

**بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ**

**قال الله تعالى**

**اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (1) خَلَقَ الْإِنْسَانَ  
مِنْ عَلَقٍ (2) اقْرَأْ وَرَبُّكَ الْأَكْرَمُ (3) الَّذِي  
عَلَّمَ بِالْقَلَمِ (4) عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ (5)**

**صدق الله العظيم**

**سورة العلق الآيات 1-5**

# Dedication

To The soul of my  
father ..god bless him .

To MY Mother.

To My Brothers &  
Sisters.

To My Friends.

# To All My Teachers .

To who encouraged me ...  
I dedicate this study

# Acknowledgement

Firstly I thank Allah so much.

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All helpings of those , from Allah .

## ملخص البحث

هذه دراسة وصفية تحليلية أجريت في مدينة عطبرة لتحديد مدى انتشار الأنيميا المنجلية خلال فترة 4 أشهر من نوفمبر 2008 حتى مارس 2009 في تلك المنطقة وذلك من خلال مستشفى عطبرة التعليمي . تم جمع 70 عينة من الدم الوريدي في وعاء دم سعة 2.5 مل يحوى مانع تجلط (EDTA)) من مرضى الأنيميا المنجلية و أسرهم و الأقارب من أم أو الأب من الجنسين ذكور وإناث , تم اجراء عدة فحوصات لتلك العينات وهى فحص الدم الكامل , (CBC) وفحص نوع الهيموغلوبين (Hb electrophoresis) . تم إدخال المعلومات و النتائج فى الكمبيوتر ومن ثم تم تحليلها باستخدام نظام التحليل الاحصائى SPSS.

أوضحت النتائج انه يمكن وجود المرض في بعض القبائل الشمالية مثل قبيلة الجعليين بالإضافة إلى القبائل ذات الأصل الافريقى خاصة في غرب السودان مثل المسيرية , الفلاتة , الداجو , الهوسا وغيرها والتي نزحت إلى تلك المنطقة . كانت النسب كالآتى :

جعليين ( ) , (45.7% المسيرية ) , (24.3% فلاتة ) (15.7% و داجو ) . (14.3% علما بان الجعليين هى القبيلة الغالبة فى تلك المنطقة .

أوضحت الدراسة ان متوسط تركيز خضاب الدم (Hb), حجم الخلايا المتكدسة (PCV) و عدد

كريات الدم الحمراء منخفض عند مرضى الأنيميا المنجلية (Hb-SS) وتكون طبيعية عند حاملى المرض (Hb-AS) كما هو عند الأشخاص الأصحاء (Hb-AA) . أما متوسط عدد كريات الدم البيضاء و الصفائح الدموية فوجد انها طبيعية فى كل الاحوال . كما وجد انه لا علاقة للمرض بعمر أو بجنس معين

## **Abstract**

This is a descriptive analytical study has been carried out in Atbara to study the distribution of Sickle cell anemia at that area in the period from November 2008 till March 2009 and this through Atbara educational hospital . 70 venous blood samples were collected in EDTA containers (2.5 ml) from sickle patients and their relatives from mother and father , males and females . Tests that were done are complete blood count (CBC) and Hb electrophoresis . the results were computerized and analyzed statistically by SPSS program .

Results show that sickle cell anemia can be found in some Northern tribes such as Jaaleen in addition of African origin tribes such as Meseria , Falata , Dago who migrate to that area according to situations of life . the percentages were as follow :Jaaleen : 45.7% ,Meseria : 24.3% ,Falata : 15.7%and Dago ; 14.3 .(Jaaleen is the major tribe at that area

The study show that the mean of Hb , PCV (hematocrit) and RBCs count is decreased in Hb-SS patients while it is normal in carriers (Hb-AS) as same as in normal persons (Hb-AA) . Means of white blood cells & platelets were normal at all cases

Also in this study we found that there is no relation to sickle cell anemia with certain age or sex

## **Abbreviations**

Hb : Hemoglobin

SCA : sickle cell anemia

SCD : Sickle cell disease

Hb-A : Adult hemoglobin

Hb-F : Fetal hemoglobin

: ethylenediamine tetra-acetic acid dipotassium EDTA

RBCs : Red blood cells

PCV : Packed cell volume

MCV : mean cell volume

MCH ; mean cell hemoglobin

MCHC ; Mean cell hemoglobin concentration

WBCs ; White blood cells

PLTs : Platelets

CBC : Complete blood count

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