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## STUDY THE CHANGE OF PORTAL BLOOD FLOW IN CIRRHOTIC PATIENTS WITH HEPATIC COMA

#### Thesis

Submitted for partial fulfillment of Master degree In INTERNAL MEDICINE

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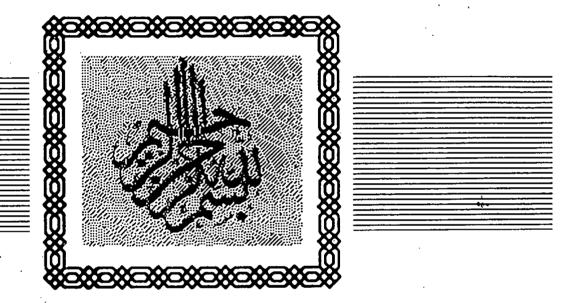
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#### LIST OF ABBREVIATIONS

AAAs Aromatic amino acids

ALT Alanine transaminase

AST Aspartate transaminase

CS Cross sectional

CT Computerized tomography

EEG Electroencephalogram

ELISA Enzyme linked immunosorbent assay

GABA Gamma amino butyric acid

GGT Gamma glutamyl transferase

HBsAg Hepatitis B surface antigen.

HCVAb Hepatitis C virus antibody.

HLA Human leucocytic antigen

m.eq millimeter equivalent

PBF Portal blood flow.

PVV Portal vein velocity

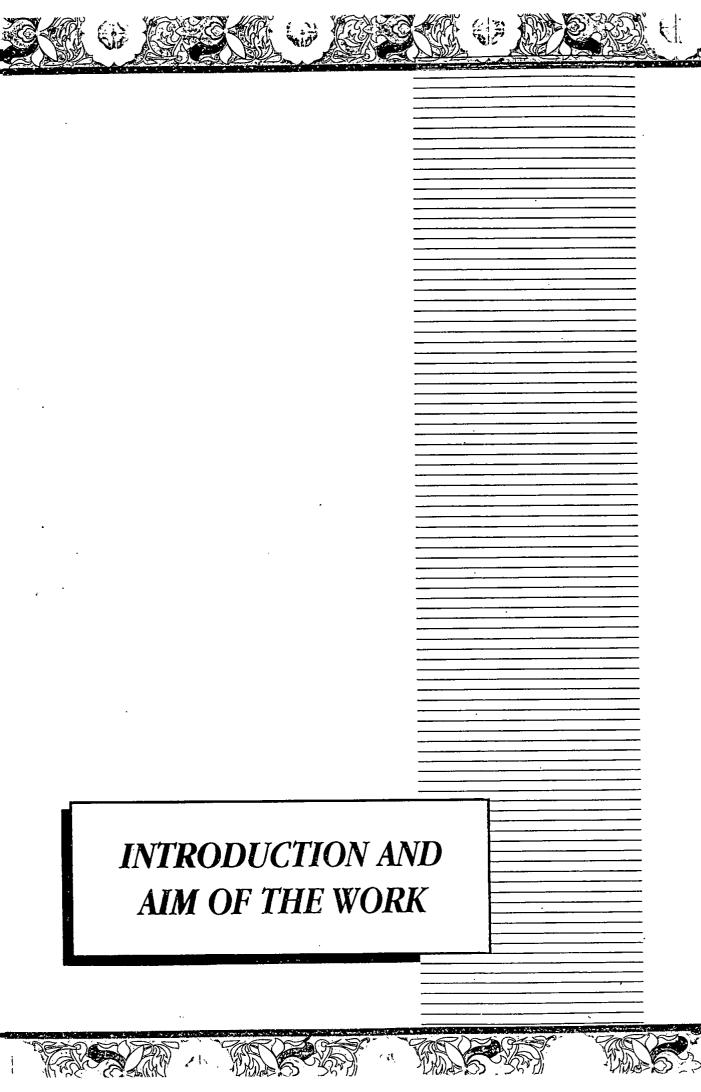
ZDD Two Doppler Dimension

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#### **INTRODUCTION**

Hepatic encephalopathy is a complex neuropsychiatric syndrome that appears to be characterized predominantly by augmented neuronal inhibition. The syndrome is a feature of acute, late-onset, or chronic hepatocellular failure. It is generally considered to be a potentially reversible metabolic encephalopathy (Sherlock, 1993). The clinical manifestations range from a slightly altered mental status to coma. It may be acute or chronic. In severe cases, irreversible coma and death may occur (Podolosky et al., 1991).

Portal blood flow in man is about 1000 - 1200 ml/minute. There is no constant pattern of hepatic distribution of portal inflow, sometimes splenic blood goes to the left and sometimes to the right lobe, crossing over the stream can occur in the human portal vein flow which is probably stream lined rather than turbulent (Abaza, 1978).

Normal direction of blood flow in the portal vein is hepatopedal which means that, the blood goes towards the liver (Maggio and Sanders, 1991). Normal portal vein blood flow/kg body is about  $14.1 \pm 2.7$  ml/kg/minute (Hekroyed et al., 1986). The splenic blood flow is proportional to splenic volume and can increase to 2 - 3 liters/minute if the spleen is

massively enlarged, while the intestinal blood flow increase by eating and in case of inflammatory bowel disease and decrease by exercise (Ackroyed et al., 1986). The normal fasting hepatic blood flow approximate 1500 ml/minute. The high pressure hepatic arterial and low pressure-portal venous stream, unite at the level of hepatic sinusoids the best estimate indicate that about two-thirds of hepatic blood flow and about half of total oxygen consumption is supplied by portal vein while hepatic artery contribute to the remainder (Schiff, 1987).

#### AIM OF THE WORK

The aim of this work is to study the change in the portal blood flow in cirrhotic patients with hepatic coma.

