RECENT TRENDS IN THE MANAGEMENT OF GASTRIC CARCINOMA

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ESSAY

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Submitted for partial fulfilment of master degree of general surgery

BY

ABD EL AZIZ AHMED M. GONNA

M.B.B.Ch

SUPERVISOR

PROFF. DR. MOHAMED SAMEH ZAKI

Professor of general surgery

Ain-Shams University

Cairo - Egypt - 1986

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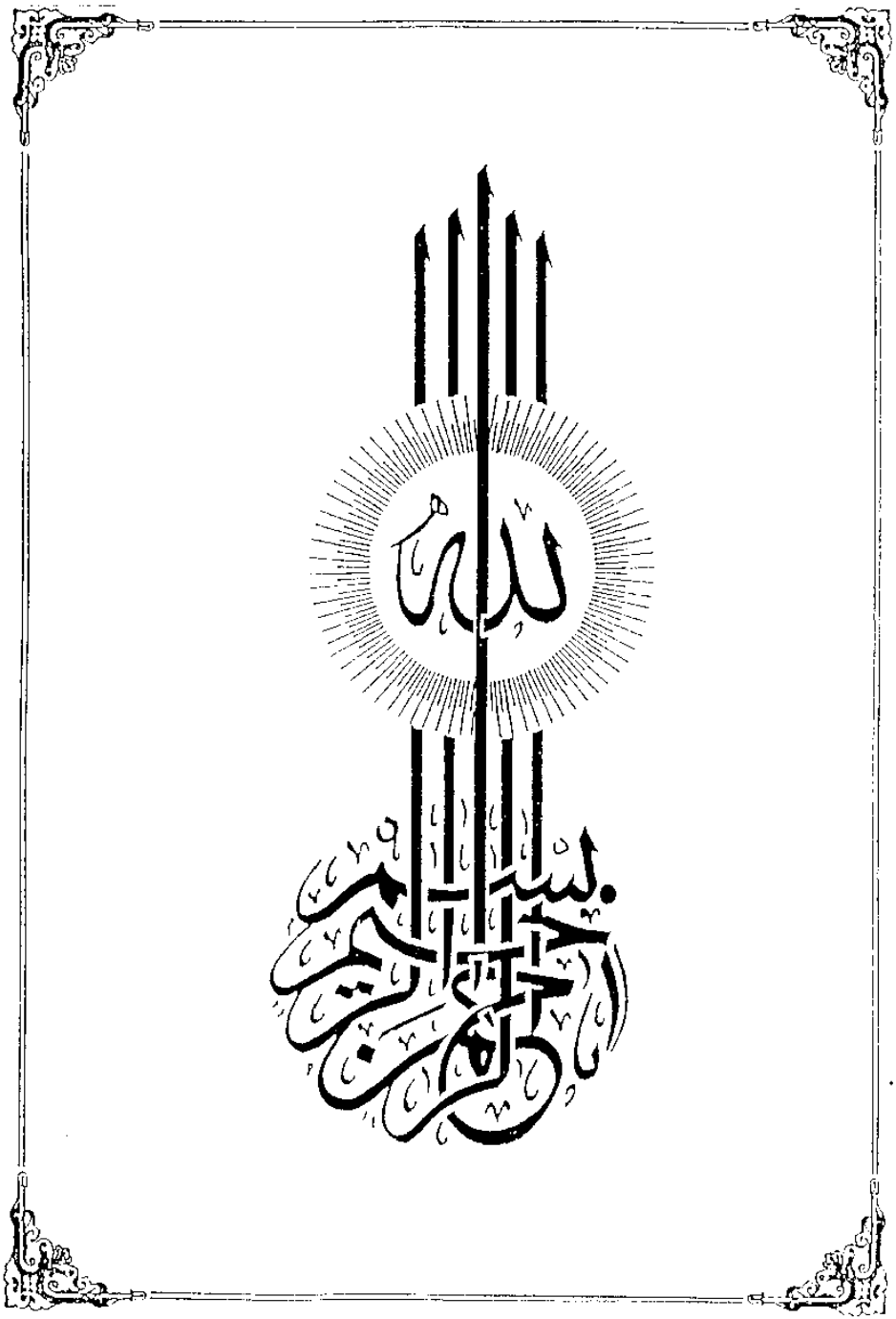

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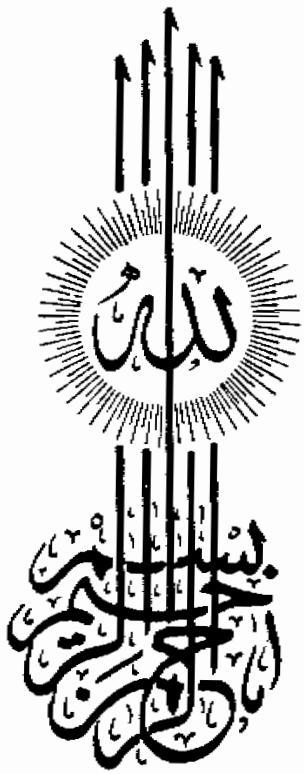

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A C K N O W L E D G M E N T

I would like to express my deep gratitude to Dr. Mohamed Sameh Zaki, Professor of general surgery, Faculty of Medicine, Ain Shams University, for his keen supervision, fruitful guidance and patience offered to me during the progress of this work.

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I. Introduction and aim of the work

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INTRODUCTION AND AIM OF THE WORK

The overall 5-year survival of patients with gastric cancer has not changed significantly over the past three decades and remains at 10-15% (UICC report). The best hope for decreased mortality in the future lies with earlier detection at a surgically curable stage. (Stark et al.,1985)

At present by the use of endoscopy it has become possible to detect any lesion of the stomach including even small lesions 2-3 mm in diameter. (Kasugai; 1982)

The aim of this work is to present up to date methods of diagnosis and treatment of gastric cancer, also to throw a light on surgical anatomy of the stomach, pathology and staging of gastric cancer.

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II. Surgical anatomy

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S U R G I C A L A N A T O M Y

OF THE STOMACH

Position and Relations:

The stomach is a dilated portion of the alimentary tract and is situated in the upper part of the abdomen extending from the left hypochondriac region into the epigastric and umbilical regions. Much of the stomach lies under cover of lower ribs. It is roughly J-shaped and has two openings, the cardiac and pyloric orifices, two curvatures known as the greater and lesser curvatures, and two surfaces, an anterior and a posterior surfaces. (Snell, 1981)

The shape of the stomach undergoes considerable variation in the same person and depends on the position of the patient, the degree to which the stomach is filled, the degree to which the intestine is filled, the tone of the abdominal wall and the habitus of the patient. (Skandalakis et al., 1983)

The only fixed point of reference is the gastro-esophageal junction which lies to the left of the midline behind

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the 7th costal cartilage at the level of 10th thoracic vertebra. For the remainder of the stomach there is no single normal projections. The stomach begins at this point and ends at the pylorus, direct or in continual spread to the esophagus or the duodenum must be taken into account when dealing with lesions in these portions of the stomach. (MacDonald et al., 1982)

For purposes of description, it is usual to divide the stomach into the following parts: The fundus is dome shaped and projects upward and to the left of the cardiac orifice. It is usually full of gas. The body extends from the level of the cardiac orifice to the level of the incisura angularis, a constant notch in the lower part of the lesser curvature. The pyloric antrum extends from the incisura angularis to the proximal limit of the pylorus. The pylorus is the most tubular part of the stomach. Its thick muscular wall forms the pyloric sphincter. The cavity of the pylorus is called the pyloric canal. (Woodburne, 1983)

The lesser curvature forms the right border of the stomach, the lesser omentum extends from the lesser curvature

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to the liver. The greater curvature form the right and inferior border. The cardiac orifice is where the abdominal part of the esophagus enters the stomach, the pyloric orifice is formed by the pyloric canal which is about 1 inch (2.5 cm long) the pylorus lies on the transpyloric plane, and its position can be recognized by a slight constriction on the surface of the stomach. The prepyloric vein crosses its anterior surface and can be easily identified in the living subject. (Snell, 1981)

From the surgeon's point of view, the stomach is a part of two almost separate systems each with its special relations, pathology and surgical approach. (Skandalakis et al., 1983)

The first of these systems is the proximal gastric unit which contains the proximal stomach and the esophageal hiatus of the diaphragm. The second is the distal gastric unit which includes the gastric antrum, the pylorus and the first part of the duodenum. Most gastric surgery takes place in this area, so it is much better known than the proximal gastric unit. (Skandalakis et al., 1983)

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Relations of the distal gastric surgical unit:-

The lesser curvature of the antrum, the pylorus and the upper border of the first part of the duodenum are attached to the hepatogastric and hepatoduodenal ligaments (lesser omentum). The greater curvature attaches to the gastrocolic ligaments (greater omentum). Anteriorly, the unit is related to anterior abdominal wall, medial segment of left lobe and anterior segment of right lobe of the liver, the transverse mesocolon if the stomach is empty and the neck of the gall bladder. Posteriorly, the unit is related to, the floor of the lesser sac, the aorta, the celiac trunk and its branches, the celiac ganglion and plexus, the hepatic triad and the gastroduodenal artery. (Skandalakis et al., 1983)

Peritoneal Reflections (Skandalakis et al., 1983)

.. Derivatives of the ventral mesentery:

- The falciform and coronary ligaments
- Gastrohepatic ligament (lesser omentum):

  The gastrohepatic ligament is the proximal part of the lesser omentum. It extends from the porta hepatis to the lesser curvature of the stomach and upwards as the

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ventral mesentery of the abdominal esophagus. The ligament contains left gastric artery and vein, hepatic division of the anterior vagal trunk, anterior and posterior gastric divisions of the vagal nerve and lymph nodes.

- Hepato-duodenal ligament:

The distal part of the lesser omentum extending from the liver to the first 2.5 cm of the duodenum.

.. Derivatives of the dorsal mesentery:

- Gastrocolic ligament:

It is a portion of the greater omentum passing from the greater curvature of the stomach and the first part of the duodenum to the transverse colon. It contains the right and left gastroepiploic artery and vein.

- Gastrosplenic ligament:

The gastrosplenic ligament attaches to the greater curvature of the stomach and is a downward continuation of the gastrophrenic ligament. Its contents are:

upper part: short gastric arteries and veins and lymph nodes

lower part: left gastroepiploic artery and vein, terminal branches of the splenic artery and lymph nodes.

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@@- Gastrophrenic ligament:

It is a continuation of the gastrohepatic ligament to the left of the esophagus. It has an avascular area through which the surgeon's finger may safely pass and through which penrose drain may be inserted around the cardia to pull down the esophagus (a useful maneuver in vagotomy). The contents of the ligament are:

upper part: avascular

lower part: short gastric arteries, veins and lymph nodes.

Blood Supply of the Stomach:

The stomach is among the best vascularized organs of the body. Not only is it served by many arteries but its wall contains a rich anastomosing network of vessels. The stomach receives its arterial blood supply from all branches of the celiac trunk. (Woodburne, 1983)

Twelve arteries supply the stomach. The first (6) are primary and the remainder are secondary arteries.

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