SKIN AND LIVER DISEASES

Essay
Submitted in partial fulfilment for
Master Degree in Dermatology and Venereology

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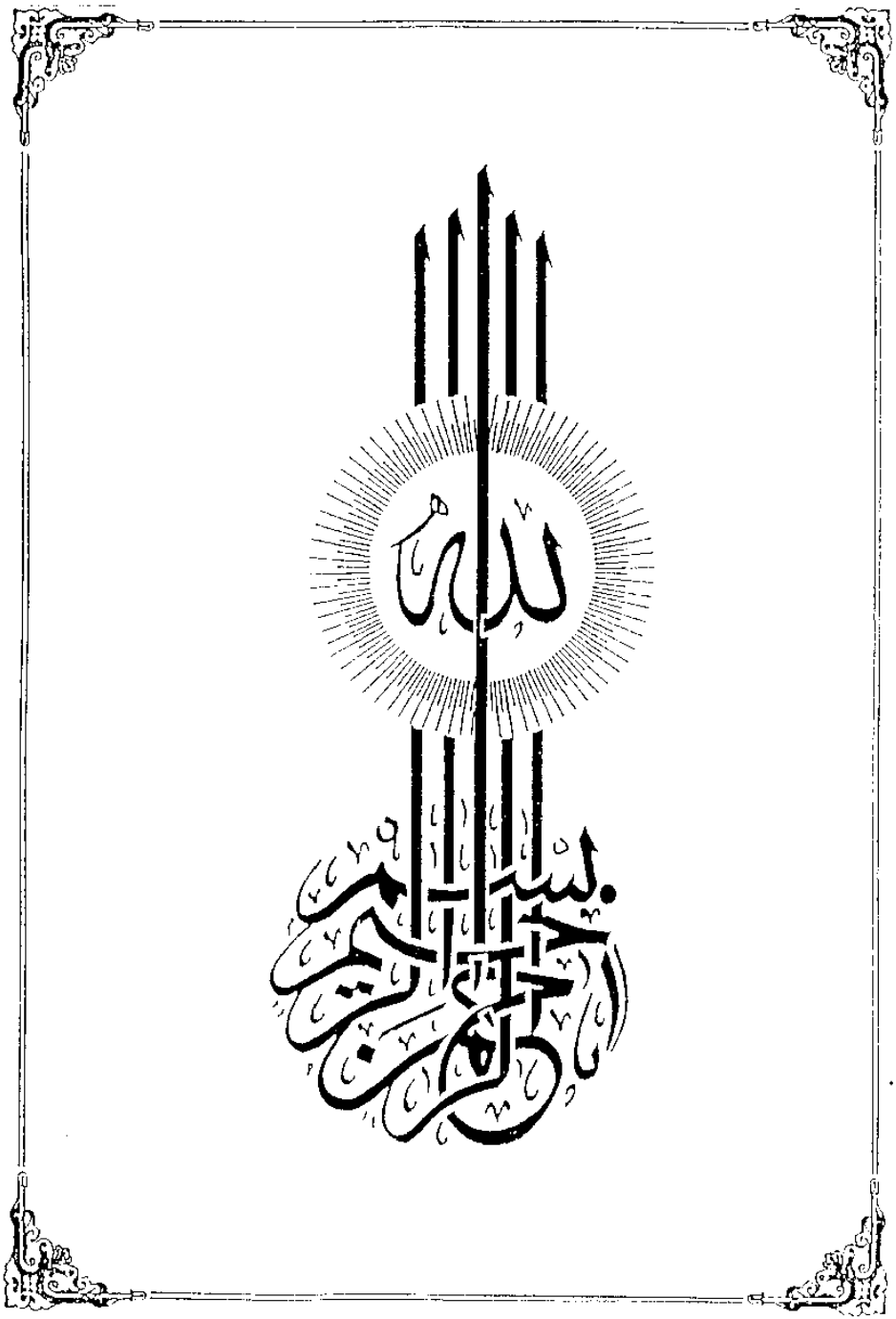
To My Mother &
The Spirit of My Father



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INTRODUCTION:

The skin is extraordinarily informative in hepatic diseases, and although many of the cutaneous features occur in the various types of liver disease, the different balance of sings and symptoms may help to make the clinical distinction, **[Shuster, 1978]**.

The liver is the second largest organ in the human body and plays a central role in metabolic homeostasis. It has long been recognized that selected diseases may include both hepatic and cutaneous manifestations. In some instances, the simultaneous involvement of the two organs is clearly and directly related, whereas, in other cases, the relationship is less clear. In some reported associations of hepatic and cutaneous disease, the relationship is no more than coincidental, **[Berman and Lamkin, 1989]**.

There are systemic drugs used in dermatology for which liver function test assessment is most important, such as; methotrexate, reti-

retinoids, ketoconazole. There are several histologic patterns of drug induced liver toxicity, **[Wolverton, 1991]**.

AIM OF THE WORK:

To study the relation between liver diseases and skin which might be of various cutaneous manifestation useful for diagnosis and monitoring the patient response to treatment.

REVIEW OF LITERATURE

INTRODUCTION

The liver in the normal adult weighs approximately 1.5kg. It is situated in the right upper abdomen largely under the right lower ribs. An important cell found in the liver is the kupffer cell which is particularly prominent in the hepatic sinusoids. This cell is a part of the reticulo-endothelial system and undertakes important storage and immune processes, **[Read, 1978]**.

Liver cells carry out a wide variety of metabolic functions and the liver is quantitatively the most important organ for the drug metabolism. Most drugs metabolized are fat-soluble and their conversion into water-soluble substances make them suitable for excretion in bile or urine. Also the liver is an important site of hormone action and of hormone degradation, **[MacLeod et al., 1987]**.

The liver plays a central role in the maintenance of metabolic homeostasis. The biochemical functions in which the liver plays a major role include:

(1) the intermediate metabolism of amino acids and carbohydrates.

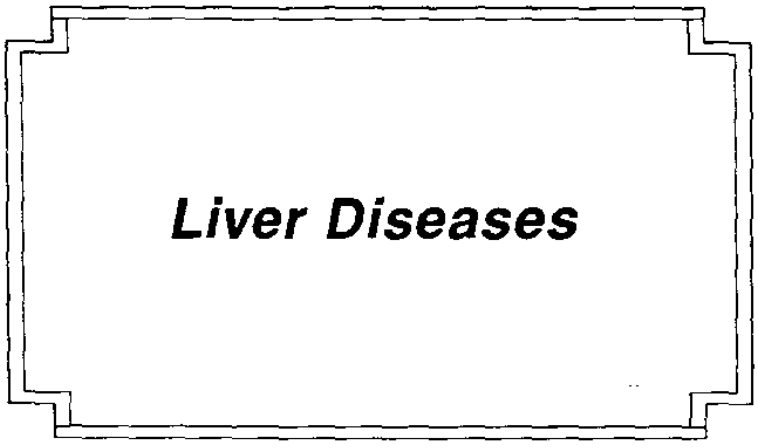
(2) synthesis and degradation of proteins and glycoproteins.

(3) metabolism and degradation of drugs and hormones and

(4) regulation of lipid and cholesterol metabolism, **[Podolsky and Isselbacher, 1991]**.

It is the principal organ in which a wide variety of endogenous and exogenous substances such as ammonia, steroid hormones, drugs, and toxins undergo biotransformation. To the extent that biotransformation "detoxifies" or inactivates a substance, the liver may be viewed as serving a regulatory or protective function for the whole organism, **[Ockner, 1992]**.

Also, it has an important role in bilirubin metabolism, unconjugated bilirubin formed from the breakdown of hemoglobin heme and other hemoproteins is transported in plasma reversibly bound to albumin and is converted in the liver to bilirubin monoglucouronide (BMG) and diglucuronide (BDG). BMG and BDG together normally account for less than 5% of serum bilirubin. In the presence of hepatobiliary disease, BMG and BDG accumulate in plasma and appear in urine, **[Scharschmidt, 1992]**.



LIVER DISEASES

I. Parenchymal

A. Hepatitis

1. Acute

2. Chronic

3. Toxic and Drug induced hepatitis

B. Cirrhosis

C. Hemochromatosis

D. Wilson's disease (hepato lenticular degeneration)

E. Space occupying lesions

F. Infiltrations

II. Hepatobiliary

A. Extrahepatic biliary obstruction

B. Cholangitis

III. Vascular

CHAPTER I

LIVER DISEASES

Classification of liver disease:

No single classification of the various types of liver disease is entirely satisfactory because in many instances the etiology and pathogenic mechanism are obscure.

Because of the difficulties involved in defining the etiology of many types of liver disease, in most instances the process is best defined and described by an examination of the morphologic character of the lesion. Therefore, a morphologic classification of liver is more practical than one based on etiology.

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III. Vascular

[*Isselbacher and Podolsky, 1991*] .

[A] Hepatitis:

(1) Acute viral hepatitis:

It is a systemic infection affecting the liver predominantly. Five major agents which differ in structure and in the epidemiology and natural history of diseases they cause, and several minor agents the vast majority are accounted for by hepatitis viruses A,B,C and D. In addition hepatitis E. Other viral agents that cause an acute hepatitis