قال تعالى:

{ وَفُلِ اعْمَلُوا فَسَيَرَى اللَّهُ عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ وَسَيُرَدُّونَ إِلَى عَالِمِ الْغَيْبِ وَالْسَّهَادَةِ فَيُبَنِّيْنَكُمْ بِمَا كُنتُمْ تَعْمَلُونَ }

صدق الله العظيم

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Dedication

To All We Love

&

Cherish
Acknowledgment

First of all thanks for Allah that giving me the power and will to complete this study.

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Abstract

This was descriptive and cross-sectional study was carried out in Khartoum state during the period from November 2008 to January 2009.

The study was designed to determine the pattern of inheritance of sickle cell anemia in parents of patients who referred to three hospital of Khartoum State.

Hundred parents (50 mother and 50 father) were selected for this study, from Khartoum pediatric Hospitals, (2,5) ml of venous blood was taken from all parents and put it in an anticoagulant container. Complete blood count (CBC) was determined by use of Sysmex instrument N-50, and samples were investigated for HbS by use of sickling test. Hemoglobin electrophoresis was performed to determine the pattern of inheritance of sickle cell gene.

The results were as followed:

97% of samples were heterozygous form of Hb S (ββS) and the remaining were homozygous form of HbS (βSβS). 89% red cell morphology was normocytic normochromic cells, and the remaining were microcytic normo-hypochochromic cells. The means of count and cell indices in the carrier and diseased parents as follows respectively: the mean of white blood cells count(TLC) was $8.5 \times 10^9/l$ and $6.9 \times 10^9/l$, the mean of red blood cell count(RBC) was $4.6 \times 10^{12}/l$ and $3.9 \times 10^{12}/l$, the mean of hemoglobin(Hb) was $13g/dl$ and $9g/dl$, th mean of hematocrit(PCV) was $41.2\%$ and $39.3\%$, the mean of mean cell volume (MCV) was $86.2$ and $86.3fl$, the mean of mean cell hemoglobin(MCH) was $30pg$ and $29.1pg$ the mean of mean cell hemoglobin concentration (MCHC) was $31.2\%$ (58%) and $31.3\%$, the mean of platelets count(PLT) was $207 \times 10^3/µl$ and $298 \times 10^3/µl$.

The highest frequency of sickle cell anemia was found in Messaria tribe (40%), followed by Bargo tribe (30%), Hausa and Rezaigat (8%), Taisha and Jawama (6%), and Zagawa (2%).
مستخلص الدراسة

اجريت هذه الدراسة الوصفيه التحليلية في ولاية الخرطوم في الفترة من نوفمبر 2008 حتى يناير 2009 وذلك لتحديد النمط الوراثي لإباء المرسمالمتردبين على ثلاثة مستشفيات بولاية الخرطوم، تم اختيار مانه من الأبوين (50 أب 50 أم) لإجراء هذه الدراسة، تم اخذ 2.5 مل من الدم في وعاء مانع للتجلط من كلا الأبوين، تم قياس صورة الدم الكامل باستعمال جهاز سيسكس وتم اختبار العينات لهيمقوليون S باستعمال الإختبار المنجلى، عمل الفصل الكهربائى للهيمقوليون لتحديد النمط الوراثي وكانت النتائج كالآتى:

97% من العينات كانت تحمل الشكل الغير منجانس لهيمقوليون S والبقية عبارة عن الشكل المجانس لهيمقوليون، 89% من شكل الخلايا الحمراء عبارة عن خلايا طبيعية اللون والحجم، والبقية عبارة عن خلايا طبيعية-قليلة اللون وطبيعية الحجم، وكان متوسطيات عدد ومعاملات الخلايا في الأمام الحاملين والمرضى على التوالي كالآتى: متوسط عدد كرات الدم البيضاء 4.6 × 10^12/لتر و 5.9 × 10^12/لتر و 8.9 × 10^12/لتر، ومتوسط الهيمقوليون 13 جرام % و 9 جرام %، ومتوسط الهيماتوكريت 41.2 % و 39.3 %، ومتوسط حجم الخلية 86.3 فيمنو/لتر و 83 فيمنو/لتر و 2.1 بيكو جرام و 2.91 بيكو جرام، ومتوسط تركز هيمقوليون الخلاة 31.2 % و 31.3 %، ومتوسط عدد الصفائح الدموية 207×10^3/ميكرولتر و 298×10^3.

إلى نكرار للانيميا المنجلية وجد في قبيلة المسيرة (40%) تعبتها قبيلة البرقو (30%) تعبتها الهوسا والرزيقات (8%) والتعابيشة والجوامعة (6%) والزغوة (2%).
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