بســـم الله الرحـــمن الرحـــيم

ســورة المائــدة

آية رقم (9)

Dedication

I dedicate this work to my great father Mr. Kamal Hassan who always support and encourage me and to the best gift in my life my mother Mrs. Ebtesam Mohammed who inspired me.

Mayson K. Hassan

Acknowledgments

First of all, I am grateful to Allah for establishing me to complete this study. I would like to express the deepest appreciation to my supervisor Dr. Tagwa Yusuf for her time, advices, provisions and valuable comment that benefited me in the success of this work.

I would like to express my sincere thanks and grateful to Dr. Tagreed Ahmad Al-Hadi for her suggestion, support and motivation. Thanks for prof. AL Derdery Mohammed Abd-Alrahman for this encourage and motivate.

Sincere thanks to Al-Rayan Laboratory staff for their assistance. Sincere thanks to the staff of Hematology Department at Collage of Laboratory Science, Sudan University of Technology and Sciences. For their helpful, encourage and valuable suggestion.

I would like to express my gratitude towards my beloved family for their words of encouragement and great support which aided me to complete this study.

Deepest thanks to all who in one way or another has contributed in making this study possible.

Abstract

This study aimed to estimate and assess the level of serum ferritin among AML patients in Khartoum State. General objective of this work was to study serum ferritin level among acute myeloblastic leukemia patients in Khartoum State. It is a descriptive study, conducted in National Center of Radiotherapy and Nuclear Medicine in Khartoum, Sudan, during the period from Oct 2014 until Nov 2014. Data was collected by pre-coded questionnaire and analyzed by standard program of SPSS version 17, 2008 statistical package. Study included 40 AML diagnosed patients with age between 16-67 years old, they were 21 males (52.5 %) and 19 females (47.5%). Ferritin concentration was measured in serum by using Biosystem Clinical Analyzer A15 (Barcelona, Spain) with a commercial ferritin latex kit. Serum ferritin level among AML patients was significant higher than the normal reference value (P=0.00), mean serum ferritin level in AML patients was (431.86±16.61µg/L). Serum ferritin level correlated positively with TWBCs (r=0.345) (P=0.029) and no correlation with Hb concentration (P=0.604) was found. There was no significant difference of serum ferritin level between FAB subclasses of AML (P=0.107). There was no variation among age (P=0.900) and no significant difference between males and females patients with AML (P=0.154) in regard to serum ferritin level. No correlation found between serum ferritin level and blast% (P=0.703). Study concluded that serum ferritin level can contributed in initial evaluation of AML disease.

ملخص الدراسة

هدفت هذه الدراسة لقياس وتقدير مستوى فيريتين المصل لدى مرضى السرطان الارومى الحاد بولاية الخرطوم. كان الهدف العام من هذا العمل دراسة مستوى فيريتين المصل لدى مرضى السرطان الارومى الحاد بولاية الخرطوم. هذه دراسة وصفية،أجريت في المركز القومي للعلاج بالأشعة والطب النووي في الخرطوم، السودان، خلال الفترة من أكتوبر 2014 حتى نوفمبر 2014 ، تم جمع البيانات من المرضى بإستخدام الإستبيان المشفر وتحليلها بواسطة النسخة القياسية 17 من برنامج الحزمة الإحصائيةSPSS ، 2008. وشملت الدراسة 40 من مرضى السرطان الارومى الحاد, أعمارهم تتراوح بين 16-67 سنة، وكانوا 21 من الذكور (52.5٪) و 19 من الإناث (47.5٪). وقد تم قياس تركيز فيريتين المصل بإستخدام المحلل السريري (15 أ) مع مجموعة لاتكس فيرتين التجارية. مستوى فيريتين المصل بين مرضى السرطان الارومى الحاد كانت أعلى من القيمة المرجعية الطبيعية (P =0,00). كان متوسط مستوى فيريتين المصل عند هؤلاء المرضى (L / 43,86±16,61µg). يرتبط مستوى فيريتين المصل بشكل إيجابي مع تعداد كريات الدم البيضاء (r=0,345) (P = 0,029) ولا يوجد إرتباط إحصائي مع تركيز الهيموغلوبين (P =0,604). لم يوجد فرق إحصائي في مستوى فيريتين المصل بين الفئات الفرعية للتصنيف FAB (P=0,107). ليس هنالك فرق احصائي في مستوى فيرتين المصل باعتبار العمر (P=0,900) و بين الذكور والإناث من مرضى السرطان الارومى الحاد (r=0,154). لا يوجد إرتباط إحصائي لمستوى فيرتين المصل عند مرضى سرطان الدم الآرومي الحاد مع النسبة المئوية للخلايا الآرومية (P=0,703). خلصت الدراسة إلى أن مستوى فيريتين المصل عند مرضى السرطان الارومى الحاد يمكن أن يساهم في التقييم الأولي لهذا المرض.

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Abbreviations

ALL	Acute lymphoblastic leukemia.
AML	Acute myeloblastic leukemia.
AML M_{4Eo}	Acute eosinophilic leukemia.
AMML	Acute myelomonocytic leukemia.
APL	Acute promyelocytic leukemia.
ATRA	All-trans retinoic acid.
BAALC	Brain and acute leukemia cytoplasmic gene.
CBFB	Core-binding factor subunit beta.
CD	Cluster of differentiation.
CEBPA	CCAAT/enhancer binding protein alpha.
CGH	Comparative genomic hybridization.
CLL	Chronic lymphocytic leukemia.
CNS	Central nerves system.
DIC	Disseminated intravascular coagulation.
DNA	Deoxyribonucleic acid.
EDTA	Ethylenediaminetetra acetic acid.
E.g.	For example.
ELISA	Enzyme-linked immunoabsorbent assays.
ERG	Erythroblast transformation specific related gene.
EVI1	Ecotropic Viral Integration Site 1.
FAB	French-American-British.
Fig	Figure.
FISH	Fluorescence *in site* hybridization.
FLT	FMS-like tyrosine kinase.
H-subunit	Heavy-subunit.
Hb	Hemoglobin.

HLA	Human leucocyte antigen.
HSV	Herpes Simplex Virus.
IARC	International Agency for Research on Cancer.
ITD	Internal tandem duplications.
KIT	v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene.
KRAS	Kirsten rat sarcoma viral oncogene homolog.
L-subunit	Light-subunit.
LAP	Leukemia-associated phenotype.
MDS	Myelodysplastic syndrome.
MKL1	Megakaryoblastic leukemia 1 gene.
MLL	Mixed-lineage leukemia gene.
MN1	Meningioma gene.
MPD	Myeloprolifrative disorder.
MPO	Myeloperoxidase.
MYH11	Myosin 11.
NIBSC	National Institute for Biological Standards and control.
NOS	Not otherwise categorize.
Nov	November.
NPM1	Nucleophosmin.
NRAS	Neuroblastoma rat sarcoma viral oncogene homolog.
NUP214	Nucleoporin 214 KDa.
Oct	October.
PCR	Polymerase chain reaction.
PML	Promyelocytic leukemia gene.
PRAME	Preferentially expressed antigen in melanoma.
RARA	Retinoic acid receptor alpha.
RAS	Receptor tyrosine kinases.
RBM15	RNA binding motif protein 15.

RHAMM	Hyaluronan-mediated motility receptor.
RNA	Ribonucleic acid.
ROS	Reactive oxygen species.
RPN1	Ribophorin 1.
RT-PCR	Reverse transcriptase polymerase chain reaction.
RUNX1	Runt-related transcription factor 1.
SBB	Sudan black B.
SE	Stander error.
SPSS	Statistical package for the social sciences.
TCR	T cell receptor.
TET2	Tet methyl cytosine dioxygenase 2.
TNF α	Tumor necrosis factor α.
TWBCs	Total white blood cells.
WHO	World Health Organization.
WT1	Wilms tumor 1.