

COVID-19 revolution: a new challenge for the internist

Hospital discharge and return to the community: is it so simple?

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ABSTRACT

As the main title 'COVID-19 revolution: a new challenge for the internist' states, the global coronavirus infection disease 2019 (COVID-19) pandemic represented a new challenge for the internists. This paper is part of a series of articles written during the difficult period of the ongoing global pandemic and published all together in this fourth issue of the *Italian Journal of Medicine*, with the aim of sharing the direct experiences of those who were the first to face this severe emergency, expressing each point of view in the management of COVID-19 in relation to other diseases. Each article is therefore the result of many efforts and a joint collaboration between many colleagues from the Departments of Internal Medicine or Emergency Medicine of several Italian hospitals, engaged in the front line during the pandemic. These preliminary studies therefore cover diagnostic tools available to health care personnel, epidemiological reflections, possible new therapeutic approaches, discharge and reintegration procedures to daily life, the involvement of the disease not only in the lung, aspects related to various comorbidities, such as: coagulopathies, vasculitis, vitamin D deficiency, gender differences, *etc.*. The goal is to offer a perspective, as broad as possible, of everything that has been done to initially face the pandemic in its first phase and provide the tools for an increasingly better approach, in the hope of not arriving unprepared to a possible second wave.

This paper in particular deals with hospital discharge and return to daily life.

Introduction

Since the debut of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the emergency Health Services of many countries have been taken under pressure due to shortage of intensive care beds, for this reason many patients with acute respiratory

distress syndrome due to SARS-CoV-2 infection have received supportive treatment like non-invasive ventilation in other departments such as internal medicine, pulmonology or infective disease, with the effect of saturation of hospitals' capacity.

SARS-CoV-2 infection clinical manifestations can vary from asymptomatic or mild symptomatic forms to critical patients with need of intubation and high mortality rate.

In order to relieve hospital pressure asymptomatic patients or patients who do not require hospitalization should return home for clinical observation. There is also a large portion of patients with mild clinical, laboratory or arterial blood gas test features who have risk of disease progression. These patients are hospitalized but usually without progression, they are suitable for early discharge.

Coronavirus infection disease 2019 (COVID-19) sanitarian pressure has brought to the creation of specific territorial assistance teams, in order to take care COVID-19 patients who do not requires hospitalization or to assist COVID-19 patients after hospital discharge.

Home isolation and domiciliary observation criteria

Home isolation and domiciliary observation criteria are the following: i) asymptomatic patients; ii) patients with fever but without hypoxemia or absence of

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chest X-ray alteration; iii) possibility of home isolation; iv) activation of territorial assistance for health monitoring and successive execution of molecular tests to declare complete cure.

Discharge criteria

Discharge criteria for patients cured are the following: i) clinical criteria; ii) no fever at least for three days; iii) no alteration in saturation and absence of oxygen need; iv) pulmonary imaging showing absorption of inflammation; v) no hospital care needed for other pathology; vi) double molecular test (usually rhino-pharyngeal swabs), the second after at least 24 h.

Discharge criteria for patients discharge before molecular negativity: i) clinical criteria; ii) no fever for at least three days; iii) no alteration in saturation, without oxygen need; iv) pulmonary imaging showing absorption of inflammation; v) no hospital care needed for other pathologies; vi) possibility of home isolation; viii) activation of specific territorial care, for observation and for successive execution of double molecular test to declare the patient cured.

Regardless of discharge criteria, COVID-19 patient demission should be considered in patients with clinical, radiological and laboratory improvement, with symptoms disappearance, regression of radiological findings and lowering in inflammatory markers.

COVID-19 patient discharge from hospital can occur after activation of sanitarian authorities, for each patient clinical needs and possibility of home isolation must be evaluate, at dismissal patient must be informed about the modality of home isolation.

Specific territorial assistance

With the COVID-19 emergency, new assistance has been organised or re-organised in order to face pandemic; in the Italian reality, Regional and Local Crisis Unit (*Unità di Crisi Regionale e Locale*) are identified, in collaboration with Health Authorities, for the management of suspect cases and close contacts, they also operate telephonic health monitoring of territorial COVID-19 patients. For medical assistance to suspect cases or COVID-19 patients who do not requires hospitalization, many regions have been organized specific unities (*Unità Speciali di Continuità Assistenziale*, USCA), these unit should also ensure clinical assistance in discharged COVID-19 patients.

Home isolation

Hospital discharge is not allowed if home isolation is not possible, and house characteristics should be evaluate from health authorities.

Patients who do not live alone should have an aired single room for themselves and possibly an exclusive bathroom. Patient should eat in their room and do not have contacts with other people, they should use a medical facemask in common spaces. Adequate cleaning of all surfaces is need, especially for common spaces, with sodium hypochlorite (0.1-0.5%), hydrogen peroxide (0.5%) or alcoholic solution.

Isolation in hotels and reception buildings

If home isolation is not possible, for absence of dedicated rooms, overcrowding or other reasons, health authorities can provide to activate isolation of asymptomatic or mild symptomatic COVID-19 patients in hotels or other reception buildings until complete cure and home return; unfortunately this operation is not available in every region.

Return to the community after cure

Complete cure is defined by absence of symptoms and negative double molecular test; after the second negative swab a patient is declared cured, but he should wait communication from health authorities before discontinue isolation; for workers an occupational doctor must declare eligibility to return to work.

Conclusions

Hospital discharge is not always simple, especially for high complexity of COVID-19 territorial care and limits of home isolation; moreover territorial organization is different in the various regions. All these reasons sometimes limit or delay the hospital discharge and taking charge by territorial care.

Regardless of the difficulties, COVID-19 experience has been showing the importance of cooperation between hospitals and territory; as we know hospitals are frequently saturated also in non-pandemic periods, often with patients without acute illnesses or with chronic problems when territorial care is possible; improving territorial cares for close follow up also outside the pandemic should be the future challenge, in order to try to reduce hospital pressure.