SMALL INTESTINAL TUMORS

ESSAY

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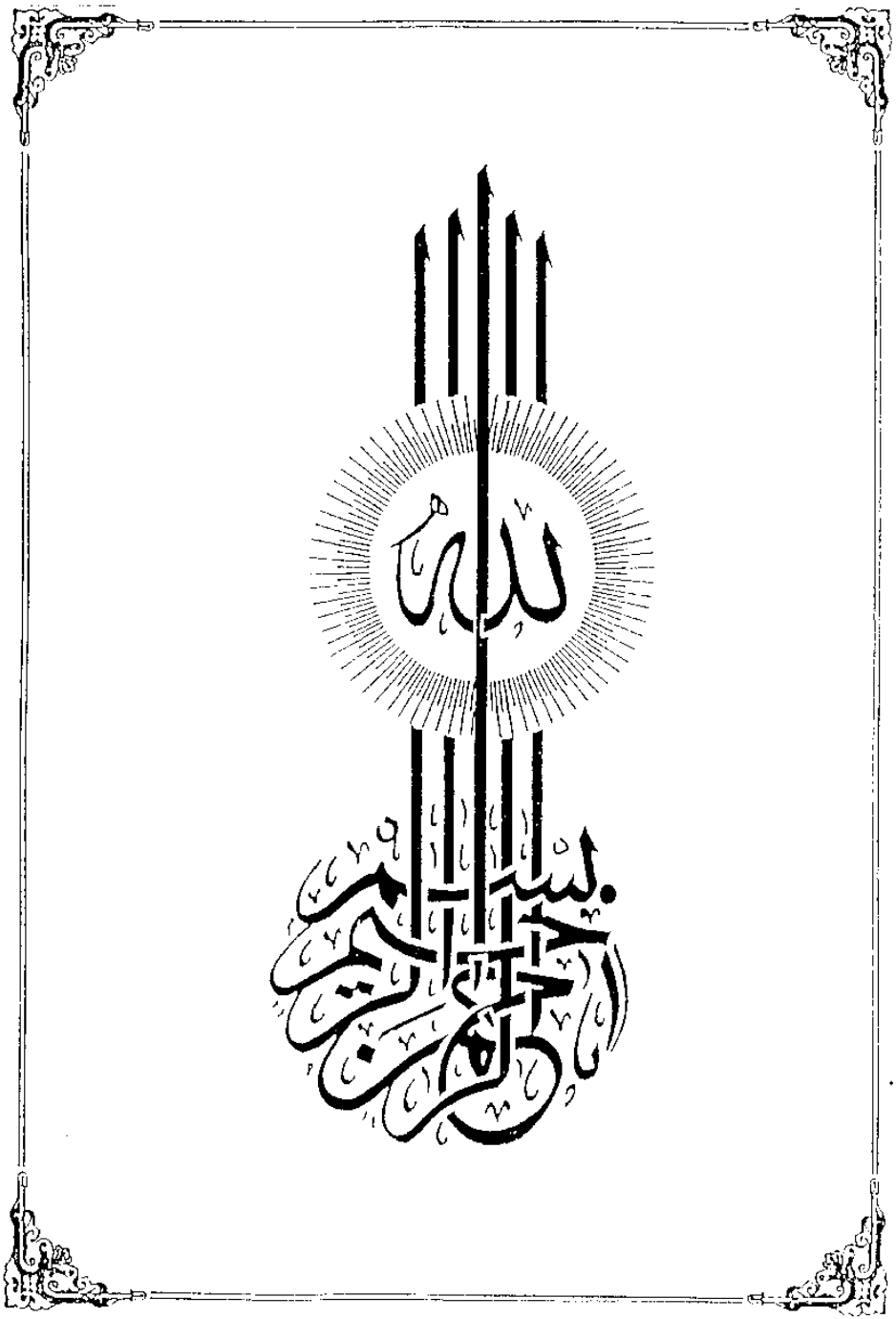

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INTRODUCTION

Although benign small bowel tumors constitute 60% of small bowel neoplasms, their clinical importance is limited by their usual asymptomatic course. So that most of them are encountered as accidental finding at operation or post mortem.

On the other hand, it has been estimated that less than 5% of all malignant gastrointestinal neoplasms are found in the small intestine. **(Cuschieri and Bouchier, 1982).**

Symptoms can be incidious in onset and vague in presentations. To make the diagnosis at an early stage in the disease, the surgeon must be [small bowel conscious].

The long delay between the onset of symptoms and the diagnosis and the frequency with which they present as acute obstruction or perforation contribute to the poor prognosis. Perhaps, this is because the under graduate and the surgeon have been thought that such tumors are pathologic curiosity and only of academic interest. **(Hawley, 1990).**

• AIM OF THIS ESSAY :

To spot a light and to review the items of small bowel neoplasms. Also it is important to stress upon the methods of early diagnosis of small bowel neoplasms.

SURGICAL ANATOMY OF THE SMALL INTESTINE

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The small intestine is the only portion of the alimentary tract necessary for life without extra-anatomic support **(Schirmer et al; 1990).** The small intestine is a coiled tube which extends from the pylorus to the ileocaecal valve, where it joins the large intestine. It is usually said to be 6-7 meter in length, gradually diminishing in diameter towards its termination. However it is longer after death owing to the loss of muscle tone; its average length in living adults is perhaps about 5 meter **(Williams et al; 1989).**

The small intestine occupies the central and lower parts of the abdominal cavity, usually within the colonic loop; it is related in front to the greater omentum and abdominal wall; a portion may reach the pelvis in front of the rectum. It consists of a short, curved sessile section, the duodenum, and a long, greately coiled part attached to the posterior abdominal wall by the mesentry, the proximal two- fifths being the jejunum, the distal three-fifths, the ileum **(Williams et al; 1989).**

▪ The duodenum :-

The duodenum is the shortest, widest and most sessile part of the small intestine. It begins opposite the right side of the spine at the

level of the first lumbar vertebra. It extends from the pylorus to the duodenojejunal flexure, a total length of about 25 cm, and forms a C - shaped bend, the area of which is occupied roughly by the head of pancreas. The duodenum is differentiated clearly from the rest of the bowel by its deep position, marked fixation, and connection with the secretory ducts of the liver and pancreas. **(McVay, 1984).**

The duodenum is divided into four parts : first (superior), second (descending), third (horizontal) and fourth (ascending)

▪ The superior (first) part :

It is the most mobile section, about 5 cm in length, extending from the pylorus to the neck of the gall bladder. Peritoneum covers its anterior aspect but it is bare of this posteriorly, except near the pylorus where it takes a small part in the formation of the anterior wall of the omental bursa; here the lesser omentum is attached to its upper border and the greater omentum to its lower (proximal half). It is related above and in front with the quadrate lobe of the liver and gall bladder and more posteriorly above with the epiploic foramen, behind with the gastroduodenal artery, bile duct and portal vein and postero- inferiorly with the head and neck of pancreas. It is usually stained by bile after death especially on its anterior surface where it is related to the gall bladder **(Williams et al; 1989).**

▪ The descending (second) part :

It is about 8-10 cm in length, descends from the neck of the gall bladder along the right side of the vertebral column to the lower border of the third lumbar vertebral body. **(Williams et al; 1989).** The second part of the duodenum curves downwards over the hilum of the right kidney. It is covered in front with peritoneum, and crossed by the attachement of the transverse mesocolon, so that its upper half lies in the supracolic compartment to the left of the hepatorenal pouch (in contact with the liver) and its lower half lies in the right infracolic compartment medial to the inferior pole of the right kidney (in contact with coils of jejunum). It lies along side the head of the pancreas **(McMinn et al; 1990).**

A small part of the pancreatic head is sometimes embedded in the duodenal wall. The bile and pancreatic ducts come into contact at its medial side, entering its wall obliquely and uniting to form the hepatopancreatic ampulla. The narrow, distal end of this opens on the summit of the major duodenal papilla, sited posteromedially in the descending duodenum, 8-10 cm distal to the pylorus. An accessory pancreatic duct may open 2 cm proximal to the major papilla on a minor duodenal papilla **(Williams et al; 1989).** A normal papilla will permit the passage of adilator 3 mm in diameter. The circular smooth

muscle around the pancreatic and common bile duct is known as the sphincter of Oddi **(Williams et al; 1989).**

In the region where the bile duct enters the second part of the duodenum, a congenital diverticulum of the duodenum may occur. It owes its existance to the fact that at a very early developmental stage, more than one outgrowth from the gut takes place to form the liver. Parts of a second outgrowth may remain, forming a blind protrusion from the bowel. Such a diverticulum is devoid of peritoneal covering. This is of surgical importance, as its removal would be attended by risks of peritonitis since the retroperitoneal tissues have little resistance to infection and the suturing of bowel without a peritoneal coat is less secure **(Decker et al; 1986)**.

▪ The horizontal (Inferior or third) part :-

This part is about 10cm in length. It passes from the right of the lower border of the third lumbar vertebra, sloping slightly up and to the left across the inferior vena cava, to end in the fourth part in front of the abdominal aorta. Its anterior surface is covered with peritoneum except in the median plane where it is crossed by the superior mesentric vessels and mesentric root. Its posterior surface is covered by peritoneum only at its left end, where the left layer of the mesentry sometimes covers it. The posterior surface rests upon : the right ureter,