ENDOSCOPIC, BLOOD AND IMMUNOLOGICAL CHANGES AFTER SPLENECTOMY AND DEVASCULARIZATION AND SHUNT OPERATIONS

THESIS

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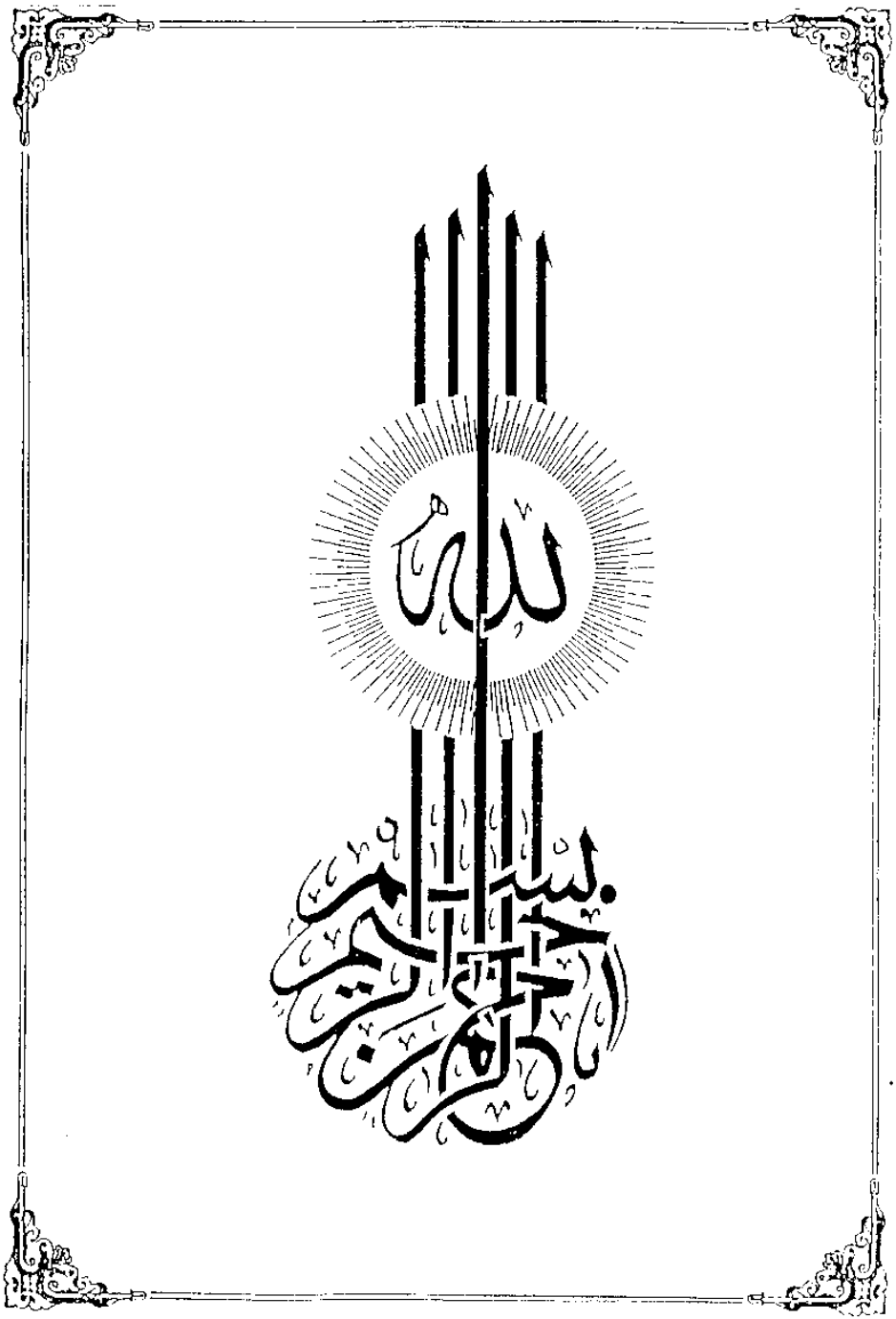

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CONTENTS

INTRODUCTION AND AIM OF WORK

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Hepatosplenic syndrome (H.S.S.) is so common in Egypt. This syndrome usually complicated by Haematemesis and liver cell failure. This was found to be responsible for 36% of all adult deaths in Egypt.(R. Kamel & Myron G. 1979).

This high incidence in mortality rate of that common disease made it a subject for research to many of the research workers. They are studying the complications and its management of that disease.

There is reason to believe that incidence of H.S.S. may be increasing in Egypt, since complications such as haematemesis secondary to oesophageal varices are seen more frequently. This increase may be due to recent rise in the incidence of schistosomiasis brought about by new irrigation projects, and by an increase of chronic active hepatitis due to a relative non availability of disposable syringes. The economic coasts of H.S.S found to be enormous by the World health Organisation as 200 million dollars worth of manhours of work are lost in Egypt due to schistosoma alone every year. (R. Kamel and Myron G. Schultze, 1979).

The aim of this work is to study comparatively three main lines of management of oesophageal varices complicating Bilharzial portal hypertension. These three lines are; end to side porta caval shunt, splenectomy and devascularization and lastely injection of the varices by sclerosing material.

Oesophageal varices will be studied by Fibrotpic oesophagoscope and Barium swallow using the conventional method and by injecting buscopan.

Pathological, biochemical, immunological and blood changes before and after surgery will be discussed.

Post operative study is done to evaluate various operative techniques.

VISUALISATION OF OESOPHAGEAL VARICES

I. Barium Swallow:

Wolf, in 1928 was the first to demonstrate the radiological picture of oesophageal varices. He remarked that they could be diagnosed radiologically before the appearance of symptoms of hepatic cirrhosis.
Wolf concluded that, in cases of G.I.T. haemorrhage of obscure origin, radiological exploration of the oesophagus should be carried out.

Many cases described in the literature have confirmed Wolf's opinion.

Radiological Picture of Oesophageal Varices:

The early radiological change is linear filling defect. This may be seen on one or other surface of the lower end of the oesophagus.

In advanced cases the picture is as follows: The lumen of the oesophagus is widened and slightly tortuous. The normal shallow longitudinal folds are obliterated either partially or completely by the varices. The filling defects are also described as worm-like, crisoid, globular or may resemble a string of beeds. The normal smooth lateral contour

becomes scalloped and mammillated. There is no obstruction to the passage of barium but traces tend to remain in irregular crevices.

Also suggestive secondary signs may be noticed:

1. The oesophagus with varices distends more than the normal.
2. Peristaltic contraction are very superficial.
3. Residual amount of barium stagnates in the oesophagus despite numerous deglutiton of saliva (no cleaning signs). In most cases, the radiological picture is characteristic and easy to recognise.

Radiological Grading of Oesophageal Varices:

Grade 1:

There is irregularity of the mucosal folds confined to the distal $\frac{1}{3}$ of the oesophagus.

Grade 2:

There is definite serpigenous filling defects. The mucosal folds in the lower half of the oesophagus is not completely intercepted.

Grade 3:

There is gross varices. The filliwng defects extends completely obscuring the normal mucosa. The varices extends into the proximal ½ of the oesophagus.

II. Enhanced Visualization of Oesophageal Varices by Buscopan:

(Chung - I Liu, M.D. Tarpel, Taiwan, June ;1974).

Visualization of small oesophageal varices by conventional radiological methods may be very difficult. Although various efforts have been tried. These efforsts such as the use of Trendlenburg position with valsalva or Mueller maneuvers, dextran infusion, oesophageal ballon and cine-radiography. Successful visualisation of oesophageal varices still varies from 20 to 70 per cent.

Dalinka et al. (1972) reported an equivocal demonstration of oesophageal varices by I.V. or I.M. administration of 30 mg. Pro-Banthin in 17 patients. This drug diminishes or abolishes smooth, muscle peristalsis and markedly decreases oesophageal motor activity, permitting the intramural veins to remain distended throughout the study, independent of respiration, and consequently augments the visualization of varices.

In these cases the varices were not delineated by the conventional radiological methods, but were demonstrated in 9 patients after Pro-Banthin injection.

Pro-Banthin is contra-indicated in patients with glucoma. It must be used with caution in patients having cardiac disease or prostatic hypertrophy.

Dalinka et al. (1972) had introduced Buscopan as an alternative enhancement agent.

Fibre-Optics:

Fibre-optic is a revolutionary system for transmitting images and light over curved paths by utilizing long thin fibres of optical glass. The term 'fibre-optic" is used to describe the principle of light and image transmission through glass fibres, and also the instruments (endoscopes) which contain these fibre transmission systems.

Although the clinical value of fibre-optic endoscopy was already appreciated in 1958 it was not until 1970 that fibre-optic endoscopes which allowed examination of the oesophagus, stomach upper duodenum and the colon to become generally available. There are now instruments avilable with which it is possible to examine the entire digestive tract. Not only is the diagnosis of digestive disease by endoscopy possible, but a tissue diagnosis can also be made employing biopsy and cytology (P.R. Salmon, 1974).

Upper gastro-intestinal endoscopy (oesophago-gastro-duodenoscopy).

It is possible to examine the whole of the upper gastro-intestinal tract with one instrument.

Indications:

The most common indication for upper gastro-intestinal endoscopy is dyspepsia. The other main indications for endoscopy are the assessment of ulcer healing, recurrence symptoms in patients who have had previous gastric surgery, gastro-intestinal bleeding and to obtain a tissue diagnosis of a lesion shown at radiology.

Complications:

Perforation mainly in the oesophagus and stomach.

Aspiration of saliva or gastric contents. This, however, is rarely followed by serious sequelae.

Diazepam which is used widely in endoscopy can cause many complications especially if it is used incorrectly. Hypotension and apnea may occur during intravenous administration especially if injected rapidly. The drug is extremely irritant if extravasation occurs and may result in thrombophlebitis and peripheral nerve palsy.

The amnesia induced by diazepam may prove hazardous to an outpatient.

The other main complications of endoscopy are cardiovascular and include hypotension following diazepam and cardiac arrhythmias during the examination.

Contra-indications for Endoscopy are:

1. Oesophageal obstruction.
2. Oesophageal distortion the result of aortic aneurysm, or enlarged Lt. atrium.
3. Mediastinal tumours.
4. Spinal deformities such as spondylitis deformans, osteoarthritis of the spine with osteophages formation, predisposis to necrosis of the posterior pharyngeal wall from instrument pressure.
5. Severe cardiovascular and pulmonary diseases, recent myocardial infarction.
6. Oesophageal distortion from an intrinsic disease such as oseophageal diverticulae make endoscopy hazardous.

Endoscopic Picture of Oesophageal Varices:

Oesophageal varices are identified endoscopically by the tortousity and the elevation of mucosa lining them.