

الاية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال تعالى: ﴿عَٰلِيَ اللّٰهِ اِلْمَالِدُ قَوْلًا لِّاَنَّ الَّذِي يَمُنُّ بِانْقَادِ الْمَلِكِ لَا يَكْفُرُ بِالْعَدْلِ وَالَّذِي لَا يُؤْتِنُهُ الْمُلْكُ لَا يُؤْتِنُهُ بِالْإِيمَانِ هُوَ السَّكَتُ لِلْإِيمَانِ﴾

صدق الله العظيم

سورة طه الاية 114

Dedication

We would like to express our great gratitude's to our parents for their loving, patience, caring and support. We wish to thank our brothers, sisters and all family members for their huge encouragement throughout the study. We are particularly grateful for the presence of friends the candles that bright our days and supporting us each step of the way.

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الخلاصة

هذه دراسة وصفية أجريت في الفترة ما بين 2014/2/6 الى 2014/3/10 في عينات دم تم سحبها من أشخاص سودانيين أصحاء في العمر من 10-65 سنة، لمعرفة القيم الطبيعية لعد كريات الدم البيضاء والعد التفرقي لكل نوع منها. وقد تم جمع 200 عينة دم وريدي في 200 وعاء يحتوي كل منه على مادة مانعة للتجلط. وتم فحص العينات باستخدام الطرق التقليدية لعد كريات الدم البيضاء وطريقة الشريحة الزجاجية. حلت البيانات باستخدام الحاسوب عن طريق برنامج الحزم الاحصائية للعلوم الاجتماعية. تبين أن متوسط عد كريات الدم البيضاء هو 5,9 ألف خلية لكل لتر من الدم، عند الذكور 6,0 ، وعند الاناث 5,8 ، والقيمة الطبيعية لعد كريات الدم البيضاء هي 3,3 - 10,7 $\times 10^9$ و النسب الطبيعية لكل نوع من خلايا الدم الأبيض هي الخلية العدلة 35 - 75 %، الخلية الليمفاوية 20 - 55 %، الخلية الوحيدة 1 - 10 %، الخلية الحمضة 0 - 6 %، والخلية الأسنة 0 - 1 %.

كتوصية يمكن اجراء دراسات مستقبلية في عدد أكبر من العينات على فئات عمرية أخرى وادخال الدراسات القبلية وباستخدام تقنية الكشف بموسمات الخلايا.

Abstract

This is a descriptive, prospective and analytical study performed in the period from 6\2\2014 to 10\3\2014 in blood sample taken from normal Sudanese individuals of 10-65 years of age, to estimate the normal value of the TWBCs and the percent of each type of leukocyte. 200 venous blood sample collected in 200 blood containers with EDTA anticoagulant, sample analyzed by manual methods of counting the WBCs and thin blood film. The data analyzed by using the SPSS program in the computer. The TWBCs mean was $5.9 \times 10^9/L$, in males 6.0, in females 5.8 , and leukocyte percent as, Neutrophil 35-75% , Lymphocyte 20-55% , Monocyte 1-10% , Eosinophil 0-6% , and Basophil 0-1% . AS recommendation more studies can be done in large amount of samples and other age groups, different tribes is used and the use of Flowcytometry.

Abbreviations

WBCs	White blood cells
RBCs	Red blood cells
Plt	platelet
N:C	Nuclear cytoplasmic ratio
AGM	Aorta gonads mesonephros
HSCs	Hematopoietic stem cells
MAPCs	Multipotent adult progenitor cells
CFU	Colony forming unit
CFU-GEMM	CFU-Granulocyte erythrocyte monocyte megakaryocyte
CFU-GM	CFU-granulocyte macrophage/monocyte
CFU-Eo	CFU-eosinophil
CFU-B	CFU-basophil
CFU-Meg	CFU-megakaryocyte
BFU-E	Burst forming unit erythroid
HPCs	Hematopoietic progenitor cells
UCB	Umbilical cord blood
PMNs	Polymorphonuclear cells
MRPs	Migration inhibitory factor related proteins
MPO	Myeloperoxidase
BPI	Bacterial permeability increasing protein
FMLP	N-formyl-methionyl-leucyl-phenylalanine receptors
NETs	Neutrophil extracellular traps
IL	Interleukine
INF	Interferon
FMF	Familial Mediterranean fever

CD	Cluster of differentiation
NK	Natural killer
GALT	Gut associated lymphoid tissue
T cell	Thymus cell
B cell	Bursa derived cell
MHC	Histo compatibility complex
TNF	Tumor necrosis factor
MBP	Major basic protein
ECP	Eosinophilic cationic protein
EPO	Eosinophilic peroxidase
EDN	Eosinophil derived neurotoxin
BAT	Basophil activation test
ANC	Absolute neutrophil count
G-CSF	Granulocyte colony stimulating factor
CGD	Chronic granulomatus disease
Ig	Immunoglobulin
G6PD	Glucose 6 phosphate dehydrogenase
CMV	Cytomegalovirus
EBV	Epstein barr virus
SLE	Systemic lupus erythromatus
HIV	Human immune deficiency virus
AIDs	Aquired immunodeficiency syndrome

List of contents

Contents	Page
Ayah	
Dedication	
Acknowledgement	
Abstract" Arabic"	
Abstract" English"	
Abbreviation	
List of contents	
List of figures	
List of tables	
Chapter One	
Introduction and Literature review	
Subject	Page
1.0: Introduction and Literature Review	1
1.1: General introduction	1
1.2: Literature Review	3
1.2.1: Blood	3
1.2.1.1: Constituent of human blood	4
1.2.1.2: Blood functions	6
1.2.2: Hematopoiesis	6
1.2.2.1: Production and degradation of blood cells	6
1.2.2.2: Bone marrow sites and function	7
1.2.2.3: Sites of Hemopoiesis	8
1.2.2.4: Hematopoietic stem cells (HSCs)	9
1.2.2.4.1: Types of human stem cells	9
1.2.2.4.2: Cellular elements of Bone marrow	10

Subject	Page
1.2.2.5: Hematopoiesis categories according to cells	12
1.2.2.5.1: Leukopoiesis	13
1.2.2.5.2: Erythropoiesis	13
1.2.2.5.3: Granulopoiesis	13
1.2.2.5.4: Lymphopoiesis	13
1.2.2.5.5: Megakaryopoiesis	14
1.2.3: Normal WBCs	14
1.2.3.1: Neutrophils	14
1.2.3.1.1: Development and function	15
1.2.3.1.2: Types of granules	15
1.2.3.1.2.1: primary granules (azurophilic)	16
1.2.3.1.2.2: Secondary granules	16
1.2.3.1.2.3: Tertiary or gelatinous	16
1.2.3.1.2.4: Secretary vesicles	17
1.2.3.1.3: Neutrophil maturation stages	17
1.2.3.1.3.1: Promyelocyte stage	17
1.2.3.1.3.2: Myelocyte stage	18
1.2.3.1.3.3: Metamyelocyte stage	18
1.2.3.1.3.4: Polymorphonuclear stage	18
1.2.3.1.4: Neutrophil functions	18
1.2.3.1.4.1: Chemotaxis	19
1.2.3.1.4.2: Antimicrobial function	19
1.2.3.1.4.3: Phagocytosis	20
1.2.3.1.4.4: Degranulation	20
1.2.3.1.5: Neutrophil extracellular traps (NETs)	21
1.2.3.1.6: Role in Disease	21
1.2.3.1.7: Neutrophil antigens	22

Subject	Page
1.2.3.2: Lymphocyte	22
1.2.3.2.1: Development and function	23
1.2.3.2.2: Sites of lymphocytic development	23
1.2.3.2.2.1: Primary lymphoid tissue	24
1.2.3.2.2.2: Secondary lymphoid tissue	24
1.2.3.2.2.3: Lymphocyte maturational stages	24
1.2.3.2.2.3.1: Lymphoblast	25
1.2.3.2.2.3.2: Prolymphocyte	25
1.2.3.2.2.3.3: Mature lymphocyte	25
1.2.3.2.4: General variations in lymphocyte morphology	26
1.2.3.2.5: Types of lymphocytes	27
1.2.3.2.5.1: T and B cell	27
1.2.3.2.5.2: NK cell	28
1.2.3.3: Monocytes	28
1.2.3.3.1: Development and function	28
1.2.3.3.2: Physiology	30
1.2.3.3.3: Monocytes subpopulation	31
1.2.3.4: Eosinophils	31
1.2.3.4.1: Development and function	32
1.2.3.4.2: Migration and Activation	32
1.2.3.4.3: Functions of eosinophil	33
1.2.3.4.4: Eosinophil granular proteins	34
1.2.3.5: Basophils	34
1.2.3.5.1: Development and function	35
1.2.3.5.2: Immunophenotyping of basophil	36
1.2.3.5.3: Degranulation of basophil	36
1.2.4: White blood cells disorders	36

Subject	Page
1.2.4.1: Neutrophils disorders	38
1.2.4.1.1: Quantitative disorders	40
1.2.4.1.1.1: Neutrophilia	40
1.2.4.1.1.2: Neutropenia	40
1.2.4.1.2: Qualitative disorders of neutrophils	41
1.2.4.1.2.1: Defective locomotion and chemotaxis	41
1.2.4.1.2.2: Toxic granulation	41
1.2.4.1.2.3: Dohle bodies	42
1.2.4.1.2.4: Hypersegmentation	42
1.2.4.1.2.5: Pelger- Huet anomaly	42
1.2.4.1.2.6: May- hegglin anomaly	42
1.2.4.1.2.7: Chediak- higashi syndrome	43
1.2.4.1.2.8: Alder- Reilly inclusion	44
1.2.4.1.2.9: Chronic granulomatous disease	44
1.2.4.1.2.10: Myeloperoxidase deficiency	44
1.2.4.1.3: Other functional anomalies of neutrophils	45
1.2.4.2: Disorders of lymphocyte	45
1.2.4.2.1: Lymphocytosis	46
1.2.4.2.1.1: Disorders associated with lymphocytosis	46
1.2.4.2.1.1.1: Infectious mononucleosis	46
1.2.4.2.1.1.2: CMV infection	46
1.2.4.2.1.1.3: Toxoplasmosis	47
1.2.4.2.1.1.4: Infectious lymphocytosis	47
1.2.4.2.1.1.5: Bordetella pertussis infection	47

Subject	Page
1.2.4.2.2: Lymphocytopenia	47
1.2.4.2.2.1: Immune disorders associated with lymphocytopenia	47
1.2.4.2.2.1.1: Digeorge syndrome	48
1.2.4.2.2.1.2: AIDs	48
1.2.4.2.2.1.3: SLE	48
1.2.4.2.2.1.4: Infectious mononucleosis	48
1.2.4.3: Disorders of monocytes	49
1.2.4.3.1: Monocytosis	49
1.2.4.3.2: Monocytopenia	49
1.2.4.4: Disorders of eosinophil	50
1.2.4.4.1: Eosinophilia	50
1.2.4.4.2: Eosinopenia	50
1.2.4.5: Disorders of basophil	50
1.2.4.5.1: Basophilia	51
1.2.4.5.2: Basopenia	51
1.2.5: Leukemias	54
1.2.5.1: Causes and Risk factors	56
1.2.5.2: Classification	58
1.2.5.3: Symptoms	59
1.2.5.4: Diagnosis	59
1.2.5.5: Types of leukemia	60
1.2.5.5.1: ALL	60
1.2.5.5.2: CLL	61
1.2.5.5.3: AML	61

Subject	Page
1.2.5.5.4: CML	62
1.2.5.5.5: Hairy cell leukemia	62
1.2.5.5.6: T-cell prolymphocytic leukemia	62
1.2.5.5.7: Juvenile myelomonocytic leukemia	62
1.3: Objectives	63
Chapter two Materials and Method	
2.1: Subject	64
2.2: Materials	64
2.3: Method	65
2.3.1: Blood collection	65
2.3.2: Manual TWBCs count	65
2.3.3: Making of smear	67
2.3.3.1: Staining (Leishman's stain)	67
2.3.3.1.1: Leishman's stain preperation	67
2.3.3.1.2: Leishman's stain method	68
2.3.3.2: Checking	68
2.3.4: Differential count	68
2.3.5: Absolute count	69
Chapter Three Results	
3.1: Results	70
Chapter Four Discussion, Conclusion and Recommendation	
4.1: discussion	83
4.2: Conclusion	85

4.3: Recommendation	86
Chapter five References	
References	87
Appendix	

List of Figures

No	Figure	Page
(1.1)	Differentiation of blood cells from the stem cell.	12
(1.2)	White blood cell types.	14
(1.3)	Neutrophil maturation stages.	18
(2.1)	Loading the chamber	66
(2.2)	The counting area of the chamber.	66
(2.3)	Differential counting from the thin film.	69
(3.1)	Mean of TWBCs for age groups.	71
(3.2)	Mean of Neutrophil% for age group.	72
(3.3)	Mean of Lymphocyte% for age group.	73
(3.4)	Mean of Monocyte% for age group.	74
(3.5)	Mean of Eosinophil% for age group.	75
(3.6)	Mean of Basophil% for age group.	76
(3.7)	Mean of TWBCs for male and female.	77
(3.8)	Mean of Neutrophil% for male and female.	78
(3.9)	Mean of Lymphocyte% for male and female.	79
(3.10)	Mean of Monocyte% for male and female.	80
(3.11)	Mean of Eosinophil% for male and female.	81
(3.12)	Mean of Basophil% for male and female.	82

List of Tables

No	Table	Page
(3.1)	The whole result of the research.	70
(3.2)	Showing the age of the sample and compare their mean TWBCs.	71
(3.3)	Showing the age of the sample and comparing their mean Neutrophil%.	72
(3.4)	Showing the age of the sample and comparing their mean Lymphocyte%.	73
(3.5)	Showing the age of the sample and comparing their mean Monocyte%.	74
(3.6)	Showing the age of the sample and comparing their mean Eosinophil%.	75
(3.7)	Showing the age of the sample and comparing their mean Basophil%.	76
(3.8)	Showing gender of the sample and comparing their mean TWBCs.	77
(3.9)	Showing gender of the sample and comparing their mean Neutrophil%.	78
(3.10)	Showing gender of the sample and comparing their mean Lymphocyte%.	79
(3.11)	Showing gender of the sample and comparing their mean monocyte%.	80
(3.11)	Showing gender of the sample and comparing their mean Eosinophil%.	81
(3.12)	Showing gender of the sample and comparing their mean Basophil%.	82

