mmol/L, respectively) and inappropriately high when natremia was higher (i.e. ADH 20.3 and 22.5 pmol/L with a sodium of 132 and 131 mmol/L, respectively).

Conclusions: These findings were consistent with a diagnosis of Reset Osmostat, secondary to GBS, suggesting the need of taking this pathogenetic mechanism into account when dealing with hyponatremia during GBS.

Gestione infermieristica delle stomie: uno studio multicentrico

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Premesse e Scopo dello studio: Le conoscenze relative alla gestione delle stomie e le modalità di approccio al paziente, dovrebbero essere apprese durante la formazione universitaria, in modo che gli studenti sviluppino competenze spendibili in ambito clinico al fine di prevenire le complicanze, migliorando gli esiti sensibili alle cure infermieristiche dei pazienti stomizzati. L'obiettivo dello studio è di valutare il livello di conoscenze e competenze degli studenti infermieri sulla gestione delle stomie intestinali.

Materiali e Metodi: Studio cross-sectional condotto in 4 poli universitari italiani nel 2021, attraverso una survey online.

Risultati: Il livello generale di conoscenze non è adeguato e solo il 33% degli studenti ha risposto correttamente a tutte le domande del questionario, mentre il 93% sa riconoscere le caratteristiche nella valutazione di una stomia. In generale la maggioranza del campione si ritiene competente nella gestione di una stomia in assenza di complicanze (71.5%).

Conclusioni: I risultati forniscono spunti di riflessione per i formatori universitari per rafforzare la formazione teorico-pratica degli studenti di infermieristica.

Effect of Annurca apple polyphenols on claudicatio intermittens

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Background and Aim: Patients with chronic peripheral arterial disease (PAD) have a 6-fold greater risk of death from cardiovascular disease than those without PAD. The purpose of our study was to evaluate whether walking autonomy, ankle-arm index (ABI) and acceleration time (AT) in patients suffering from Fontaine stage 2 PAD could improve with Annurca apple polyphenolic extract (AMS).

Materials and Methods: 180 patients (aged 35 to 75 years) with Fontaine stage 2 PAD were enrolled and randomized to intervention group I (90 patients) and control group C the remaining 90. Group I was given 4 capsules of Annurca apple polyphenolic extract (AMS)/day. Group C was given identical-looking capsules containing only maltodextrin. The study lasted 24 weeks. Patients underwent clinical examination and ultrasound of lower limbs at time 0 and after 24 weeks.

Results: In the AMS group, walking autonomy increased by an average of 69% ($p < 0.05$), while the results for ABI and AT were not exciting, even if statistically significant. They were +25% respectively; $p < 0.05$ and -3.6%; $p < 0.05$ from baseline. The placebo group showed no significant differences.

Conclusions: Our preliminary results may point to AMS as a natural, safe and promising tool for treating PAD-related symptoms.

Utilità della ultrasonografia point-of-care (POCUS) nella diagnosi differenziale della piastrinopenia in setting internistico

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Premesse: La piastrinopenia nel paziente anziano è difficile da diagnosticare, spesso determinata da cause multiple legate alla polipatologia e politerapia. Di seguito un caso clinico risolto servendosi del quinto pilastro dell'esame obiettivo.

Descrizione del caso: Uomo di 80 anni ricoverato per polmonite CoViD-19 in paziente affetto da favismo. Degenza complicata da anemia grave, non segni di emolisi, basso indice reticolocitario e anisopoichilocitosi allo striscio periferico. Nell'ipotesi di anemia iporigenativa impostata eritropoietina con beneficio. Concomitante rilievo di piastrinopenia grave, incremento delle piastrine reticolate, non aggregati piastrinici né forme immature della serie bianca allo striscio periferico. Sarebbe stata utile la biopsia osseo midollare, esclusa per l'invasività dell'esame in paziente fragile. Mediante l'ecografia clinica point of care (POCUS) riscontrata splenomegalia con diametro passante per ilo di 20 mm, esclusa franca ipertensione portale e splenomegalia. Formulata l'ipotesi di piastrinopenia a possibile genesi mista da sequestro, per ipersplenismo cronico associato a favismo e su base immunitaria in corso di infezione. Iniziato prednisone con incremento e stabilizzazione delle piastrine.

Conclusioni: E' stato possibile evitare indagini invasive e ulteriori indagini strumentali dispendiose e inappropriate grazie al semplice utilizzo dell'ecografia clinica bedside. La POCUS ha permesso di formulare l'ipotesi diagnostica e modificare la strategia terapeutica, consentendo la dimissione sicura in tempi brevi.

Anziani e politerapia. Un caso clinico di piastrinopenia grave su cui riflettere

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Premesse: La politerapia del paziente anziano con comorbilità rappresenta spesso un problema per i potenziali effetti avversi di difficile identificazione data la complessità dei regimi farmacologici, le caratteristiche farmacocinetiche e farmacodinamiche e il numero elevato di farmaci somministrati.

Descrizione del caso clinico: Donna, 85 anni, ricoverata per infezione SARS-CoV-2, polmonite batterica, endocardite batterica da MSSA su valvola protesica, sindrome coronarica acuta attualmente in duplice terapia antiaggregante. Iniziata vancomicina e piperacilina/tazobactam. Comparsa di piastrinopenia grave. Sospesa antiaggregazione, eparina e trasfusa piastrine. Al controllo si rilevava peggioramento della piastrinopenia e comparsa di delirium. D-dimero 1500 mg/dL, coagulazione e aptoglobina normale, reticolociti reattivi, striscio periferico e test Coombs negativi. All'ecografia esclusa splenomegalia. 4Tscore 2, indicativo di bassa probabilità di trombocitopenia da eparina. Escluse coagulazione intravascolare disseminata, microangiopatie trombotiche, emolisi. Nell'ipotesi di trombocitopenia immune indotta da farmaci, sono stati sospesi antibiotici ed eseguite immunoglobuline endovena. Successiva normalizzazione dei valori piastrinici e risoluzione del delirium.

Conclusioni: Per una buona pratica clinica è necessario valutare sempre l'appropriatezza di ogni scelta farmacologica, considerare le caratteristiche del paziente inclusa l'aspettativa di vita, eseguire costantemente la riconciliazione terapeutica per ridurre il rischio di cascata prescrittiva e di complicanze periospedaliere.

De Quervain's subacute thyroiditis: an illustrious unknown

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Background: De Quervain's thyroiditis (SATdQ), also known as subacute granulomatous thyroiditis, is a self-limiting disorder. The symptoms are hyperthyroidism and hypothyroidism. In addition, patients may suffer from painful dysphagia, thyroid pain confused with pharyngodynia, and systemic symptoms like fever, hepatic cytolysis, and an elevated erythrocyte sedimentation rate.

Description of the case: We report a case of an adult age 66 admitted to Hospital for a 50-day fever above 38, for which he had a blood test, chest x-ray, all negative. He also took antibiotic therapy and steroid therapy without benefit. When he is hospitalized, he reports headache and joint pain. He performed blood test, echocardiography, abdominal ultrasound, chest CT and CT abdomen with contrast medium, procalcitonin, blood cultures, urine culture, quantiferon test. The patient performed a nasopharyngeal swab for detection of SARS-CoV-2 with a negative result. The cultures were all negative. He had a high value of erythrocyte sedimentation rate, the patient presented a hyperthyroid hormonal pattern and the absence of antithyroid antibodies. The thyroid ultrasound and thyroid scintigraphy were compatible with De Quervain's thyroiditis. The treatment with cortisone/beta-blockers led to a progressive improvement.

Conclusions: An infrequent atypical SATdQ manifests itself with a fever of unknown origin and can be suspected with scintigraphy. It is essential to differentiate SATdQ from other thyrotoxicoses such as diffuse toxic goiter or Graves' disease and not confuse it with otitis and pharyngitis.

Progressive multifocal leukoencephalopathy: an unknown case of AIDS

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Background: Progressive multifocal leukoencephalopathy (PML), also known as progressive multifocal leukoencephalitis, is a rare

and primarily fatal viral disease characterized by progressive demyelination of the brain's white matter. The disease occurs almost exclusively in patients suffering from severe immunodeficiencies, such as those with AIDS.

Description of the case: We report a case of a 41-year-old patient who came to our observation for a 20-day fever, with progressive asthenia leading to recent bed rest, cognitive impairment and dysphagia. In the history, she had leukopenia and anaemia for two years, already followed from the Hematology Unit, recent *Candida albicans* esophagitis and *Pseudomonas aeruginosa* urinary tract infection. Performed during hospitalization blood chemistry, blood culture, urine culture, quantiferon test, chest CT, brain CT, brain MRI, neurological and infectious consultation. Blood tests show evidence of a positive HIV test and for Cytomegalovirus. Chest CT revealed pneumonia. Neurological counseling shows severe impairment of ocular motility with severe cognitive impairment. Nuclear magnetic resonance revealed multiple areas from the altered signal in the periventricular and the left frontal and temporal region.

Conclusions: The onset of rapidly progressive neurological symptoms in patients with fever and leukopenia should lead to suspicion of progressive multifocal leukoencephalitis, even in patients with no history of HIV positivity. This condition is a demyelinating disease with a poor prognosis; most patients with PML die within four months of onset.

Global vision and clinical reasoning in complexity: an endangered competency in Internal Medicine in the CoViD era. Case series in an Internal Medicine unit CoViD-free

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Background: During SARS-CoV-2 pandemic management of internist patient is even more complex: hospital acquired infection, resources devolved to CoViD-19, round visit with PPE, minor interrelation, post-CoViD patients.

Presentation of the case series: 1. A 75-year old man had dysphagia, fever, low back pain, shoulder pain. Anamnesis: CoViD pneumonia (P/F143, TTS18/20), goiter, bladder neoplasm, T2DM. CT showed pneumomediastinum, pneumothorax, iliopsoas haematoma. He underwent broad spectrum antibiotic, arthrocentesis, culture tests. We concluded for pneumomediastinum due to CoViD-19 pneumonia, MSSA sepsis, septic arthritis, dysphagia due to goiter and pneumomediastinum, UTI. He is transferred to OSCO (surgery delayed) - 2. A 72-year old woman presented respiratory failure, fever, bacterial pneumonia. Anamnesis: stroke at age 50, APS diagnosis, AOC, kidney failure. We performed antibiotics. Near to discharge, she had profuse haematemesis due to acute esophageal necrosis. She underwent PPI infusion and tests for risk factors and triggers (as APS or neoplasm). - 3. A 45-year old man had severe sepsis and intestinal obstruction. Anamnesis: paraplegia, previous intestinal obstruction. He underwent antibiotics, rehydration, NGT. Colonoscopy and gastrografin enema ruled out stenosis, but occlusion persisted. After collegial discussion surgical approach was proposed, but the patient had unfavorable outcome due to CoViD-19 infection.

Discussion: These cases share high level of complexity: need of subintensive care, difficult management of patients' need. Clinical judgment, assessment of EBM priorities are essentials, under-estimated skills.

Impianto di pacemaker permanente in paziente iperteso con severa disionia in corso di trattamento con lenalidomide per mieloma multiplo

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Premesse: Nei pazienti con mieloma multiplo lo sviluppo di ma-

lattie cardiovascolari correla con il trattamento con lenalidomide, farmaco immunomodulante utilizzato nei casi refrattari.

Descrizione del caso clinico: Un maschio di 77 anni veniva ricoverato in Medicina Interna (01/2021) per confusione, agitazione psicomotoria, parestesie con TC cerebrale negativa. Era affetto da MM IgG-Lambda in trattamento con lenalidomide 25mg 3-settimane/mese e 20mg di desametasone/settimana, ipertensione arteriosa, IRC-3° stadio, vasculopatia carotidea e pregressa embolia polmonare. Assumeva terapia con perindopril/amlopidina 5/5mg, atorvastatina 40mg, rivaroxaban 20mg. I valori pressori erano elevati (160/96 mmHg), poi normalizzati con perindopril/amlopidina 10/10mg. Vi era ipocalcemia severa totale/ionizzata (6,59/3,35 mg/dl), ipokaliemia (2,68 mmol/l), ipo-vitamins-D (11,2 ng/ml), aumentata creatinemia (1,34 mg/dl). L'ECG mostrava RS con BB destro, emi-blocco anteriore sinistro, BAV di II grado tipo Mobitz-II intermittente con QTc allungato (508 ms). Dopo sospensione della terapia con lenalidomide e desametasone, infusione di calcio (9 g)/potassio (80 mEq) la sintomatologia neurologica si risolse ma nonostante la normalizzazione della disionia, l'ECG-Holter confermò il blocco tri-fascicolare che richiese impianto di pace-maker bicamerale.

Conclusioni: Nel MM l'ipertensione è frequente e di difficile controllo. L'ipocalcemia e l'ipokaliemia sono rare e aumentano il rischio di trombofilia ed aritmie. Nei pazienti ipertesi con MM sarebbe opportuno un confronto multidisciplinare per prevenire complicanze cardiovascolari.

Il ruolo della telemedicina nella gestione dell'ipertensione durante la pandemia SARS-CoV-2: studio pilota in un centro dell'ipertensione

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Obiettivo dello studio: Valutare l'efficacia e l'aderenza alla terapia nell'iperteso con il servizio di telemedicina durante il periodo pandemico.

Materiali e Metodi: Da gennaio ad aprile 2021 sono stati analizzati 51 ipertesi (64% femmine, età media 71.5±8.5 anni); coloro che acconsentivano alla prestazione compilavano un diario pressorio (dei 6 giorni antecedente la telefonata) inviato per posta elettronica o consegnato al caregiver. Nel diario era richiesto di indicare la terapia, il tipo di misuratore elettronico, la presenza di FA o uso di anticoagulanti orali. Sono stati definiti a target i pazienti con valori di PA <140/90mmHg. Le variabili continue sono state espresse come media±deviazione standard e confrontate con il t-test di Student, mentre quelle categoriche sono state confrontate con il test del Chi-quadrato di Pearson.

Risultati: I valori di PA erano significativamente aumentati nei maschi più che nelle femmine (138.7±4.7 vs. 134.3±12.4mmHg, p<0.003 e 81.7±3.0 vs. 76.1±5.8mmHg, p<0.001), mentre i valori di FC e numero di farmaci anti-ipertensivi non erano diversi per sesso (71.8±10.6 vs. 71.3±8.4bpm e 2.5±0.8 e 3.1±0.7, NS). Il 63.1% dei soggetti era a target pressorio e non era diverso per sesso (61.1 vs. 64.0%, NS). Tra gli anti-ipertensivi, i diuretici erano più frequentemente usati (70.6%), seguivano i calcio-antagonisti (64.7%), gli ACE-inibitori (53%), i beta-bloccanti (52.9%) ed i sartani (35.3%).

Conclusioni: La telemedicina è efficace sul controllo pressorio, nel monitorare l'aderenza alla terapia, nel contenere i costi di gestione e con potenziale riduzione delle liste d'attesa.

Retrorraggia in paziente con RCU: riattivazione o manifestazione CoViD-correlata?

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Descrizione del caso clinico: Uomo di 64 anni ex fumatore da sei anni (120 pack-years), tiroidectomia per pregressa neoplasia tiroidea, colecistectomia, rettocolite ulcerosa corticoreistente. Il paziente giungeva nel reparto di Medicina d'Urgenza CoViD per retrorragia, anemia (Hb 8.3 g/dL), severa piastrinopenia (PLT

1000 mm²) e infezione da SARS-CoV-2. Si presentava con lesioni petecchiali localizzate agli arti inferiori ed in sede sublinguale, ripetuti e abbondanti episodi di rettorragia, emodinamicamente stabile. In considerazione della grave piastrinopenia, del coesistente stato anemico e del sanguinamento attivo è stato sottoposto a ripetute trasfusioni di globuli rossi concentrati, concentrato piastrinico e plasma, terapia steroidea ad alte dosi e monitoraggio seriato clinico e laboratoristico fino a normalizzazione della crisi ematica e conseguente cessazione della rettorragia. E' stata effettuata ricerca di autoanticorpi e virus con esito negativo.

Conclusioni: Il caso clinico mostra come l'infezione da SARS-CoV-2 possa presentarsi con quadri atipici, la severa piastrinopenia in questo caso, simulando manifestazioni di patologie croniche sottostanti.

Trombosi venosa porto-mesenterica da *Bacteroides fragilis* e CoViD-19

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Premesse: La fase pandemica SARS-CoV-2 ha reso estremamente difficoltoso valutare e trattare adeguatamente i pazienti complicati, a causa della necessità di utilizzare le risorse per gestire la malattia CoViD-19 correlata. I reparti di Medicina Interna hanno tuttavia mantenuto la vocazione alla gestione dei casi clinici complessi.

Descrizione del caso clinico: abbiamo valutato un paziente (M, aa 72) con quadro di febbre, addominalgie, vomito e diarrea, insufficienza renale acuta. Una TC addome con mdc ha evidenziato un accesso peridiverticolare e trombosi della vena porta e della mesenterica superiore; negativo lo screening per trombofilia e la mutazione del JAK2, documentato un deficit di B12 e folati. E' stata impostata terapia antibiotica (PIP/TAZ) e anticoagulante (enoxaparina) oltre a reintegro vitaminico. Le emocolture hanno isolato un ceppo di *Bacteroides fragilis*. Nei giorni successivi il paziente, asintomatico, è risultato positivo al tampone molecolare per SARS-CoV-2 e, successivamente ha manifestato polmonite interstiziale CoViD-19-correlata e insufficienza respiratoria acuta. E' stata impostata terapia con remdesivir, desametasone e ossigeno; il paziente ha avuto completa risposta clinica e laboratoristica ad entrambe le malattie.

Conclusioni: Si è trattato di un caso clinico complesso caratterizzato da una duplice patologia: una rara e pericolosa complicanza trombotica di patologia infettiva intraaddominale, alla quale si è sovrapposta la polmonite da CoViD-19, frequentemente associata a fenomeni trombotici sistemici. Il quadro clinico si è risolto completamente.

Gestione dell'emergenza CoViD-19: esperienza della Medicina Interna dell'Ospedale di Sanremo (IM)

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Premesse e scopo dello studio: Durante la pandemia da SARS-CoV-2 i reparti di Medicina Interna, base del sistema ospedaliero, hanno contribuito alla gestione dell'emergenza. Descriviamo qui una fase dell'esperienza della Medicina 2 di Sanremo (IM), centro CoViD provinciale.

Materiali e Metodi: Il nostro reparto consta di 50 letti CoViD-19. Nel periodo gennaio-aprile 21 abbiamo ricoverato 343 pazienti, di cui 257 (74,9%) affetti da 3 o più comorbilità; 102 (29,7%) con score CFS (Clinical Frailty Index - CSHA) tra 4 e 6 e 94 (27,4%) tra 7 e 10. 299 soggetti (87,2%) erano affetti da polmonite CoViD-19 con insufficienza respiratoria; tutti i pazienti sono stati gestiti in modo interdisciplinare da specialisti in Medicina Interna, Malattie Infettive, Pneumologia, Reumatologia e ove necessario Rianimatori. Tutti i pazienti sono stati sottoposti a TC torace smdc, monitoraggio biochimico ed EGA ed è stata implementata al massimo l'ecografia bedside, limitando all'essenziale lo spostamento dei pazienti dal reparto per la diagnostica. E' stata effettuata la terapia per il CoViD-19 secondo le linee guida e, insieme, la gestione delle comorbilità e delle complicanze.

Risultati: Abbiamo dimesso (al domicilio e in strutture dedicate) 254 pazienti. Sono stati trasferiti in Area Critica 41 soggetti (11,9%); i deceduti sono stati 48 (14%).

Conclusioni: La Medicina 2 Sanremo, già da inizio pandemia reparto CoViD-19 per pazienti di medio-alta gravità e di elevata complessità clinica, ha contribuito fattivamente alla gestione dell'emergenza CoViD-19 in provincia di Imperia.

An atypical case of rapidly progressive interstitial lung disease

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Introduction: We present a case of anti-MDA5 antibody associated rapidly progressive interstitial lung disease (RP-ILD), in a patient with no other clinical signs suggestive of dermatomyositis (DM), especially clinically amyopathic dermatomyositis.

Description of the case: A 33-year-old man from Senegal presented fever and dry cough since 3 weeks, not responsive to any antibiotic therapy. The initial chest x-ray showed bibasal pulmonary thickening. All the microbiological analysis resulted negative, blood tests were normal apart from mild anemia and elevated ferritin levels. A bronchoscopy, complicated by a pneumomediastinum, found a tracheal ulcer. Meanwhile the patient's condition worsened, he developed respiratory failure with high-resolution CT of the chest showing increased thickening and diffused ground glass areas. All data were evocative of an organizing pneumonia (OP), excluding secondary causes, anti-MDA5 antibody tested positive. Despite immunosuppressive treatment the patient died two months later for severe lung failure.

Conclusions: Anti-MDA5 dermatomyositis is a rare subtype of DM characterized by distinctive mucocutaneous features and RP-ILD with a high mortality rate. The clinical presentation of this case was very anomalous because no cutaneous manifestation neither muscle weakness were present and CPK levels were just above the normal values; few cases of tracheal ulcer and pneumomediastinum were described in literature. Dermatomyositis should always be ruled out in front of a RP-ILD case because an early diagnosis can reduce its elevated mortality rate.

Correlation between HRCT Severity Score and CO-RADS in 30 patients with SARS-CoV-2 interstitial pneumonia. HISECOR study

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Background and Aim: The authors present the "HISECOR" study, an acronym deriving from "High resolution computerized tomography SEverity score and CO-Rads". A retrospective analysis was performed on 30 patients enrolled with CoViD-19 pneumonia. The diagnosis was confirmed by the radiological picture (CT-CXR), by the positivity of the molecular swab for SARS-CoV2. A comparative analysis was performed with Student's parametric "t" test to check if there is a significant relationship between the values of the HRCT Severity Score and those of the CO-RADS at T0. The "HISECOR" study has the following objectives: 1) check relationships between the HRCT Severity Score values and those of the CO-RADS at T0; 2) verify the statistical significance found by applying Student's parametric test "t".

Materials and Methods: Student's "t" test calculates the relative value (VR) of t index to be associated with the difference found according to the following formula: $t = (M1 - M2) / \sqrt{DS12 / N1 + DS22 / N2}$.

Results: Student's "t" test applied to 30 patients shows a highly significant correlation ($p < 0.001$) of the two variables examined (HRCT Severity Score and CO-RADS Score at T0) and not attributable to case. The value of "t" is 6.10 and the CV of "t" for $p = 0.001$ is 3.65 with GL = 29.

Conclusions: The "HISECOR" study demonstrated a statistically significant correlation between the HRCT Severity Score values and those of the CO-RADS Score obtained at T0.

Correlation Charlson Comorbidity Index - HRCT Severity Score. CHAVES Study

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Background and Aim: The Authors present the "CHAVES" study, acronym deriving from "CHARlson comorbidity index - hrct seVerity Score", enrolling 30 patients with SARS-CoV-2 pneumonia. The diagnosis was confirmed by the radiological picture (CT-CXR), by the positivity of the molecular swab for SARS-CoV-2. All patients underwent HRCT at the time of admission and in all patients the HRCT Severity Score and the Charlson Comorbidity Index were calculated at T0. The "CHAVES" study has the following objectives: 1) check existing relationships between the HRCT Severity Score values and those of the Charlson Comorbidity Index at T0; 2) verify the statistical significance found by applying Student's parametric test "t" as a comparative analysis test.

Materials and Methods: Student's "t" test calculates the relative value (RV) of "t" index to be associated with the difference found according to the following formula: $t = (M1 - M2) / \sqrt{DS12 / N1 + DS22 / N2}$.

Results: Student's "t" test applied to 30 patients shows a highly significant correlation ($p < 0.001$) of the two variables examined (HRCT Severity Score and Charlson Comorbidity Index values at T0). The value of "t" obtained is 4.71 and the CV (critical value) of "t" for $p = 0.001$ is 3.65 with $GL = 29$.

Conclusions: The "CHAVES" study demonstrated a statistically significant correlation between the values of the HRCT Severity Score and those of the Charlson Comorbidity Index obtained at T0.

Utilizzo di bezlotoxumab nella gestione della colite da Clostridium difficile: descrizione di 2 casi clinici

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Premesse: La gestione dell'infezione da Clostridium difficile ha visto negli ultimi anni l'introduzione di nuove opzioni terapeutiche. A tal proposito, abbiamo oggi a disposizione il bezlotoxumab, un anticorpo monoclonale umano, che si lega alla tossina B di Clostridium difficile. L'indicazione in Italia è la prevenzione della recidiva dell'infezione da Clostridium difficile (CDI) negli adulti ad alto rischio di recidiva da CDI.

Descrizione dei casi clinici: Si descrivono 2 casi di pazienti ricoverati in Medicina Interna, entrambi di sesso maschile, uno di 53 anni e l'altro di 44 anni. Il primo, ricoverato per una cirrosi epatica su base esotossica ha presentato una colite da Clostridium difficile trattata con vancomicina (senza beneficio) e fidaxomicina (sospesa per reazione allergica), è stato pertanto somministrato bezlotoxumab alla dose di 10 mg/kg in monosomministrazione con beneficio. Il secondo caso clinico è quello di un uomo ricoverato per una rettocolite ulcerosa severa riacutizzata sovrainfettata con infezione da Clostridium difficile, ha presentato scarsa risposta alla terapia antibiotica convenzionale (metronidazolo, vancomicina), pertanto è stato somministrato bezlotoxumab alla dose standard con beneficio. In entrambi i casi i pazienti sono stati dimessi a domicilio e seguiti ambulatorialmente.

Conclusioni: Entrambi i casi clinici dimostrano come oggi la gestione dei pazienti con colite da Clostridium difficile sia particolarmente complessa, l'utilizzo di nuovi farmaci può rappresentare una soluzione in casi particolari come questi.

Desametasone in pazienti con ARDS moderato-severa da CoViD-19: dosaggio elevato vs dosaggio standard

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Premesse e Scopo dello studio: Gli steroidi, utilizzati nei casi gravi di infezione da SARS-CoV-2, possono modulare il danno polmonare immuno-mediato e ridurre la progressione verso i

casi più gravi di ARDS. Il trial RECOVERY ha dimostrato che desametasone alla dose di 6 mg/die per almeno 10 giorni porta ad una riduzione della mortalità a 28 giorni nei pazienti con supporto di ossigeno-terapia e in quelli con ventilazione meccanica. Schemi terapeutici con dosaggi differenti di desametasone sono stati pubblicati.

Materiali e Metodi: Lo studio ha valutato oltre 150 pazienti da ottobre 2020 a gennaio 2021, di questi sono stati selezionati 36 pazienti con ARDS moderato-severa secondo la definizione di Berlino. Fra questi: 23 pazienti hanno ricevuto la terapia con desametasone 6-8 mg/die per 10 giorni, 13 pazienti hanno ricevuto desametasone a dosaggio elevato (20 mg/die per 5 giorni seguiti da 6 mg nei 5 giorni successivi); la randomizzazione è avvenuta sulla base di criteri clinici e laboratoristici.

Risultati: L'outcome principale è stato quello di valutare la mortalità a 28 giorni in entrambi i gruppi di pazienti, nel gruppo di pazienti trattati con dosaggio standard di desametasone la mortalità è stata del 52%; nel gruppo di pazienti trattati con desametasone ad alte dosi la mortalità è stata del 30,7%.

Conclusioni: Il nostro piccolo studio dimostra come una "personalizzazione" della terapia cortisonica nei pazienti con ARDS moderato-severa da CoViD-19, così come già conosciuto nella gestione delle ARDS da altre cause, può portare a dei benefici in termini di mortalità.

Join to improve: a multidisciplinary approach to hip fracture

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Aim of the study: We introduced in our Orthopedic Department a multidisciplinary approach for hip fracture to improve fast functional recovery. Our protocol join Orthopedic surgeons, Anesthetic specialists, Internal Medicine specialists, Physiotherapists.

Materials and Methods: Since January 2021 we offer in the first day of delivery a multidisciplinary medical evaluation, erythropoietin, martial therapy, Vitamin D load, evaluation of motor skills. During the surgery we offer regional block anaesthesia, tranexamic acid administration. After the surgery we offer early mobilization, we repeat tranexamic acid administration and blood count check.

Results: We studied 134 patients, we observed a reduction of transfusion by 20%, a fast functional recovery in 88% of cases, a reduction in post-surgery pain, no vascular complications.

Conclusions: We have shown that a multidisciplinary approach is compulsory in hip fracture management.

Is it possible to predict early the outcome of CoViD-19 patients? Prognostic value of erythrocyte sedimentation rate

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Aim of the study: Aim of this study was to identify an early predictor of poor outcomes in CoViD-19 pneumonia and, in particular, the role of ESR.

Materials and Methods: An observational retrospective study was performed by analyzing clinical, laboratory and instrumental features from 155 hospitalized patients for CoViD-19 pneumonia in our General Medicine and Semi-intensive Care Units.

Results: ESR was significantly higher in patients treated by non-invasive ventilation ($p = 0.009$). ESR had a positive correlation with neutrophils count ($p = 0.026$, $r = 0.217$); HbA1c ($p = 0.047$, $p = 0.226$); NT-proBNP ($p = 0.046$, $r = 0.217$); QTc interval on ECG ($p = 0.022$, $r = 0.245$); LDH ($p < 0.001$, $r = 0.606$); creatinine ($p < 0.001$, $r = 0.403$); alpha-1 ($p < 0.001$, $r = 0.455$), alpha-2 ($p < 0.001$, $r = 0.483$) and beta-2 ($p < 0.001$, $r = 0.413$) electrophoretic bands, CRP ($p = 0.019$, $r = 0.255$) and lactate ($p = 0.016$, $r = 0.233$) on blood gas analysis. ESR had a negative correlation with pO2 ($p < 0.001$, $r = -0.332$), sO2 ($p = 0.006$, $r = -0.260$) and P/F ratio ($p = 0.002$, $r = -0.296$) on blood gas analysis. Patients with higher ESR values (cut-off 50 ml/h) were mainly hospitalized in Semi-Intensive Care Unit instead of General Medicine ($p = 0.031$). In these patients inflammation biomarkers were worst (neutrophils count, $p = 0.048$; CRP, $p = 0.016$; LDH,

$p < 0.001$; α -1/ α -2/ β -2 electrophoretic bands, $p = 0.004$ / $p < 0.001$ / $p < 0.001$, creatinine was higher ($p = 0.017$) and arterial blood gas analysis was worst (pO_2 , $p = 0.031$; P/F ratio, $p = 0.047$).

Conclusions: Therefore, elevated ERS level at admission is a risk factor for the severity of CoViD-19.

Lung and mediastinal lymph nodes involvement in patients recovered from CoViD-19

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Background and Aim: Several studies have shown high prevalence of mediastinal lymphadenopathy (ML) during CoViD-19. Many evidences in literature suggest correlations between pulmonary inflammation and immunological dysregulation. Aim of our study was to establish the incidence of ML in patients recovered from CoViD-19 and evaluate an eventual association between ML and the radiological features of CoViD-19 pneumonia.

Materials and Methods: 40 patients with previous SARS-CoV-2 infection were recruited from March 2021 to May 2021 and retrospectively evaluated 3 months after viral nucleic acid test turned negative. They underwent chest CT with Lung Score (LS) and Lung Ultrasound (US) with severity Score (LUS).

Results: The prevalence of ML was 36.1%, 44.4% had fibrous stripes (FS) and in 77.8% of the cases ground glass opacities persisted. Mean LS was 4 ± 3.99 (range 0-14) and mean LUS 2.94 ± 4.64 (range 0-20). ML was directly related to FS ($r = 0.491$; $p = 0.002$). Patients affected by ML had worse LUS (5 ± 7.43 vs 2.58 ± 2.89 ; $p < 0.0001$), higher LS in LID (1.73 ± 0.9 vs 0.83 ± 0.9 ; $p = 0.018$) and in LIS (1.45 ± 0.83 vs 0.78 ± 0.73 ; $p = 0.037$), although there were no significant differences in total LS (6.55 ± 3.67 vs 3.72 ± 3.89 ; $p = 0.062$).

Conclusions: In patients recovered from CoViD-19, ML associated with FS persists. In patients with ML, CT and US pictures appears to be worse than in patients without ML.

Fever, anemia, thrombocytopenia, kidney failure and neurological changes: acquired thrombotic thrombocytopenic purpura (aTTP) in a CoViD-19 patient

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Background: The association between CoViD-19 and thrombotic complication such as pulmonary embolism or deep vein thrombosis, is well known. However, SARS-CoV-2 infection may cause also thrombotic microangiopathy with significant clinical pictures. We report a case of a patient with CoViD-19 infection, thrombocytopenia, hemolytic anemia and neurological manifestation.

Description of the case: A 70-year-old patient was admitted to the hospital for CoViD-19 pneumonia needing non-invasive ventilation. After 15 days he developed severe diffuse weakness and altered mental status with episodes of hyperkinetic delirium. A head CT scan and brain MRI performed were negative for lesions. On blood examination elevated creatinine (2.9 mg/dL), anemia (Hb 8,3g/dL) and thrombocytopenia ($76 \cdot 10^3$ mmc) were present. The study for the hemolysis revealed total bilirubin 2.46 mg/dL, haptoglobin non detectable, direct and indirect Coombs test negatives and elevated presence of schistocytes $> 100/1000$ blood cells. The ADAMTS-13 was negative. During the hospitalization platelet count drop to $16 \cdot 10^3$ mmc and patient developed a right ileopsoas hematoma. The patient died before the treatment started.

Conclusions: Acquired thrombotic thrombocytopenic purpura represent a fearsome CoViD-19 complication with unfavorable outcome. The early recognition may be associated with a better prognosis. The presence of thrombotic microangiopathy on blood tests and Moskowitz's pentad in the clinic should rise the suspicion: the first step in diagnosing aPTT is to suspect it.

Thyroid dysfunction in CoViD-19 moderate-to-critical patients: an endocrine complication due to SARS-CoV-2?

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Background and Aim: CoViD-19 has different clinical manifestations. The aim of this cross-sectional study was to assess thyroid function in CoViD-19 hospitalised patients in relation to the severity of disease.

Methods: We assessed 174 CoViD-19 patients hospitalised between March to December 2020 in a High Care Internal Medicine Unit with serum TSH concentration at admission. We excluded those with history of thyroid disease or treated with drugs modifying thyroid function. We evaluated baseline TSH, fT3, fT4 and the severity of disease using PaO₂/FiO₂, respiratory rate, blood oxygen saturation, type of respiratory support and inflammatory markers.

Results: 20% of patients had low TSH (< 0.422 mIU/L), 9.9% had thyroiditis (TSH < 0.28 mIU/L and/or fT4 > 17 ng/L). fT3 was assessed in 53 patients and 60% had low fT3 (< 2.0 ng/L). Moreover, lower fT3 values were related to higher mortality ($p = 0.03$), hypoalbuminemia ($p < 0.01$) and higher D-dimer ($p < 0.01$). Lower baseline serum TSH concentrations were related to lymphocytopenia ($p < 0.01$) and hypoalbuminemia ($p = 0.01$), and associated with greater need of respiratory support during hospitalisation: the median values were 1.41, 1.38, 1.20 and 0.65 mIU/L in patients who did not need any support, those with only oxygen support, non-invasive ventilation and invasive ventilation respectively ($p = 0.02$).

Conclusions: Moderate-to-critical CoViD-19 patients can develop thyroid dysfunctions related to several biomarkers of disease. Baseline serum TSH seems to be related to the severity of respiratory failure developed during hospitalisation.

Una polmonite molto complessa

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Premesse: Sarcoidosi: patologia multisistemica interessante qualsiasi organo, da forme asintomatiche a insufficienza d'organo. DD con malattie linfoproliferative. Diagnosi istologica: granuloma non caseoso. Incidenza maggiore tra Afro-Americani. Età 35-50 anni.

Presentazione del caso clinico: 49 anni. DM2, fumatore, neuropatia diabetica. Comparsa di febbre e dispnea. Rx torace: ingrandimento ilare, sfumato addensamento bilaterale, multiple areole radiopache. E.O: dispnea, edemi declivi, crepitii basali bilaterali, deambulazione difficoltosa. BNP elevato. Inizia terapia antibiotica e diuretica. TC torace: addensamento polmonare, adenopatie sopra e sottodiaframmatiche, splenomegalia. V. ematologica: biopsia linfonodale per sospetta malattia linfoproliferativa. EMG/ENG: severa polineuropatia sensitivo-motoria, danno demielinizante. Puntura lombare: dissociazione albumino-citologica. RMN colonna: normale. V. neurologica: ricerca anticorpi anti-gangliosidi e mutazione TTR. Ecocardiografia: ipocinesia diffusa. Coronaro-TC: placca intermedia e calcificazione con stenosi. Coronarografia: impianto stent medicato su DA. Controllo ecocardio: buona FE senza disfunzione regionale. Per FBS con agoaspirato transbronchiale non diagnostico esegue videomediastinoscopia. Istologia: sarcoidosi. Diagnosi: sarcoidosi prevalentemente polmonare e neurologica periferica. Inizia terapia cortisonica ad alte dosi, terapia del dolore e terapia marziale.

Conclusioni: Un paziente con sarcoidosi è una sfida per il clinico e richiede un approccio multidisciplinare con coinvolgimento di diverse figure specialistiche.

Behavioural and psychological symptoms in dementia, often reversible conditions

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Background: In the later stages of dementia some people with develops what's known as behavioural and psychological symptoms of dementia (BPSD). Symptoms of BPSD can include increased agitation, aggression, delusions, hallucinations, sleep disturbance and night-time waking. Behaviour changes could be caused by brain-related issues or from changes to someone's environment, health or medication.

Methods: Dementia is an umbrella term used to describe a group of symptoms that affect brains work. Many conditions, such as stroke, depression, infections, as well as normal ageing, can cause dementia-like symptoms. We describe 120 patients that have been admitted in the emergency setting because of acute symptoms. We examined the patients to see if they have any infection, pain constipation, depression or side-effects of their medicine that could be contributing to or causing the behaviour change.

Results: The mean age was 81, 68 women and 52 men. Hypertension was present in 96 and vascular changes in the brain were found in the neuroimaging. 78 patients had reversible symptoms of dementia due to such conditions: urinary infection, hydration, constipation, fever and CoViD-19 infection.

Conclusions: Dementia is always changing and unique for each person. Everyday life can be a stressful ordeal for a person with a dementia-related disorder. As the disease progresses, behaviours changes can occur. The pandemic worsened such situation. It is important in the acute setting to rule out any concomitant illness that can cause or worsen behavioural and psychological symptoms in dementia.

A gym for the Hospitalist

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Background: We describe a clinical case occurred in Orthopedic Department to explain the role of an Internal Medical doctor in a surgical setting. The patient showed complex clinical problems with important decisions to rule out: cardiologic, hepatic, coagulation, kidney function, infective problems.

Description of the case: We describe the case of a patient with hip fracture suffering from hepatic cirrhosis decompensated Child B with concomitant anemia and high thrombotic risk (heart mechanical valve), decompensated ascites, kidney failure. We reassessed the decisional tree: time of surgery, management of anticoagulant therapy, ascites therapy, complications prevention.

Conclusions: We underline the crucial role of an Internal Medicine doctor for surgical complex patients. An Internal medical doctor can manage different specialized pathologies and can reduce time of decision, number of consultants and, above all, patient risk.

Prevention and not just cure

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Aim of the study: We want to study the patients admitted to an Orthopedic Department for the risk of re-fracture and we join to a regional database to prescribe mirrored therapies and to offer continuation of checks and cure in a mirate setting.

Materials and Methods: We joined to a Regional database (LICOS project) and we surveyed all patients hospitalized in our Orthopedic Department for hip fracture since January 2021. We hospitalized about 20 patient /month for hip failure. We check each patient for PTH, vitamin D, kidney function, age, comorbidity and we offer post-discharge osteoporosis therapy. If there are counter-conditions we send the patient to a second level centre.

Results: All the patients affected by hip fracture are correctly studied for osteoporosis and refracture risk, the 95% receive a punctual therapy at the discharge and 2% are sent to a second level Centre. During the delivery we prescribe vitamin D in 98% of the patients and calcium only if PTH is high (5% of the patients). We prescribe alendronate in 82% of the patients. Only 6% of the patients are in therapy with alendronate before the discharge: we

evaluate how to go on. We don't make prescription in 12% of the patients (comorbidities, severity etc.).

Conclusions: It is mandatory to apply guidelines to prevent hip refracture, just like the regional project LICOS (Liguria Contro Osteoporosi).

Patologia IgG4 correlata: una possibile causa di febbre di origine sconosciuta

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Descrizione del caso clinico: Un uomo di 72 anni, con sola storia di ipertensione, si ricovera per febbre da oltre due settimane e astenia. E.O. nella norma. Durante la degenza risultano negative: emocolture, urinocolture frazionate, colture delle feci, sierologia per batteri e virus comuni, tampone faringeo. Normale lo striscio ematico periferico. Negativa Rx ortopantomica. L'ecocardiogramma mostra segni di cardiopatia ipertensiva senza vegetazioni. E' presente incremento della PCR e della ferritinaemia, lieve anemia normocromica, ipergammaglobulinemia in assenza di picchi. Negativo lo screening autoanticorpale. Iniziata terapia antibiotica empirica con riduzione dei picchi febbrili ma peggioramento della sintomatologia astenica. La TC torace-addome mostra niente di rilevante a livello toracico, ma a livello addominale "Trombosi del plesso venoso perisigmoideo con interassamento della vena mesenterica inferiore e della vena porta con tessuto disomogeneo circostante i suddetti vasi oltre a disomogeneità del tessuto adiposo periviscerale nel passaggio colon-sigma". Non ulteriori informazioni dalla RNM. Si prescrive terapia anticoagulante. La colonscopia risulta negativa. Viene quindi eseguita laparotomia con biopsia del tessuto interessato. Risposta istologica: "Flebite obliterante della vena mesenterica inferiore con caratteri morfologici ed immunofenotipici coerenti con patologia IgG4 correlata". Il valore della sottoclasse IgG4 risulta 308 mg/dL (v.n. 8-140). Si inizia terapia con prednisone 50 mg/die ottenendo la scomparsa della febbre ed un netto miglioramento sintomatologico.

Diagnostic algorithm in CoViD-19 pulmonary outcomes

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Background and Aim: Pulmonary involvement from CoViD-19 is frequent, after acute phase dyspnoea, cough, desaturation, respiratory insufficiency, can persist, pneumonia leads to interstitial disease (ground-glass) and to pulmonary fibrosis (honeycomb lung). A diagnostic algorithm can be a simple way for differential diagnoses (pulmonary embolism, PE) and to set up therapies in a systematic way. Our objective was to propose a simple and easy diagnostic algorithm, to identify with chest CT scan, excluding PE in high dimer-D patients, suggestive gait test and compatible objectivity.

Methods: Prescription of: blood tests, radiological (CT chest CMC or High Resolution), respiratory physiopathology (Walking test, Global spirometry, Plethysmography, DLCO). Set drug therapies in case of PE, oral steroid (OCS) in case of extensive interstitial disease, long-acting beta 2 agonist bronchodilators (LABA), antimuscarinics (LAMA), inhaled steroids (ICS). For fibrosis and a honeycomb pattern, treatment with dipalmitoylethanolamide (PEA).

Results: 258 outpatients, average 60.68 years, 115 women, 143 men, with an urgent request for pneumological visit and treated on an outpatient basis. 1 pt died during treatment, 4 pts were diagnosed with pulmonary embolism. 4 pts required a prescription for oxygen therapy. 228 pts presented ground-glass, 30 pts showed normal chest CT.

Conclusions: DLCO shows progressive improvement in values after ICS treatment. Small pathway deficiency evidenced by spirometry can be treated with LABA-LAMA especially in patients with a previous history of cigarette smoking or COPD.

An early complication in patient with CoViD19 pneumonia

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Background: In December 2019, many cases of atypical pneumonia with unknown etiology were reported in China. Later on, a new coronavirus was identified, named SARS-CoV-2. We present a case of SARS-CoV-2 pneumonia complicated by spontaneous pneumomediastinum (SPM), pneumothorax (PNX) and subcutaneous emphysema (SCE) without the use of an invasive or non-invasive positive pressure ventilator.

Presentation of the case: A 42-year-old man with moderate dyspnea arrived at the DEA. He reported infection with SARS-CoV-2 from a week. He reported no medical history. At the entrance the patient was lucid, oriented and cooperative. The B.P. was 125/75 with sinus rhythm with pulse 75 bpm, afebrile, SpO₂ 88% on A.A. To DEA showed examinations: D-Dimer 549, fibrinogen 850, VES 75, PCR 8.33, LDH 295. The EGA (Reservoir 90%) detected: pO₂ 60.7 mmHg, pCO₂ 36.3, pH 7.47, SpO₂ 92% and P/F 67.4. The Rx thorax showed multiple hazy parenchymal opacities in the lower lobar seat bilaterally. He was submitted to therapy based on dexamethasone, fluid therapy, antibiotics, enoxaparin. After 36 hours, he presented progressive deterioration of respiratory function and chest CT showed: SPM, PNX, SCE. After two days he died.

Conclusions: In many CoViD-19 studies the incidence of SPM, PNX, SCE is rare. The peculiarity of this case report is given by the serious SPM, PNX, SCE as an early complication in the absence of lung comorbidities, cough, consume alcohol, smoke tobacco or use recreational drugs. This suggests that others processes related to CoViD-19 might be the mechanism of air leak that progress to SPM, PNX, SCE.

Severe thrombocytopenia in patient with SARS-CoV-2 infection

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Background: SARS-CoV-2 disease (CoViD-19) is an important pandemic respiratory disease that emerged in China on December 2019 and quickly spread around the world. Many studies on SARS-CoV-2 infection demonstrate its association with an increased incidence of coagulopathy. In this case-report we describe a serious thrombocytopenia as an early manifestation of CoViD-19.

Description of the case: A 59-year-old male with moderate dyspnea and rare petechiae spread to the trunk arrived at the DEA. He reported infection with SARS-CoV-2 from a week with the appearance of petechiae 24 hours before the discovery of positivity. He also reported COPD history and hypertension. At the entrance the patient was lucid, oriented and cooperative. The B.P. was 110/75 with sinus rhythm with pulse of 110 bpm, afebrile, SpO₂ 85% in A.A. To DEA showed examinations: thrombocytopenia (8,000), leukocytosis (15,560), D-Dimer 11727, VES 74, PCR 10.53, ferritin 1592, LDH 365. The EGA (Reservoir 90%) detected pO₂ 70.0 mmHg, pCO₂ 36.5 mmHg, pH 7.44, SpO₂ 94% and P/F 78. The X-ray chest showed multiple thickening at the lower lobar seat bilaterally and moderately spread interstitial thickening. He was admitted to the CPAP cycle (FIO₂ 90% PEEP 7.5 cm H₂O) and therapy based on dexamethasone, fluid therapy, cholecalciferol, antibiotics and multiple platelet transfusions. After 12 days the patient died.

Conclusions: In many CoViD-19 studies the incidence of thrombocytopenia is about 36%. The peculiarity of this case-report is given by the serious thrombocytopenia as an initial manifestation in the absence of clinical bleeding.

Pandemia da SARS-CoV-2: il "bicchiere mezzo pieno". Arricchimento professionale nella gestione dei supporti meccanici per la ventilazione non invasiva

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Premessa e Obiettivo: La numerosità dei pz coinvolti nella pandemia ha modificato l'indirizzo di cura di molte UU.OO. con stravolgimenti strutturali e assistenziali. A medici (M) e infermieri (I) è stato chiesto di gestire pz in contesti diversi da quelli abituali. Abbiamo indagato il livello di preparazione di M/I nella gestione di pz con insuff. respir. da CoViD-19 (IR-C).

Metodi: A M/I in servizio nelle UU.OO. CoViD c/o l'Osp. Fatebenefratelli (Milano) è stato proposto un questionario. I livelli di auto-percezione e i giudizi sulle proprie conoscenze erano stimati all'esordio (1ON) e rivalutati all'inizio della II ondata (2ON)

Risultati: Il questionario è stato proposto a 114 M e 350 I (57 risposte, 12%). Il 28% dei M e il 41% degli I prima dell'emergenza non lavorava in reparti con gestione di casi di IR; l'89% dei M ha lavorato in un reparto diverso da quello di appartenenza. Il giudizio dei M sul livello di formazione nella gestione di IR-C era "per nulla/poco": 1ON vs 2ON=72% vs 28% (p<0.03). Il giudizio sulle proprie capacità di gestire situazioni di urgenza legati a IR-C era "per nulla/poco": 1ON vs 2ON=50% vs 17% (NS) per i M e 13% vs 3% (NS) per gli I. Il giudizio sul grado di arricchimento delle proprie capacità teorico/pratiche al termine delle 2 ondate (score 0-10) era: 1ON vs 2 ON=6.2±1.7 vs 7.3±1.3 (p<0.05) per i M e 7.1±1.5 vs 7.5±1.7 (NS) per gli I.

Conclusioni: Il livello di formazione nella gestione del pz con IR-C era già consolidato su buoni livelli all'esordio (soprattutto negli I) e vi è stato un ulteriore arricchimento professionale in tutti gli operatori sanitari.

Differenze nella gestione dell'infezione da SARS-CoV-2 tra la prima e la seconda ondata: studio osservazionale

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Premesse e Obiettivi: La limitata disponibilità di studi relativi alla sindrome CoViD-19 è responsabile della eterogeneità delle terapie farmacologiche e dei supporti respiratori utilizzati. Si sono analizzate le differenze di trattamento dell'insuff. respir. (IR) correlata a CoViD-19 nel corso delle due ondate (ON) pandemiche.

Materiali e Metodi: Studio retrospettivo di revisione di cartelle cliniche dei pazienti (pz) ricoverati nell'Osp. Fatebenefratelli di Milano per IR, nei due periodi 1-03/30-04 (1ON) e 1-11/31-12-20 (2ON).

Risultati: 1ON: 363 accessi in PS per CoViD, ricoveri 77%, in altre terapie intensive (TI) 11%, deceduti 13%. Dei pz ricoverati il 58% ha avuto un peggioramento: inviati in TI (25%) o deceduti (33%). 2ON: 358 accessi in PS per CoViD, ricoveri 61%, in altre TI 27%, deceduti 12%. Dei pz ricoverati il 42% ha avuto un peggioramento: inviati in TI (9%) o deceduti (33%). 1ON vs 2ON: importante modifica delle strategie terapeutiche. Nella 1ON sono stati utilizzati antivirali, idrossiclorochina e tocilizumab che nella 2ON sono stati abbandonati; nella 2ON è stato incrementato l'uso di corticosteroidi. L'eparina è stata utilizzata in entrambe le ondate. Anche la supplementazione di ossigeno ha evidenziato differenze: nella 2ON diminuzione dell'uso di presidi respiratori a basso flusso e maggiore uso della NIV e di supporti ad alto flusso (Boussignac, casco e HFNC).

Conclusioni: La ricerca scientifica sviluppata durante i primi mesi di pandemia ha permesso di migliorare in modo sostanziale le procedure clinico/assistenziali nel trattamento del pz affetti da CoViD-19.

Severe vitamin B12 deficiency

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Background: Vitamin B12 deficiency is a common condition which can present with non-specific clinical features such as mild anemia but in some cases can lead to neurological or haematological abnormalities. This condition can be caused by cobalamin malabsorption, folate deficit or poor diet intake. Being one of the coenzymes involved in homocysteine degradation, vitamin B12 deficiency also causes hyperhomocysteinemia which is associated to increased atherosclerotic risk and to venous thrombosis.

Description of the case: A 45-year-old male with no previous diseases, came to ED complaining epigastric pain. He said he ate no meat in last 6 months. Lab tests showed: pancytopenia, bilirubin 1,2 mg/dl (mainly indirect), LDH 7596, AST 144 U/L, ALT 70 U/L. Abdominal US showed splenomegaly. Four RBC unit were transfused and patient was admitted to the Medical Ward. Total body TC scan confirmed splenomegaly and showed up superior mesenteric thrombosis; no lymphadenopathies were described. EGDS was negative. Hospitalization was complicated by urinary sepsis. After vitamin B12 intravenous reintegration, we witnessed to progressive blood count, bilirubin normalization and LDH reduction and patient was discharged.

Conclusions: Severe vitamin B12 deficiency can lead to pancytopenia, neurological complications, splenomegaly and atypical venous thrombosis going in differential diagnosis to other haematological and neurological conditions. Since missing the diagnosis can result in potentially severe complications, vitamin B12 deficiency must be diagnosed early and managed appropriately.

Ischemia-induced renal failure as a presenting manifestation of a case of abdominal PAN

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Background: Polyarteritis nodosa (PAN) is a rare disease characterized by the necrotizing inflammation of medium-sized arteries. Clinical manifestations are multisystemic.

Description of the case: A 73-year-old female presented with acute renal failure following 20 days of abdominal pain, diarrhea, vomiting. She initially reported acute symptoms, but then she admitted she had frequent diarrhea for about 10 years. Her history consisted of dilated cardiomyopathy with subcutaneous ICD, atrial fibrillation. Laboratory test revealed creatinine 11,6 mg/dL. Arterial blood analysis showed pH 7.25, HCO₃ 11.6 mmol/L. Acute renal failure recovered after volume expansion and the use of inotropes, but diarrhea persisted after clinical stabilization. Coprocultures were negative. Colonoscopy showed aspecific findings and biopsies were not performed (INR >2). An abdominal CT revealed visceral aneurysms and irregular constrictions with wall thickening of both right renal and left gastric arteries, highly suggestive of segmental vasculitis. Further CT examination showed similar findings in central nervous system and in bronchial artery. Serologic test results were negative for ANA, ANCA, anticardiolipin, C3 and C4, cryoglobule. Laboratory examination revealed: Hepatitis B virus infection (antiHBcAg +). Our patient was treated with prednisone (1 mg/kg/d orally) and improved, then she was discharged with the diagnosis of PAN.

Conclusions: The abdominal presentation in PAN is usually severe. Diagnosis in patients with gastrointestinal and renal complications can be life-saving.

A rare case report of *Stenotrophomonas maltophilia* community pneumonia

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Background: *Stenotrophomonas maltophilia* (*S. maltophilia*) is an emerging multidrug-resistant global opportunistic pathogen. The increasing incidence of nosocomial and community-acquired

S. maltophilia infections is typical of immunocompromised individuals. *S. maltophilia* is an environmental bacterium found in aqueous habitats, including plant, animals, foods, and water sources. The organism is commonly found in respiratory tract infections.

Description of the case: A 63-year old man (plumber), who came to our ward with right hemithorax pain exacerbated by acupressure for 4 days and fever for 1 day, without cough or dyspnea. Nothing remarkable in the past medical history. At first, laboratory analyses showed a neutrophilic leucocytosis and increase of inflammatory indices; chest X-ray showed nodular opacity in the right paracardiac basal site; CT scans shows triangular parenchymal consolidation area with internal colligation. Blood gas analysis showed moderate hypoxemia (62 mmHg); common blood cultures, BK research, and the bronchoscopy were negative. Eventually, PCR testing of BAL returned positive for *S. maltophilia*. These findings led to a diagnosis of *S. maltophilia* pneumonia treated with antibiotic (trimethoprim-sulfamethoxazole) which had effect on the symptoms of disease.

Conclusions: The incidence of *S. maltophilia* hospital-acquired infections is increasing, and rare cases of community-acquired *S. maltophilia* have also been reported.

Ischemic cholangiopathy: a challenging diagnosis

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Background: Cholestasis is commonly associated with lithiasic pathology or expansive lesions of the biliary tract (BT); otherwise, challenging conditions are infectious, autoimmune, iatrogenic, or ischemic vascular disorder involving the BT.

Description of the case: A 71-year-old male, polyvasculopathic, with previous iliac stenting, comes for abdominal pain, fever and isolated increase in GGT. The abdominal CT scan and subsequent MRI study revealed right biliary hemisystem dilation, biliary cysts and celiac tripod occlusion. During subsequent hospitalization, another TC shows hepatic collection communicating with the right ectopic BT; by prosthetic positioning was excluded the supply of the collection. Further hospitalization for clinical relapse was necessary: a prior CT scan showed multiple segmental ectasias of the BT and hypodense areas; during the CT follow up, liver abscess communicating with the dilated BT appeared, with edema along the portal branches. Endoprosthesis was removed and the abscess was percutaneously drained; with a subsequent internal-external drainage, we confirmed the clinical and biohumoral resolution of abscesses, even after the drainage removal.

Conclusions: Ischemic cholangiopathy represents a rare condition triggering the onset of abdominal pain and cholestasis and is often associated with a cholangitis complication; it can be defined as focal or extensive damage of the bile ducts secondary to insufficient vascularization; it's a paucisymptomatic condition to be suspected in the presence of isolated cholestasis without jaundice that develops in the advanced and complicated stages.

A case of respiratory failure due to co-infection with SARS-CoV-2 and *Mycoplasma pneumoniae*

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Background: *Mycoplasma pneumoniae* is an 'atypical' bacterium that causes upper respiratory tract infections and acute bronchitis, pneumonia can also occur. Patients can develop extra-pulmonary complications, involving hematological systems. During *Mycoplasma pneumoniae* infections formation of cold agglutinins is frequently observed, in association with an haemolytic anemia in a minority of patients.

Description of the case: A 75-year-old man came to our attention for worsening dyspnea, severe fever (39°C) and incoercible cough. No previous pathology in his clinical history. His blood test showed remarkable increase in CRP and other inflammation

markers including ferritin. The urgent chest X-ray showed pulmonary interstitialopathy and the ABG was suggestive of severe type I respiratory failure. The PCR for SARS-CoV-2 resulted positive. The patient's blood count showed agglutinins IgG-type in the absence of anemia for which we requested indirect Coombs test that resulted negative and direct positive. Also cryoglobulins, serum and urinary immunofixation were negative. Finally, anti-*Mycoplasma pneumoniae* IgM were positive. We treated the patient with dexamethasone, azithromycin, oxygen therapy and prophylaxis for DVP. A gradual defervescence and the increase of blood's gas parameters were obtained with a considerable clinical improvement.

Conclusion: The presence of cold haemagglutinins is often linked to acute infections and can raise the suspicion that a bacterial infection could coexist. Furthermore, in this case report SARS-CoV-2 and *Mycoplasma pneumoniae* co-infection aggravated respiratory failure.

Endoscopic loop-assisted resection for an ulcerated large colic lipoma causing rectorrhagia

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Background: Colonic lipomas, larger than 4 cm in size, can cause gastrointestinal bleeding. There is currently no standardized endoscopic removal technique for their treatment.

Description of the case: A 74-year-old male, in therapy with clopidogrel (75 mg/day), was admitted due to rectorrhagia. An urgent colonoscopy revealed a large pedunculated submucosal lipoma of about 5 cm in the cecum, whose apex presented hematin and fibrin. A second endoscopy, after a five-day suspension of the antiplatelet agent, was performed. Informed consent was obtained prior to the procedure. The apex of the polypoid formation was removed with endoscopic mucosal en-bloc resection, using the setting of forced coag of 60 watts, after both infiltration of the mucosae, at the base with saline-diluted adrenaline (1:10,000) mix methylene blue, and the placement of a detachable endoloop. At the end of the procedure, the retrieved specimen measured 3 cm. The related histopathological findings showed, beyond the typical adipose tissue proliferation, signs of an ulcerated mucosa without the presence of dysplasia and adenomatous or serrated components. Broad-spectrum antibiotics were administered after the procedure. The patient responded well to the treatment and was soon asymptomatic with no bleeding and/or perforation, and he was discharged two days after in good condition.

Conclusions: Endoloop could be used with excellent results to prevent both early and late bleeding related to endoscopic resection. Therapeutic endoscopy has the advantage of being an easily repeatable procedure compared to surgery.

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