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SUPPLEMENTARY MATERIAL

Evaluation of the renal function among sickle cell patients: a cross-sectional study

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Supplementary Table 1. The inclusion and exclusion criteria.

Inclusion criteria	Exclusion criteria
Patients from Saudi Arabia	Patient's residence in Saudi Arabia but not citizens
All genders	Pregnant women
Availability	Sickle pain crises and urinary tract infection

Supplementary Table 2. Results of hemoglobin electrophoresis among cases with sickle cell anemia.

Hemoglobin type	Total (n=242)	Children (n=120)	Adults (n=122)	p
HbS	67.4±23.8	69.99±22.01	64.84±22.01	0.092
HbA ₁	22.4±27.3	18.00±25.41	26.76±28.42	0.012
HbF	6.3±5.5	8.12±5.98	4.50±4.29	<0.001
HbA ₂	3.9±0.9	3.88±0.85	3.94±1.01	0.642

Supplementary Table 3. Blood picture of participant male control subjects and male cases with sickle cell disorder.

Hemoglobin type	Control (n=52)		Cases (n=115)		p
	Mean	SD	Mean	SD	
Blood picture					
White blood cell count ($\times 10^3/\mu\text{L}$)	7.26	1.61	13.02	5.87	<0.001
Red blood cell count ($\times 10^6/\mu\text{L}$)	5.16	0.60	3.70	1.10	<0.001
Hemoglobin (g/dL)	12.62	1.65	9.20	2.09	<0.001
Hematocrit (%)	40.02	4.02	28.01	6.96	<0.001
Mean corpuscular volume (fL)	77.94	7.14	77.13	10.00	0.630
Mean corpuscular hemoglobin (pg)	24.61	3.32	25.40	3.76	0.232
MCHC (g/dL)	31.44	1.89	33.05	2.27	<0.001
Red cell distribution width (%)	14.11	1.89	19.31	4.00	<0.001
Platelets ($\times 10^6/\mu\text{L}$)	304.36	86.76	408.11	173.32	<0.001

SD, standard deviation; MCHC, mean corpuscular hemoglobin concentration.

Supplementary Table 4. Serum electrolytes (sodium and potassium) levels of participant control subjects and cases with sickle cell anemia (Hb SS) compared with those with Hb AS.

Electrolytes	Control (n=91)		Cases (n=242)		p
	Mean	SD	Mean	SD	
Sodium (mEq/L)	136.68	2.40	137.43	3.27	0.046
Potassium (mEq/L)	3.97	0.49	4.14	0.52	0.009
Electrolytes	Hb SS (n=172)		Hb AS (n=70)		p
	Mean	SD	Mean	SD	
Sodium (mEq/L)	137.18	3.26	138.06	3.24	0.059
Potassium (mEq/L)	4.12	0.54	4.19	0.46	0.339

SD, standard deviation.

Supplementary Table 5. Serum electrolytes (sodium and potassium) levels of participant control subjects and Hb SS cases with sickle cell anemia as well as control subjects and Hb AS cases with sickle cell trait.

	Control (n=91)		Hb SS Cases (n=172)		p
Electrolytes	Mean	SD	Mean	SD	
Sodium (mEq/L)	136.68	2.40	137.18	3.26	0.200
Potassium (mEq/L)	3.97	0.49	4.12	0.54	0.034
	Control (n=91)		Hb AS Cases (n=70)		p
Electrolytes	Mean	SD	Mean	SD	
Sodium (mEq/L)	136.68	2.40	138.06	3.24	0.002
Potassium (mEq/L)	3.97	0.49	4.19	0.46	0.005

SD, standard deviation.