RECURRENT PEPTIC ULCER

Essay

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OF THE MASTER DEGREE IN

(GENERAL SURGERY)

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A.M. ABDEL KARIM

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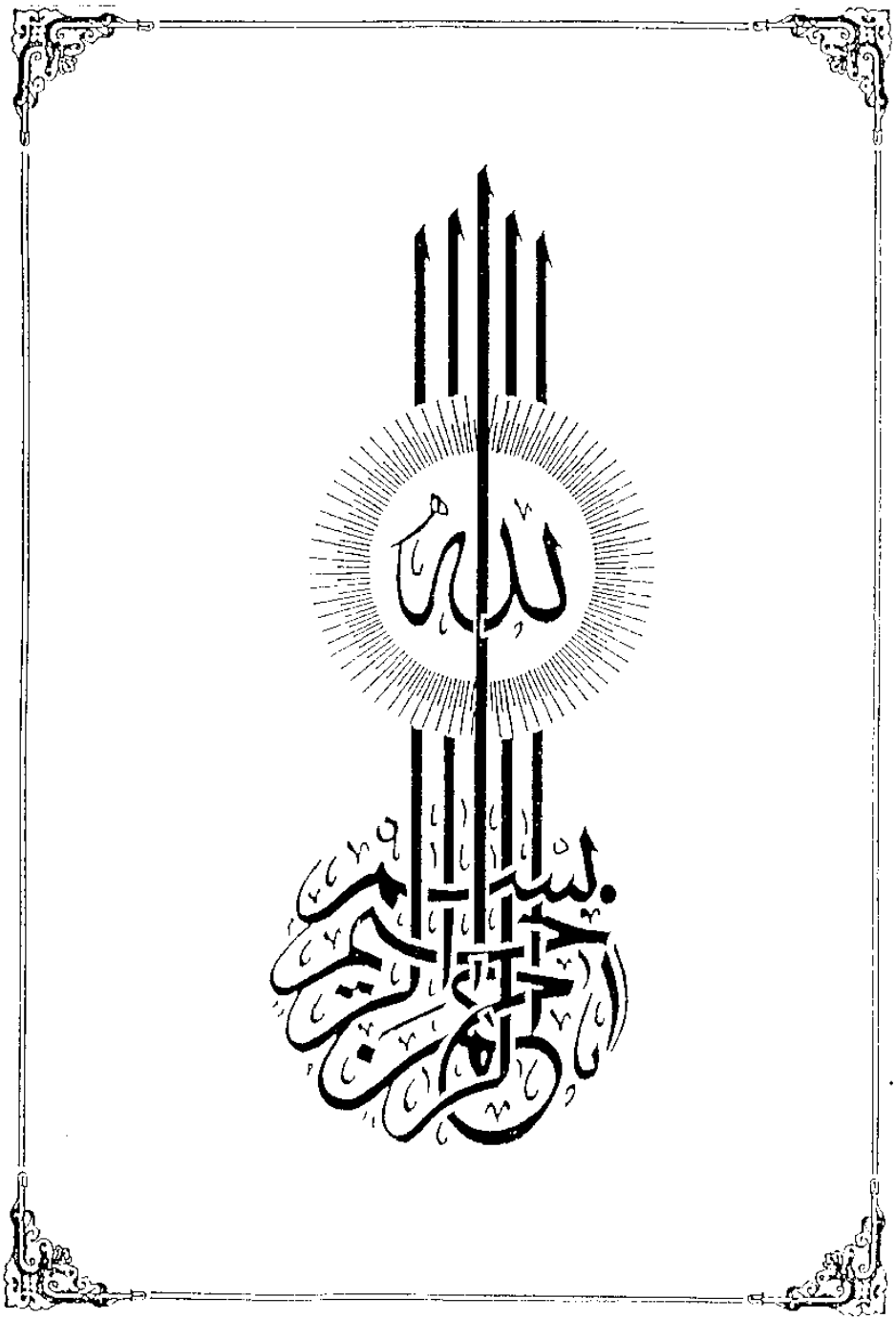

INTRODUCTION

I N T R O D U C T I O N

Surgery is an important line of treatment of peptic ulcer, but it has many complications.

Recurrent ulcer continues to be the most serious late complication of surgical operations for peptic ulcer , (Andros, 1967).

Recurrent ulcers are in general, far more trouble some symptomatically than primary peptic ulcers, and they may give rise to considerable problems in diagnosis and treatment. (Kennedy, 1980).

The Aim Of The Work:

The aim of this work is to study the problem of recurrent peptic ulceration from all its aspects, including the aetiology, clinical picture, complications, and up to date lines of investigations and treatment of recurrent peptic ulcers.

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ANATOMY OF THE STOMACH

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The stomach is the most dilatable part of the alimentary canal and is situated between the end of the oesophagus and the beginning of the small intestine **(Gray, 1980).**

Position,And Shape And Capacity:

It is situated in the upper left portion of the abdominal cavity partly occupies the left hypochondrium, epigastric and umbilical regions, it tends to be short, high and transversly oriented in broad individuals (Steer horn-shaped stomach), and elongated & vertically oriented in thin individuals (J-shaped stomach) **(Gunningham, 1981).**

Its mean capacity varies from 30 ml at birth increasing gradually to about 1000 ml at puberty and commonly reaching to about 1500 ml in the adult **(Gray, 1980).**

Parts Of The Stomach:

The stomach consists of fundus, body pyloric antrum and pylorus.

The Fundus:

Is that part which projects upwards in contact with the left dome of the diaphragm, above the level of the cardiac orifice it is usually full of gas.

The Body:

Extends from the fundus to the level of the incisura angularis, a constant notch in the lower part of the greater curvatures (Last, 1978).

The Pyloric Antrum:

Starts at the incisura and narrows gradually towards the pylorus and pyloric canal.

The Pylorus and Pylorric canal:

The pylorus is that part that corresponds to the pyloric sphincter which is a thickening of the circular muscle coat around the pyloric orifice and the pylorus is marked by a slight annular groove on its surface called the pyloric constriction. The pyloric canal is not the cavity of the pylorus, it is about one inch long. The pyloric sphincter closes the orifice and relaxes periodically when the lower part of the stomach contracts to squirt its semi-digested contents into the duodenum (Gunningham, 1981).

Gastric Orifices:

1) Cardiac Orifice:

Is fixed by passage of the oesophagus through the diaphragm, it is about one inch to the left of the median plane and lies opposite the 10th thoracic vertebra and behind a

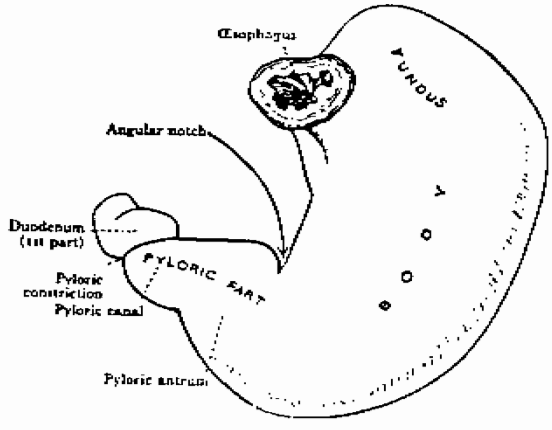

Fig. (1). Outline of Upper aspect of Stomach.
(After Gunningham, 1981).

point on the 7th left costal cartilage 1 inch from the sternum. It is about 10 cm from the anterior abdominal wall and 40 cm from the incisor teeth. The right side of the oesophagus is continuous with the lesser curvature of the stomach while the left joins the greater curvature at an acute angle termed the cardiac notch (Gray, 1980).

2) The Pyloric Orifice:

Lies about 1-2 cm to the right of median plane near the level of the lower border of the first lumber vertebra (Transpyloric plain), when the body is in the supine position and the stomach is empty. It is indicated by a circular groove on the pyloric constriction which indicates the position of the pyloric sphincter. The prepyloric vein runs vertically across its anterior surface (Gray, 1980).

The Gastric Curvatures:

1) The lesser Curvature:

Extends from the cardiac to the pyloric orifice and descends as a continuation of the right margin of the oesophagus. The most dependent part of the curve may form a notch named the angular incisure (Gray, 1980), as the two layers of the lesser omentum approach the curvature they separate to enclose the right and left gastric vessels and pass to the anterior and posterior surfaces of the stomach (Gunningham, 1981).

2) Greater Curvature:

It is at least four times as long as the lesser curvature (Bruce, 1964). It is a convex border and its direction varies, first backwards and to the left round the fundus whose highest point is on a level with the left 5th intercostal space and lies just below the left nipple. From this level it may be followed downwards, forwards with slight convexity to the left almost as low as the cartilage of the 10th rib, when the body is in the supine position, it then turns to the right to end at the pylorus directly opposite the angular incisure of the lesser curvature. On the left side of the fundus and adjoining part of the body. The greater curvature gives attachment to the gastrosplenic ligament, while to its lower region are attached the two layers of the greater omentum separated from each other by the gastro-epiploic vessels (Gray, 1980).

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THE GASTRIC SURFACES AND THEIR RELATIONS

1. The Antero-superior surface:

The portion under shelter of the ribs (6th, 7th, 8th, 9th ribs) is related mainly to the diaphragm but, near the cardiac orifice is separated from it by the liver, the diaphragm separate it from the left pleura and the left lung . The part not covered by ribs is overlapped in its upper part by the left lobe of the liver while,its lower part is related to the sheath of the left rectus abdominis (Gunningham, 1981).

2. Postero-inferior surface:

Is related to a number of structures collectively called "the stomach bed" these various structures are situated as follows:

1- The body of the pancreas lies obliguely across the backwall, behind the stomach with the splenic artery runs along the upper border of the pancreas .

2- A small portion of the left kidney is exposed above the pancrease.

3- The left suprarenal gland overlaps medial part of the upper part of the left kidney.

4- The spleen is lateral to those above three structures.

5- The diaphragm is above all these, behind the upper most part of the stomach.

6- The transverse mesocolon stretches down from the pancreas behind the lower part of this surface and the transverse colon itself may partly be behind the stomach. All these structures are separated from the stomach by the cavity of the lesser sac and the spleen is separated by the gastro-splenic ligament (Gunningham , 1981).

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STRUCTURE AND HISTOLOGY OF THE STOMACH

The wall of the stomach consists of the four usual layers, serosa, muscularis externa, submucosa and mucosa together with their vessels and nerves (Gray, 1980).

The Serosa:

Or visceral peritoneum covers the entire surface of the organ except:

a. Along the greater and lesser curvatures at the lines of attachment of the greater and lesser omenta where the two layers of the peritoneum leave a small space in which vessels and nerves lie, and,

b. A small area on the postero-inferior surface of the stomach close to the cardiac orifice where the stomach in contact with the inferior surface of the diaphragm at the site of reflexion of the gastro-phrenic and left gastro-pancreatic folds (Gray, 1980).

The Muscularis Externa:

Situated immediately beneath the serous covering, with which it is closely connected by subserous areolar tissue. It consists of three layers of visceral muscle fibres longitudinal, circular and oblique.

The longitudinal fibres are the most superficial and are arranged in two sets, the first set consists of fibres continuous with the longitudinal fibres of the oesophagus, they radiate from the cardial orifice, are best developed near the curvatures and end proximal to the pyloric portion. The second set commences in the body of the stomach and passes to the right, its fibres become more thickly arranged as they approach the pylorus.

Some of the more superficial longitudinal fibres pass on to the duodenum, but the deeper fibres turn inwards and interlace with the fibres of the pyloric sphincter. The circular fibres form a uniform layer over the whole of the stomach internal to the longitudinal fibres. At the pylorus they are most abundant, and are there aggregated into an annular mass, the pyloric sphincter.

The circular fibres of the gastric wall are continuous with those of the oesophagus, but they are sharply marked off from the circular fibres of the duodenum by a connective tissue septum. The obligue fibres, internal to the circular layer are limited cheifly to the body of the stomach and are most developed near the cardiac orifice. They sweep downwards from the cardiac notch and run more or less parallel with the lesser curvature. On the right they present a free and well defined margin, on the left they blend with the circular fibres (Gray, 1980).