SERUM SELENIUM IN CHILDHOOD LEUKEMIA

Thesis
Submitted in partial Fulfillment of
M.Sc. Degree in pediatrics

By

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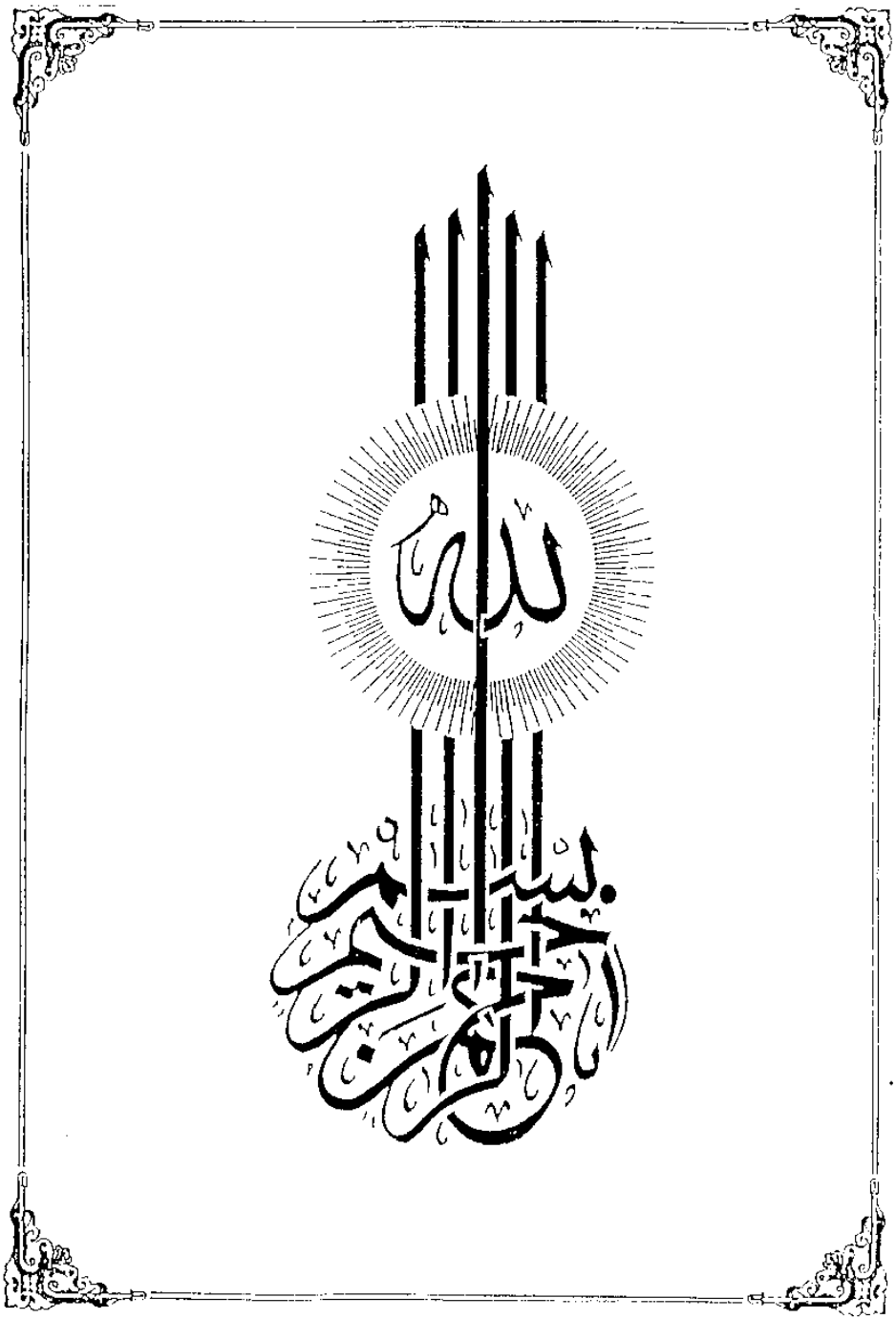

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ACKNOWLEDGEMENT

I would like to express my deepest gratitude and profound thanks to Dr. Galila Mohammed Mokhtar Assistant Prof. of pediatrics. Ain Shams University, for her kind advice, encouragement, supervision and help.

I am deeply grateful to Dr. Zeinab Awad El Sayed Lecturer of pediatrics. Ain Shams University, for her encouragement, help and kind supervision.

I wish to express my deepest gratitude to Dr. Mohammed Yehia El Awady Lecturer of Environmental Industrial & Community Medicine. Ain Shams University, for his help and supervision.

I would like to express my deepest gratitude and thanks to Dr. Azza abd El Gawad and my thanks are also for all staff working in Hematology Oncology clinic for their help through this work.

I am deeply indebted to my family for their help and encouragement lastly my particular appreciation and best wishes to all patients and hope for recovery

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(7) Represents significant correlation of Se & albumin in all leukemic cases.

LIST OF ABBREVIATIONS

ALL	acute lymphoblastic leukemia
AML	acute myeloid leukemia
ANLL	acute non-lymphoblastic leukemia
BM	bone marrow
BMT	bone marrow transplantation
C-ALL	commen ALL antigen
CIg	intracytoplasmic immunoglobulin
CNS	central nervous system
CSF	cerebrospinal fluid
DNA	deoxyribonucleic acid
FAB	French-American-British cooperative working group
GVHD	graft versus host disease
Hb	hemoglobin
Ia like	Immune-antigen
MTX	methotrexate
PAS	periodic acid schiff
Ph	philadelphia chromosome
Se	selenium
SmIG	surface membrane immunoglobulin
TBI	total body irradiation
TDT	terminal deoxynucleotidyl transferase
TLC	total leukocytic count

INTRODUCTION

INTRODUCTION

Selenium is a trace element in the body fluids. Selenium is a part of the enzyme glulathione peroxidase , which helps to prevent accumulation of hydroperoxide in lipids of cell membrane .

Deficiency of selenium occurs secondary to parentral nutrition or protein energy malnutrition . (O' Dell. 1984).

Selenium toxicity occurs as a result of megadose supplementation and manifests itself in the form of hair loss . dermatitis and irritability .

Selenium has been shown to have anti- proliferative . anti inflammatory. anti viral and immune altering effects . (O' Dell et al .. 1991).

There are several epidemiological studies suggesting an increase incidence of colon . mammary and perhaps other forms of cancer associated with low levels of enviromental selenium . (Shrauzer et al . 1976), Moreover, Koskelo et al., 1990) . reported low serum selenium in children with acute luekemia.

Recent studies showed that organic selenium compounds may now open a new perspective in cancer chemotherapy . (Wang and Shimura . 1990) .

AIM OF THE WORK

AIM OF THE WORK

This study is aimed to out line the changes in serum selenium concentration in leukemic children, and its relation to disease activity and the treatment received.

REVIEW OF LITERATURE

SELENIUM

Selenium was found to be an essential trace element in 1957, when it was discovered that animals deficient in selenium had increased susceptibility to liver necrosis (Schwarz et al., 1957) .

The essentiality of selenium in human health was established in 1979 , when beneficial responses to selenium supplementation were observed in certain patients living in low selenium areas as New Zealand and People Republic of China . Chinese scientists reported a dramatic reduction in the incidence of Keshan disease. which is an endemic cardiomyopathy after an intervention trial with sodium selenite (Chen et al., 1980).