

## الآية

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قال تعالى :

{ اللَّهُ نُورُ السَّمَاوَاتِ وَالْأَرْضِ مِثْلُ نُورِهِ كَمِشْكَاةٍ فِيهَا مِصْبَاحٌ  
الْمِصْبَاحُ فِي زُجَاجَةٍ الزُّجَاجَةُ كَأَنَّهَا كَوْكَبٌ دُرِّيٌّ يُوقَدُ مِنْ شَجَرَةٍ  
مُبَارَكَةٍ زَيْتُونَةٍ لَا شَرْقِيَّةٍ وَلَا غَرْبِيَّةٍ يَكَادُ زَيْتُهَا يُضِيءُ وَلَوْ لَمْ تَمْسَسْهُ  
نَارٌ نُورٌ عَلَى نُورٍ يَهْدِي اللَّهُ لِنُورِهِ مَنْ يَشَاءُ وَيَضْرِبُ اللَّهُ الْأَمْثَالَ  
لِلنَّاسِ وَاللَّهُ بِكُلِّ شَيْءٍ عَلِيمٌ }

صدق الله العظيم

سورة النور

الاية 35

## **Dedication:-**

We dedicate This effort to ;-

-Our Family

-Our Colleagues .

-Student Who help us .

## **Acknowledgment:-**

-Primary our Precious and thanks should be to Allah who grated us the serenity . Means of strength and practice to complete this work.

-With grateful appreciation we acknowledge the effort to ;-

Our supervisor , our teachers , medical company , and everyone who help us.

-To a great country Sudan.

## **Abstract:-**

The aim of this study was to measure the mean Hemoglobin and Hematocrit among apparently healthy Students in Sudan University of Science and Technology.

Total number of samples were 500 ( 251 Males - 249 Females ) .in age group (17-25) years.

EDTA anticoagulant venous blood samples was collected from each subject the parameters were measured by using JENWAY calorimeter 6051 for Hb measurements and Hettich ZentrifuGen D – 78532 tuttingen for HCT .

Analysis was done in laboratories of Sudan university . Computerized statistical package for social science ( version 16 ) was used for data processing .

A questionnaire was fulfilled by each subject .

The result of study show that :-

Mean Hemoglobin in males was (12.9 g/dl ) ranged between ( 9.3- 16.5 g/dl) with P. value (.0000)and in Females ranged between (8 – 14 g/dl) with mean (11.2 g/dl) with p . value (.000) . Mean Packed Cell Volume in males was (46%) ranged between( 37 -55 %) whereas in females it was (40 %) and ranged between (30.8 - 49.2 %) . With p. value (0.000)

-The results obtained show that the mean hemoglobin and packed cell volume were significantly decreased in females when compared with males .

## الخلاصة

الهدف من هذه الدراسة قياس خضاب الدم والهيموكريت ( حجم خلايا الدم المكدسة ) في طلاب جامعة السودان للعلوم والتكنولوجيا في الفترة الزمنية 2013 - 2014م - حيث تم اختيار 500 شخص أصحاء عشوائيا تتراوح أعمارهم من 17 - 25 سنة ( 251 عينة رجال -249 عينة نساء ) أخذت العينات من الأوردة في مادة مانعة للتجلط E DTA و اجري لها تحليل الدم لقياس خضاب الدم والهيموكريت بواسطة الأجهزة HITTICH ZENTRIFUGEN : TUTTINGEN D-78532 و JENWAY 6051 لخضاب الدم .

اجري التحليل في معمل جامعة السودان - كما تم استخدام برامج الحزم الإحصائية للعلوم الاجتماعية رقم (16) .

من البحث وجد أن متوسط تركيز خضاب الدم في الذكور 12.9 g/dl تتراوح بين ( 9.3 - 16 g/dl ) وفي الاناث 11.2 g/dl تتراوح بين ( 8 g/dl - 14 g/dl ) .

ونسبة متوسط كريات الدم الحمراء المكدسة في الذكور 46% وتتراوح بين (37% - 55%) وفي الاناث ( 30.8% - 49.2%) سجلت الإناث في هذه الدراسة معدلات اقل من الرجال في كل من تركيز خضاب الدم وحجم الكريات المتكدسة.

## List of abbreviation

<b>Abbreviations</b>	<b>Complete name</b>
ALA	amino laevulinic acid
ALAs	amino laevulinic acid synthase
AUG	adenine- uracil –guanine
$\alpha$	Alpha
<b>B</b>	beta
CO <sub>2</sub>	carbon di oxide
CD4	Cluster of differentiation -4
2,3,DPG	2,3diphosphoglycerate
$\delta$	Delta
EPO	Erythropoietin
EDTA	Ethylene di amine tetra acetic acid
$\epsilon$	epsilon
<i>Fe<sup>3+</sup></i>	ferric iron
$\gamma$	gamma
Hb	hemoglobin
Hb-A	Adult hemoglobin
Hb-f	
Hct	Hematocrit
ICSH	International Center For Standardization in hematology
MCV	Mean Cell Volume
mRNA	messenger ribonucleic acid
PBGD	PBGD porphobilinogen deaminase
PCV	packed cell volume
PCT	porphyria cutaneatarda
S.D	standard deviation
UK	united kingdom
UROD	uroporphyrinogen decarboxylase
$\zeta$	Zeta

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