THE VALUE OF PERITONOSCOPY IN DIAGNOSIS OF LIVER DISEASES

THESIS

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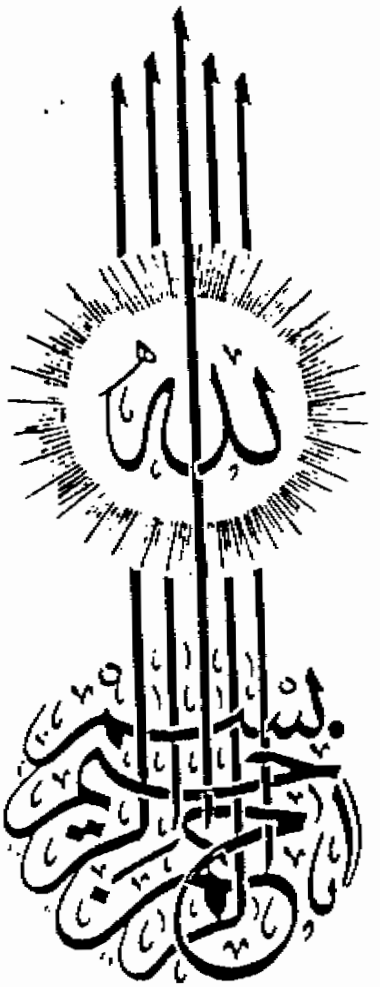

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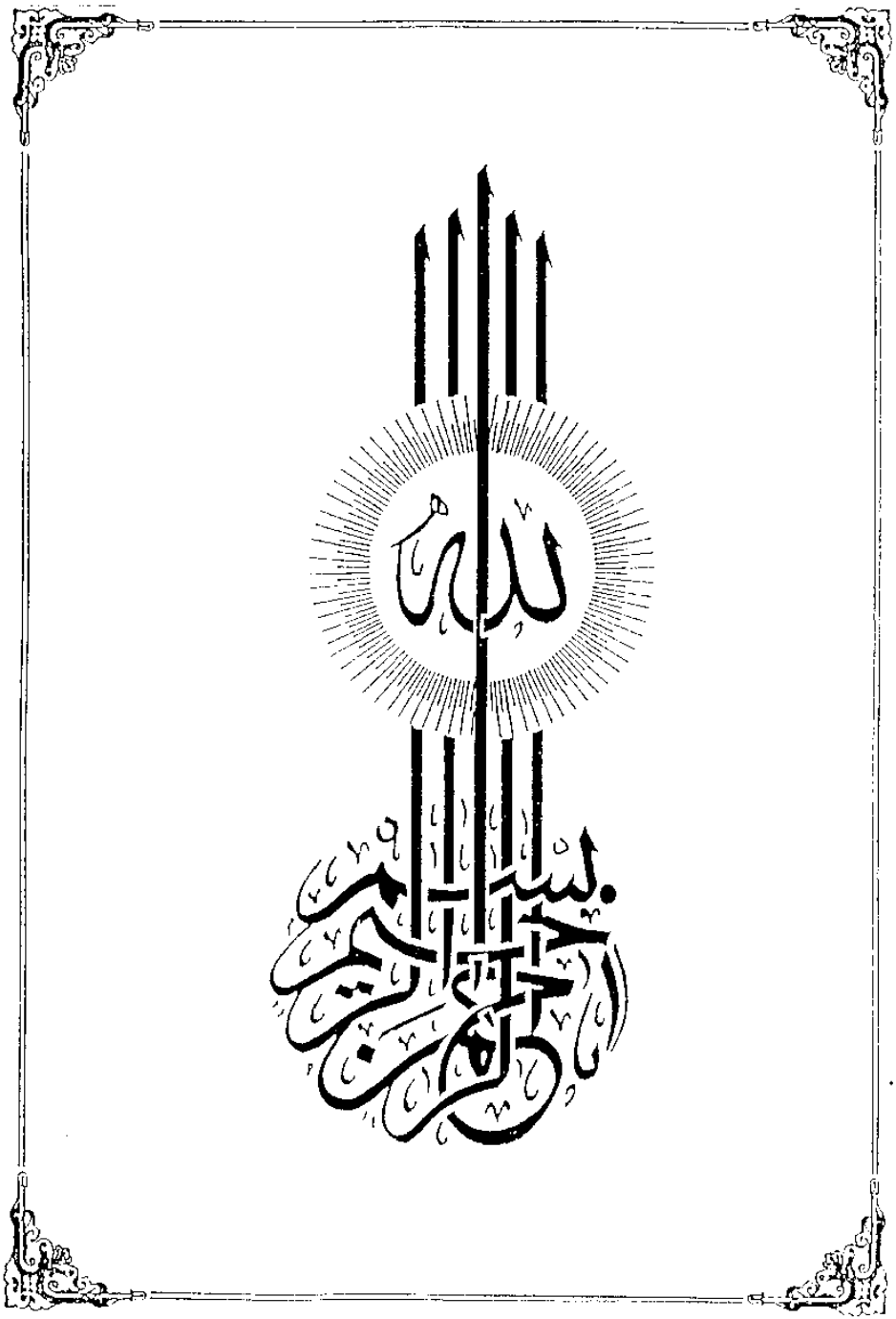

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Human schistosomiasis headed the list of communicable diseases in Egypt (Mousa, 1976). It is considered as one of the most national problems not only as regards health but also as regards social and economic effects (Khalil, 1970). The disease is notorious for hepatosplenic involvement. It mainly affects the mesenchymal tissue of the liver and parenchymatous damage either not occur or if any, it is limited even in advanced cases (Elwi , 1976).

Not every cases of hepatosplenomegaly in Egypt is bilharzial, and even in bilharzial cases other aetiological factors may be blamed (Mousa & El-Garem, 1959). Bilharzia alone was responsible for only 36% and the other 34% was associated with other aetiological factors.

Nutritional liver changes were present in 3/4 of these while post viral changes were present in the remaining fourth (1/4).

Mousa and El-Garem (1959), mentioned two types of bilharzial fibrosis, the first was mixed type and the second was pure bilhazial fibrosis. Regeneration is

possible in the first type while it never occur in the second, where the parenchyma is mostly spared.

The liver is commonly affected in bilharziasis, hepatomegaly in such cases may be multifactorial and needs a lot of investigations to prove such diagnosis. The recent investigation of laparoscopy with liver biopsy have been used to establish the aetiological and pathoclinical classifications and to determine with precisions the different stages with liver diseases. The aim of this work is to use combined Laparoscopy with Liver biopsy in diagnosis of liver diseases.

ANATOMICAL CONSIDERATION

I- ANATOMICAL CONSIDERATIONS

I- The peritoneal Cavity:

The abdominal cavity is enclosed by the abdominal walls and is completely filled by the abdominal viscera. These consist of the stomach and intestines, thier associated glands (Liver and pancreas), blood and lymph vessels and the spleen, together with the kidneys and suprarenal glands. The pancreas, Kidneys and suprarenal glands lie on the posterior abdominal wall, while anterior to them are the other structures surrounded to a greater or lesser extent by the peritoneal cavity. (Romanes 1975).

The peritonium consists of a tough layer of elastic areolar tissue. It consists of parietal and visceral layers which are separated from each other by a thin film of fluid. The parital peritonium forms a relatively simple layer on the internal surface of the abdominal walls, but the visceral layer which passes as mesentries to surround the gut tube, liver and spleen is a complex layer, the various parts of which are applied to and move on each other in addition to sliding on the parital peritonium (Romanes 1975).

The peritoneal cavity is a slit like interval between the parital and visceral layers of the peritoonium. The cavity has a very small volume, but may be extended as far as the abdominal walls will allow by the introduction of fluid or air. (Romanes 1975).

II- Liver:

The liver, the largest organ in the body, weighs about 1500 g. Sheltered by the ribs in the right upper abdominal quadrant, it is shaped like apyramid whose apex reaches the xiphisternum. (Sherlock 1981).

It is divided into two anatomical lobes, the right being about six times the size of the left. Both lobes are separated anteriorly by a fold of peritonium called the falciform ligament, inferiorly by the fissure for ligamentum teres, and posteriorly by the fissure for ligamentum venosum. (Last 1973).

The right lobe shows two cricumscribed areas, one on it's inferior surface called the quadrate lobe, and one on it's posterior surface called the caudate lobe (Sherlock 1981).

The falciform ligament connects the anterior surface of the liver to the diaphragm and anterior abdominal wall.

It has a free inferior border in which lies the round ligament of the liver (obliterated umbilical) which runs from the umbilicus to the left branch of the portal vein. The superior border of the falciform ligament divides above the liver into right and left layers which are reflected from the superior surface of the liver to form the margins of the bare area of the liver where it is in direct contact with the diaphragm. The right and left coronary ligaments arise from the right and left layers of the falciform ligament, and extend as a horizontal peritoneal fold on the superior surface of the liver. The ligamentum venosus arises from the left branch of the portal vein and fuses with the inferior vena cava. (Romanes 1975).

The liver has five surfaces, superior, anterior, right lateral, posterior and inferior.

The superior surface is seperated by the diaphragm from the pleura and lung bases on each side, and from the pericardium and heart in it's middle part.

The anterior surface is related to the anterior abdominal wall and the diaphragm. The right lateral surface is related to the diaphragm seperating it from the right pleura, right lung base and the 6th. to the11th. rib on the right side.

The posterior surface shows three anatomical landmarks which are the bare area, the caudate lobe and the portahepatis. The bare area is triangular in shape with it's apex to the right side and it's base formed by the groove for the inferior vena cava seperating it from the caudate lobe. The caudate lobe is related inferiorly to the porta hepatis. The posterior aspect of the left lobe is related to the oesophagus.

The inferior surface is related on it's left side to the stomach. On the right side, the quadrate lobe is related to the transverse colon, pylorus and first part of the duodenum.

The quadrate lobe is bounded on the left side by the fissure for ligamentum teres and on the right side by the gall bladder fossa.

To the right of the gall bladder there is the renal and colic impression. (Last 1973. Romanes, 1975).

Microscopically, the liver is divided into lobules (1-2 mm) indiameter, seperated by areolar tissue, in which branches of the hepatic artery, portal vein, and tributaries of the bile ducts run. These constitute the portal canals.

The lobule consists of columns of liver cells radiating from the central vein and interlaced in orderly fashion by Sinusoids (Last 1973).

The liver cells are polygonal in shape, their nucleus is single or less often multiple (Sherlock 1981).

The walls of the sinusoids consists of endothelial and phagocytic cells of the reticulo endothelial system. The space of Disse is a tissue space between hepatocytes and sinusoidal lining cells(Sherlock 1981).

III- Gall bladder:

The gall bladder is a pear shaped cyst located on the inferior surface of the liver. It is about 7.5 -10 cm long.

It consists of a fundus, body and neck.

The rounded fundus protrudes below the inferior margin of the right lobe of the liver, lying on the transverse colon. The body lies in a fossa on the inferior surface of the liver and through it the fundus is connected to the narrow neck which lies close to the right extremity of the porta hepatis on the posterior surface of the liver. (Romanes 1975).