

Abstract

A descriptive cross-sectional hospital based study was under taken at hospitals of Khartoum state between August – December, 2009. Among children with sickle cell disease. A hundred child aged between 1-14 years were consecutively recruited to investigate iron status. Sickling test, hemoglobin electrophoresis, CBC, Serum Ferritin and serum iron has been done. The study revealed that the mean serum is found to be 86.58 μ g/dl, and the mean Serum Ferritin was found to be 37.05 μ g/l. The result showed that 2% of patient with low serum iron and 98% were within normal range.

ملخص الدراسة

أجريت هذه الدراسة للتحقق من مستوى الحديد لدى الأطفال المرضى بفقر الدم المنجلي في مستشفيات ولاية الخرطوم في الفترة في أغسطس - ديسمبر 2009 حيث تم اخذ عينات من 100 طفل مريض بفقر الدم المنجلي وتتراوح أعمارهم بين 1-14 سنة. وتم إجراء اختبارات الدم العام واختبار التمنجل والرحلان الكهربائي لتحديد نوع الهيموكلوبين، وقياس مستوى الحديد والفريتين. اظهرت النتائج المتحصل عليها أن متوسط الحديد واتضح أن 2% من المرضى $37.05 \mu\text{g/dl}$ والفريتين $86.58 \mu\text{g/l}$ في الدم لديهم نقص في مستوى الحديد و 98% بالمعدل الطبيعي ولا يوجد نسبة تظهر أن هناك زيادة في مستوى الحديد.

Dedication

*I dedicate this thesis with much love and appreciation to
my father who has always been a brick wall that I can lean
and depend on forever.*

To my mother brother and sister

To the soul of my best friend

Mojahed

*To the best friends, family, colleagues and teachers, past
and present and everybody know him*

*To all patients suffering from sickle cell anemia in the
world.*

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Abbreviations

HB	hemoglobin
SCA	Sickle cell anemia
A	Adenine
T	Thymine
ITU	Intensive therapy unit
SOB	Short of breath
2.3DPG	2.3 diaphosphoglycerate
RBC	Red blood cell
G6DP	Glucose . 6 . phosphate dehydrogenase
UTI	Urinary tract infection
CRF	Chronic renal failure
LFT	Liver function test
CVS	Cardio vascular system
CNS	Central nervous system
TIAS	Transient ischaemic attacks
MCV	Mean cell volume
MCHC	Mean corpuscular hemoglobin concentration
2 ^o	Secondary

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