THE EFFECT OF THERAPY OF BLEEDING ESOPHAGEAL VARICES ON LIVER FUNCTIONS

THESIS

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The M.Sc. Degree in Internal Medicine

BY

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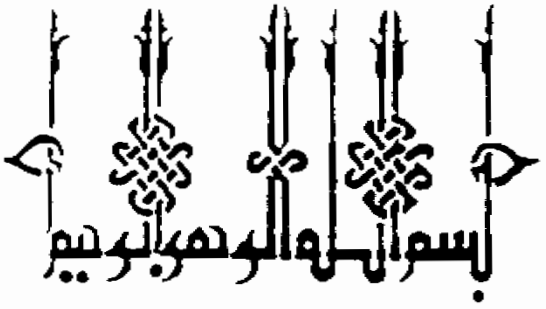

رحم الله مغرب

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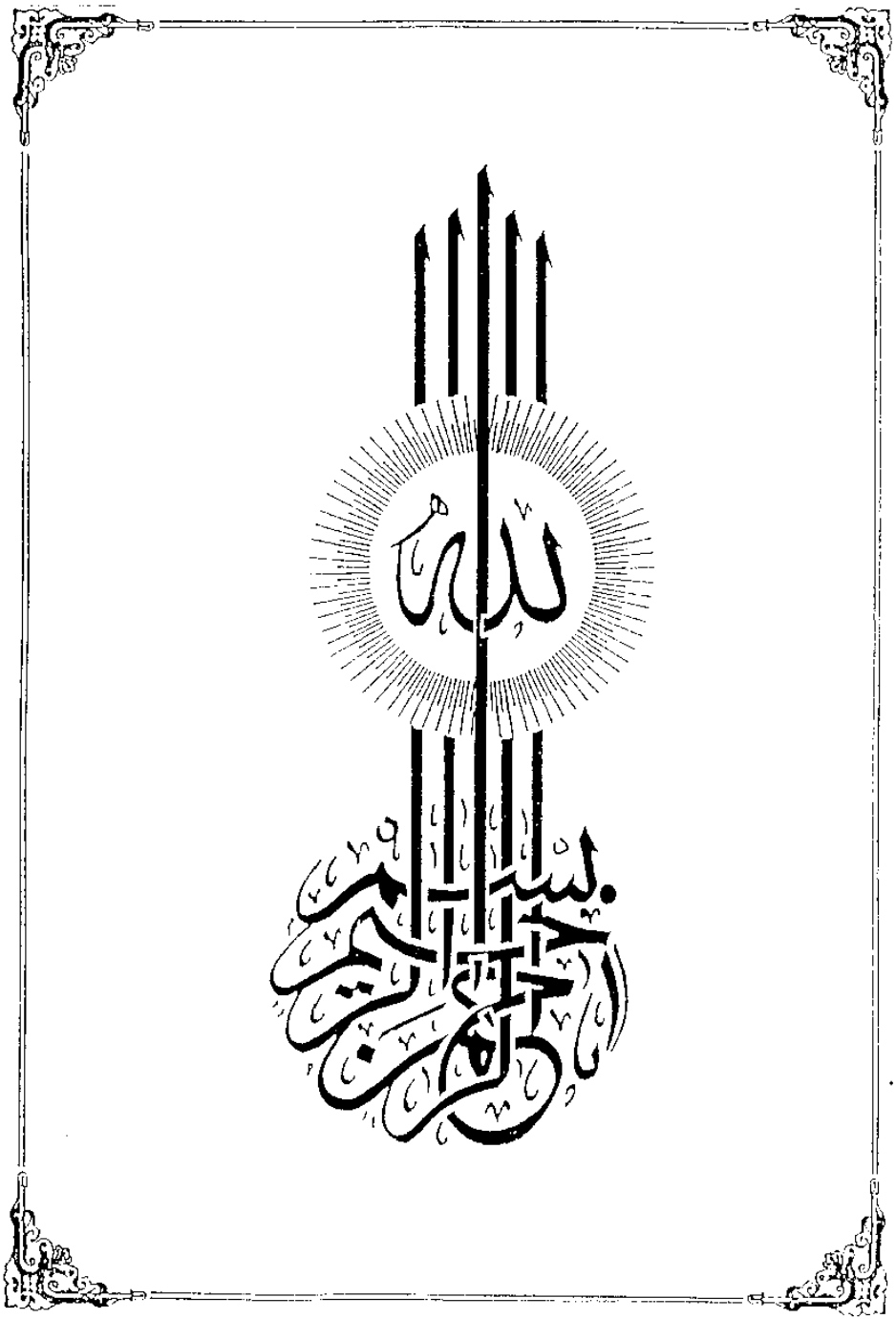

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Azza M. Yousef

LIST OF ABBREVIATIONS

AID_s:	Acquired immunodeficiency disease.
DSRS:	Distal splenorenal shunt.
EST:	Endoscopic sclerotherapy.
GEC:	Galactose elimination capacity.
GFR:	Glomerular filtration rate.
ICG:	Indocyanine green.
PGE_2:	Prostaglandin E_2.
PPE:	Posterior pituitary extract.
RBF:	Renal blood flow.
RPF:	Renal plasma flow.
TIPss:	Transjugular intrahepatic portacaval stent shunt.

CONTENTS

INTRODUCTION

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Haematemesis caused by massively bleeding esophageal varices is one of the most horrifying experiences for both the patient and the physician. The outcome of bleeding episode in patient with hepatic cirrhosis has been studied and revealed a one month mortality of 40% and a 2 year survival of approximately 20% and it was found that to improve the outcome, it is necessary to stop bleeding immediately **(Soderlund, 1985)**.

The management can be considered in the three distinct clinical situations:

The treatment of a patient with acute bleeding episodes the prevention of variceal rebleeding and the prevention of first variceal bleeding. Patients with variceal bleeding frequently have early rebleeding occurring with the first few days of hospital admission **(Graham and Smith, 1981; Fleischer, 1983; De Dombal *et al.*, 1986)**.

The immediate treatment of patient after being resuscitated with blood transfusions and fresh frozen plasma includes:

(1) A wide bore nasogastric tube for repeated gastric lavage with cold saline.

(2) An early diagnostic endoscopy is done but it does not improve survival but early diagnosis is important for rational management including use of injection sclerotherapy if needed **(Koff, 1981)**. The child Pugh classification and endoscopic findings are important for prognosis of the patients.

(3) Clinical and laboratory evidence of both severity of haemorrhage and liver disease should be included in initial assessment as these have prognostic significance **(Burroughs, 1987)**.

(4) An effective vasoactive drug should be administered as a first step **(Koff, 1981)**.

(5) Finally balloon tamponade can be applied.

(6) Stapled transection or portacaval shunts can be used.

For prevention of recurrent gastrointestinal bleeding propranolol is used in patients with cirrhosis **(Lebrec, *et al.*, 1982)**.

Although there are many alternatives in the treatment of bleeding and prevention of rebleeding of esophageal varices, however all clinical trials are concordant as regards their lack of effect on death rate from bleeding.

With drugs this lack of effect was suggested to be due to the relevant side effects, which may mask the benefits resulting from the hemodynamic effects of the drug **(Beli, 1986)**.

Among these side effects it has been suggested that the acute administration of vasoactive drugs like vasopressin and somatostatin in patients with cirrhosis may decrease the liver metabolic activity either by a direct liver damage or mediated by liver ischemia leading to decrease in perfusion of the functioning areas of the liver **(Barbare, *et al.*, 1984)**.

AIM OF THE WORK

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Considering all the above data, the aim of this work was the comparison of the effect of some selected modalities of treatment of bleeding esophageal varices on the liver function tests in cirrhotic patients and comparing them to healthy control group.

REVIEW OF LITERATURE

ANATOMY AND PHYSIOLOGY OF THE PORTAL VENOUS SYSTEM

(A) ANATOMY:

The portal system includes all veins that carry blood from the abdominal part of the alimentary tract, the spleen, the pancreas and the gall bladder.

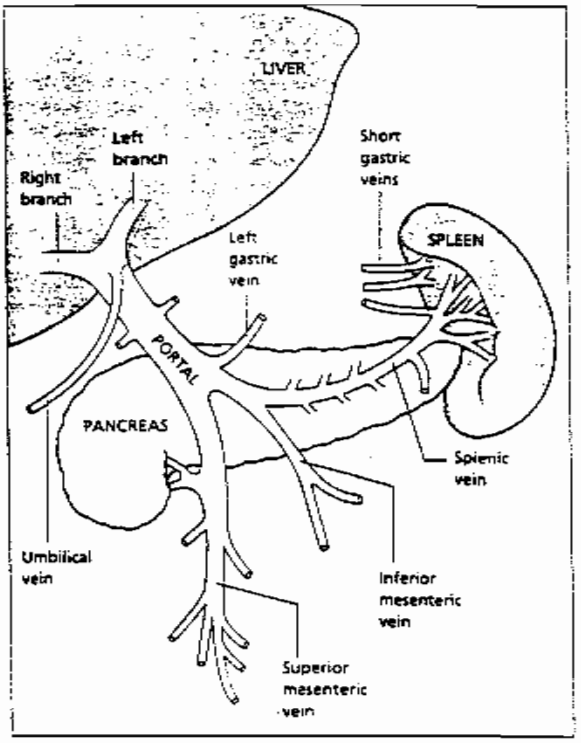
The portal vein enters the liver at the porta hepatis in two main branches, one to each lobe, it is without valves in its large channels **(Douglass, *et al.*, 1950)**.

The portal vein is formed by the union of the superior mesenteric vein and splenic vein just anterior to the head of the pancreas at about the level of the second lumbar vertebra, it extends slightly to the right of the mid line for a distance of 5.5-8 cm to the porta hepatis.

The portal vein has a segmental intrahepatic distribution accompanying the hepatic artery.

The superior mesenteric vein is formed by tributaries from the small intestine, the colon and the head of the pancreas and also from the stomach via the right gastroepiploic vein.

The splenic veins (5-15) channels originate at the splenic hilum and join near the tail of the pancreas with the short gastric vessels to



The anatomy of the portal venous system

(Quoted from Sherlock and Dooley, 1993)