ENDOTOXIN LEVEL IN CHRONIC LIVER DISEASES

THESIS

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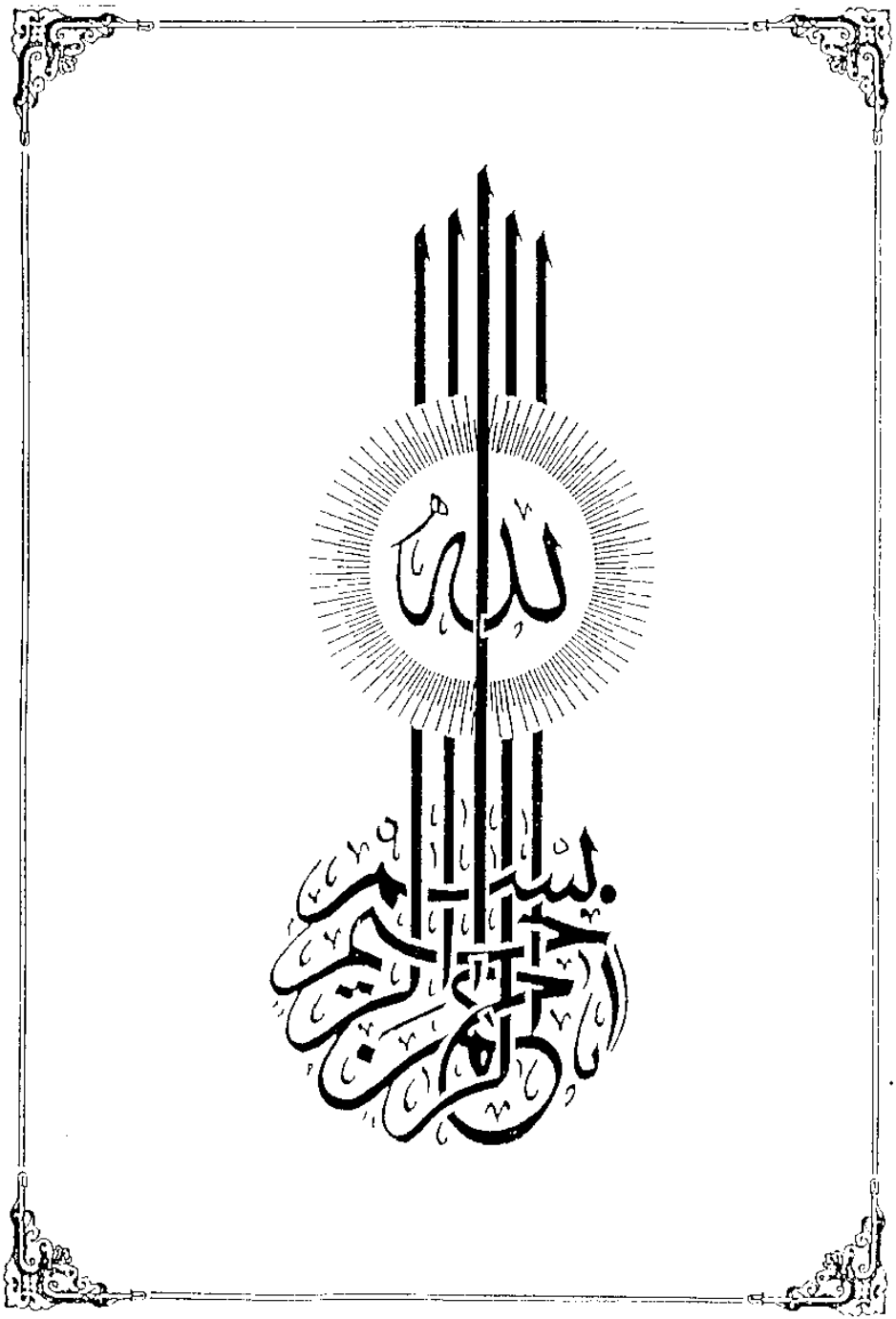

بسم الله الرحمن الرحيم

﴿ قالوا سبحانك لا علم لنا إلا ما
علمتنا إنك أنت العليم الحكيم ﴾

صدق الله العظيم

سورة البقرة – الآية ٣٢

TO ...

MY FAMILY

Abbreviations

LPS	Lipopolysaccharide
LBP	Lipopolysaccharide- binding protein
KD	Kilo daltion
GPI	Glycosyl phosphatidyl Inositol
CD	Cluster defferentiation
TNF	Tumor necrosis factor
IL	Interleukin
sCD	Soluble cluster defferentiation
rsCD	Recombinant soluble cluster defferentiation
HDL	High density lipoprotein
PGE_2	Prostaglandin E_2
IFN	Interferon
EP	Endogenous pyrogen
MPS	Mononuclear - Phagocytic system
PAF	Plasma activating factor
IL-IRa	Interleukin-1 receptor antagonist
TNFsRs	Tumor necrosis factor soluble receptors
PDGF	Platelet derived growth factor
NK	Natural killer
TGF-B	Transforming growth factor - B

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INTRODUCTION &

AIM OF THE WORK

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Bacterial endotoxin derived from the outer cell membrane of gram negative bacteria is recognized to elicit a diverse spectrum of pathophysiologic, pharmacologic and immunologic responses in human beings ***(Morrison and Ulevitch., 1978).***

It has been reported that endotoxin is present in large quantities in the intestine as a result of bacterial death, and that endotoxin is absorbed from the colon and enters the portal circulation. Such portal endotoxemia represents a normal physiologic state ***(Lumsden et al., 1988-Nolan, 1989).***

It has been observed that systemic endotoxemia is much more common in cirrhotic patients than in normal individuals ***(Prytz et al., 1976).*** Subsequent studies suggested that endotoxemia without sepsis is a constant finding in cirrhosis ***(Bigatello et al., 1987-Bode et al., 1987).***

Endotoxin has been suggested to play some role in the pathophysiology of liver diseases, particularly such complications as coagulopathy, hypotension, and renal failure ***(Munford, 1978-Nolan, 1989).***

The liver stands as a bacterial filter between the portal and systemic circulations, and kupffer cells form a protective barrier between systemic circulation and portal blood flow by removing endotoxin from the portal blood ***(Fox et al., 1990).***

Kupffer cells not only clear endotoxin from the circulation but are also activated by it. The role of endotoxin

activated kupffer cells in the pathogenesis of hepatic injury is only begining to be understood ***(Toth and Thomas, 1992).***

It has been suggested that the major defect in the handling of endotoxin in patients with chronic liver diseases especially with cirrhosis is due to the presence of portal systemic collaterals which permit the circulating endotoxin to by pass the hepatic RES ***(Van Deventer et al., 1988).***

Decreased RES functional capacity has been suggested as another mechanism of endotoxemia in chronic liver diseases ***(Ingoldby et al., 1984).***

The aim of this work is to measure serum endotoxin level in peripheral venous blood in Egyptian children suffering from chronic liver diseases and to study factors interacting with it .