SERUM INTERLEUKIN-8 IN EGYPTIAN B-THALASSEMIC CHILDREN



Thesis

Submitted for Partial Fulfillment of Master Degree in Pediatrics

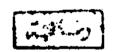


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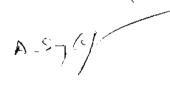
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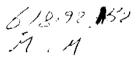
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TO

MY
MOTHER,
FATHER,
SISTERS
AND
HUSBAND



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LIST OF ABBREVIATIONS

ALT Alanine transaminase

 α Alpha

ANOVA Analysis of variance procedures

ß Beta

BECGF B endothelial cell growth factor

BMT Bone marrow transplantation

C Complement

CBC Complete blood count

CIC Circulating immune complex

CRP C-reactive protein

CT Connective tissue

DF Desferrioxamine

DNA Deoxyribonucleic acid

ELISA Enzyme linked immunosorbant assay

EPO Erythropoietin

FGF Fibroblast growth factor

G-CSF Granulocyte colony-stimulating factor

G-proteins Guanine nucleotide binding protein

GDP Guanine diphosphate

gm/dl Gram per deciliter

GM-CSF Granulocyte-macrophage colony-stimulating factor

GOT Glutamic-oxaloacetic transaminase

GPT Glutamic pyruvic transaminase

GRO Proteins that attract and activate neutrophils

GTP Guanine triphosphate

Hb Haemoglobin

HLA Human leukocyte antigen

IFN Interferon

Ig Immunoglobulin

IL Interleukin

IV Intravenous

LAM Lectin adhesion molecule

LDH Lactic acid dehydrogenase

LDNAP Lymphocyte derived neutrophil activating peptide.

M-CSF Macrophage colony stimulating factor

Mac-I Macrophage-I

MCH Mean corpuscular haemoglobin

MCV Mean corpuscular volume

MDNAP Monocyte derived neutrophil activating peptide

MDNCF Monocyte derived neutrophil chemotactic factor

μl Microliter

mg/kg Milligram per kilogram

MGSA (gro)Melanoma growth stimulating activity

ml Milliliter

mRNA messenger Ribonucleic acid

NAF Neutrophil activating factor

NAP Neutrophil activating peptide

nm Nanometer

PDGF Platelet derived growth factor

pg Picogram

PKC Protein kinase C

PMNL Polymorphonuclear leucocytes

RES Reticuloendothelial system

rh Recombinant human

RNA Ribonucleic acid

SAS Statistical analysis system

SC Subcutaneous route

SHAM Salicyl hydroxamic acid

T-cells Thymus derived lymphocytic cells

TGF Recombinant human latency associated peptide

TNF Tumour necrosis factor

INTRODUCTION AND AIM OF THE WORK

INTRODUCTION

Thalassemias are a group of disorders occurring frequently in the mediterranean region, the middle east, south east Asia and was first described in Egypt by *Diwany in* 1944.

Khalifa et al (1992) reported a relative frequency of 52.72/100,000 attendants of the outpatient hematology clinic of children hospital, Ain Shams University, to be β-thalassemic, constituting 47.7% of the hemolytic anemic patients.

The carrier rate in Egypt varied between 2.1% and 4.5% in the studies of *Hashim* (1978) and Afifi (1987).

In 1988 Khalifa et al., reported that thalassemic patients have defective humoral and cellular immunity with increased liability to repeated infections.

Takahashi et al. and Uguccioni et al. in 1993 reported increased level of Interleukin-8 (IL-8) or neutrophil activating peptide-1 as a potent chemotactic stimulus and a major mediator of the acute inflammatory response found in \(\beta\)-thalassemic patients.

AIM OF THE WORK

The aim of the present study is to measure the serum level of interleukin-8 in Egyptian \(\mathbb{B}\)-thalassemic children and correlate its level to different parameters specially liability to infection and phagocytosis.

REVIEW OF LITERATURE