

DEDICATION

To the heart of my life my mother and Soul of my father. To my brothers and sister, to my teachers and colleagues. I dedicate this work.

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First of all thank to my **GOD** for being whom am I , and help me to participate in M.Sc program.

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الخلاصة

هذه دراسة وصفية تحليلية مقطعية هدفت لمعرفة انتشار نقص الدم المنجلی في قبيلة المسيرية . وتم تجميع العينات من مائة شخص من المسيرية (بطن أولاد عمران) واجريت الدراسة في منطقة الهجليج جنوب كردفان في الفترة من اكتوبر 2008 وحتى فبراير 2009 وقد هدفت الى معرفة وجود مرض نقص الدم المنجلی وحامليه الاصحاء وعددهم في قبيلة المسيرية وفحصت لجميع العينات صورة الدم الكاملة والفحص المنجلی والرحلان الكهربائي.

نتائج الفحوصات أظهرت أن تردد مرض نقص الدم المنجلی هو 12% وحاملي المرض 35% والاصحاء 53%. وقد خلصت هذه الدراسة الى أن : المصابين بالمرض مستوى الهيموغلوبين لديهم أقل من 12 جرام في ديسيليلتر وأغلبهم في سن أصغر من 30 سنة . وأن حاملي المرض من أولاد العمومة و الدم الواحد مرتفع جدا تصل 77% نتيجة التزاوج بينهم ونقص المعرفة عن هذا المرض وطريقة انتقاله.

وان متوسط خصاب الدم في كريه الدم الواحدة في المرضى 25.39 وحاملي المرض 24.62 متقارب وكذلك متوسط حجم الخلية في المرضى 87.1 وحاملي المرض 77.03 ومتوسط تركيز خصاب الدم في الخلية الواحدة عند المرضى 31.97 وحاملي المرض 31.89 وعدد الصفائح الدموية في المرضى 394000 وحاملي المرض 238000 وهي نسب متقاربة . ولكن يكمن الاختلاف بين المرضى وحاملي المرض في عدد كريات الدم البيضاء الذي يكون مرتفع عند المرضى وطبيعي عند حاملي المرض . وكذلك الاختلاف يكمن في حجم الكريات الحمراء المضغوطة وعدد الكريات الحمراء اللذان متوسطهما منخفض عند المرضى وطبيعي عند حاملي المرض.

وعند اجراء الفحص المنجلی لحاملي المرض كانت نسبة النتيجة السلبية 36.4% ونسبة النتيجة الايجابية 63.6% مما يعني ان الفحص المنجلی ليس دقيق وانما هو فحص مبدئي فقط.

ABSTRACT

This was cross-sectional, analytical and prospective study conducted in El hejlij area during period of October 2008 to February 2009 .The study was aimed to determine the occurrence of Sickle cell disease and Sickle cell traits among Messira tribe.

The study was carried out in 100 predetermined random samples: from Messira tribe (Old Omran). All Samples were tested for the hemoglobin S using Complete blood count(CBC), Sickling test and Hb-electrophoresis.

Results were showed that the frequency of Hb SS was 12%, Hb AS was 35% and Hb AA was 53%.

The conclusion of the study was that Hemoglobin levels in sickler patients (Hb SS) always under 12g/dl , and these patients were under 30 years of age .The frequency of Hb AS among consanguinity cousins was very high due to marriage between them and absent of education about sickle cell disease.

The means of MCH in Sickle cell disease(SCD) was 25.39pg, MCV was 87.15fl, MCHC was 31.97g/dl, PLT was 394×10^3 . parameters were so close to the Sickle cell trait(SCT) which was MCV 77.03fl, MCH 24.62pg, MCHC 31.89g/dl, PLT 238×10^3 .The difference was in WBC which was high in SCD, but normal in SCT. RBC and PCV were very low in SCD, normal in SCT.

In Sickle cell trait patients Sickling test showed 36.4% negative results, and 63.6% positive results, which meant that Sickling test insignificant for detection of Sickle cell disease, but only Screening test.

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List of abbreviations

Abbreviations	Meaning
Hb	Hemoglobin
SCD	Sickle cell disease
O ₂	Oxygen molecule
Hb S	Hemoglobin of sickle cell
Hb A	Hemoglobin of normal person
Hb AS	Hemoglobin of sickle cell Trait
Hb C & Hb D & Hb E	Hemoglobinopathy
CBC	Complete Blood Count
NaCl	Sodium Chloride
TWBC	Total of white blood cell count
RBC	Red blood cell count
PCV	Packed cell volume
MCH	Mean cell Hemoglobin
MCV	Mean cell volume
MCHC	Mean cell Hemoglobin Concentration
PLT	Platelet count

L%	Percentage of lymphocytes in 100 WBC
N%	Percentage of Neutrophil in 100 WBC
M%	Percentage of Monocytes& Eosinophil &Basophil in 100 WBC
SD	Standard Deviation