CARCINOMA OF THE RECTUM

ESSAY

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BY

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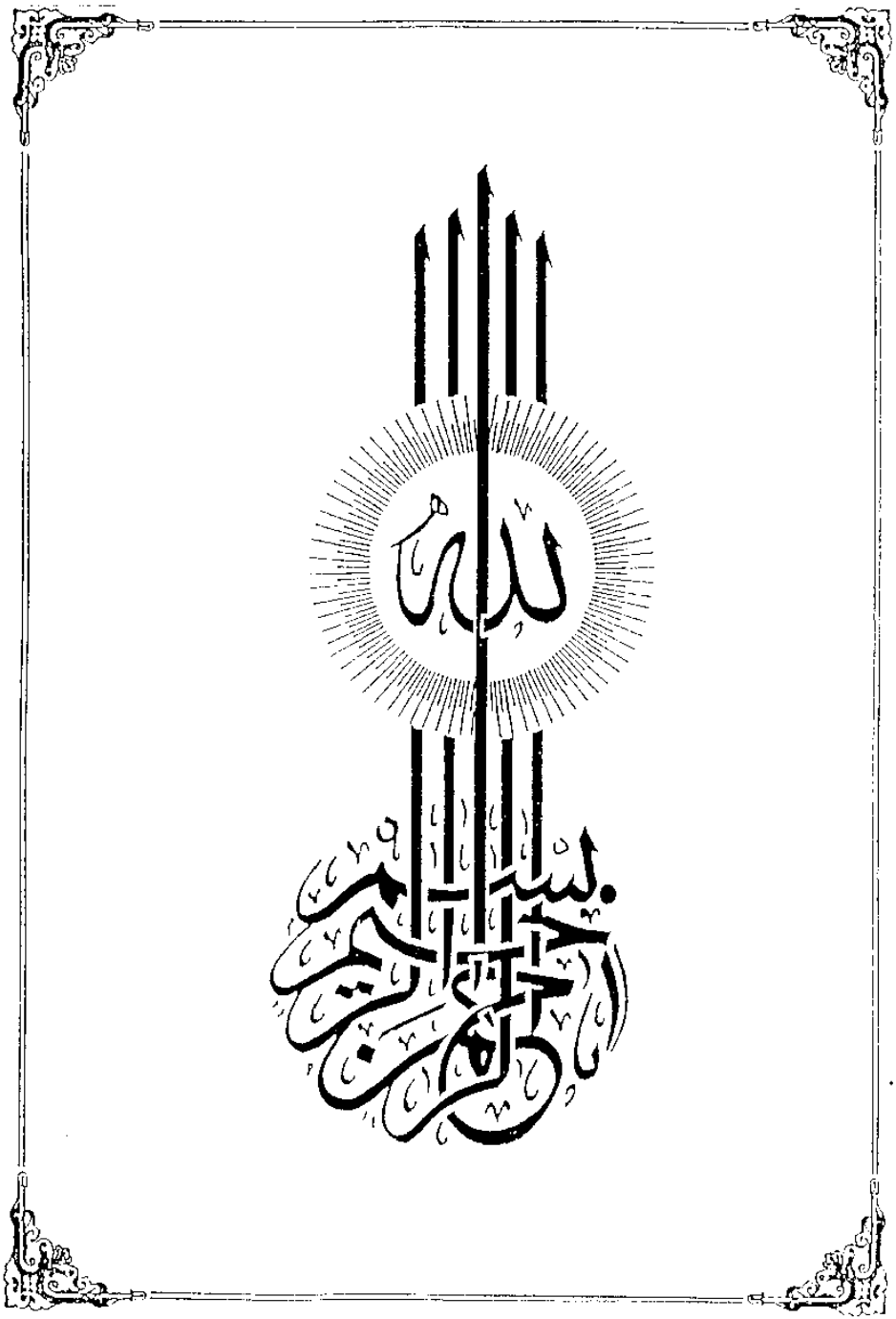
بسم الله الرحمن الرحيم

صدق الله العظيم



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INTRODUCTION

Cancer rectum is the disease of developed countries. The incidence increases with age reaching a peak at 60-69 years. In Egypt the incidence is much lower than in America and Western Europe and it is considered as the sixth prevalent tumour after carcinoma of the bladder, breast, larynx, oesophagus and Hodgkin's lymphoma.

Cancer rectum may be silent for many years and may be discovered on routine examination of a patient attending for some other obvious lesion. There are three main ways in which patients with carcinoma of the rectum may present to the hospital (a) as non-urgent cases with insidiously developing chronic symptoms chiefly affecting bowel function or general health (b) as emergencies with acute intestinal obstruction;or (c) as emergencies with perforation of the colon and peritonitis.

Proctosigmoidoscopic examination with biopsy aids very much in the diagnosis of carcinoma of the rectum. The early detection of cancer rectum in asymptomatic patients depends greatly on occult blood testing and study.

This work is an attempt to review the aetiological

factors, pathological diagnosis, the symptoms of the disease, the diagnostic procedures, lastly the different methods of treatment of carcinoma of the rectum.

ANATOMY

ANATOMY OF THE RECTUM AND ANAL CANAL

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[A] THE RECTUM

1. *Embryology of the Rectum and Anal Canal*

The rectum and upper part of the anal canal develop from

the posterior part of the cloaca particulary the ano-rectal canal. The lower part of the anal canal develops from the proctodeum [Williams & Warwich, 1980].

II. Position, Shape and Length of the Rectum

The rectum is the part of large bowel which begins as a continuation of the sigmoid colon.

In cases with a fairly long loop of the sigmoid which hangs down in to the pelvis, the recto-sigmoid junction is marked by a distinct flexure, as a terminal sigmoid, which is directed backward, upward and turns sharply downwards to follow the curve of the sacrum; but when the sigmoid colon is short such pronounced angulation may be absent [Goligher, 1984].

The rectum differs from the sigmoid colon in that it has no sacculations, appendices epiploicae or mesentry, while the taeniae coli blend about 5 cm above the junction of the rectum and sigmoid colon to form two wide muscular

bands which descend, one in the anterior and the other in the posterior wall of the rectum [Williams and Warwick, 1980]. From its origin, the rectum descends following the concavity of the sacrum and coccyx, forming an antero-posterior curve known as the sacral flexure of the rectum. It thus passes at first downwards and backwards then downwards and finally downwards and forwards to become continuous with the anal canal by passing through the pelvic diaphragm .

In addition to the antero-posterior curve, the rectum deviates from the midline in the form of 3 lateral curves; the upper one is convex to the right, the middle one (which is the most prominent) is convex to the left and the lower one is convex to the right.

The begin of the rectum and its end are in the median plane.

Last [1979] stated that the rectum ends at the ano-rectal junction 5 cm from the tip of the coccyx while Goligher [1984] and Williams and Warwick [1980] stated that the ano-rectal junction is situated 2-3 cm in front of and slightly below the tip of the coccyx . The length

of the rectum is about 12 cm [Williams and Warwick,1980] while Goligher [1984] stated that the length of the rectum is 13-15 cm.

Shafik [1982] in his new concept of anatomy, stated that the rectum does not terminate at the pectinate line but extends down to the perineal skin to which it is fixed by meansof tendinous insertions of its longitudinal muscle coat.

III. Mucous Membrane of the Rectum

In the empty state of the rectum, the mucous membrane of its lower part presents a number of longitudinal folds which are affected by distension of the rectum. Besides these there are permenant transverse or horizontal folds of a semilunar shape which are most marked when the rectum is distended.

The number of the folds are variable but commonly 3 forms are present. These folds form shelf like valves know as rectal valves of Houston.

IV. Relations of the Rectum

1] Peritoneal relations of the rectum :

The peritoneum is related only to the upper two-thirds of the rectum covering at first its front and sides but lowerdown its front only and from the later it is reflected onto the bladder in the male, forming the recto-vesical pouch of peritoneum and on the posterior wall of the vagina in the female forming the recto-uterine pouch[Douglas pouch].

The level of the peritoneal reflection is higher in the male, the recto-vesical pouch being about 7-5 cm from the anus; in the female the recto-uterine pouch is about 5.5 cm from the anus.

In the male foetus, the peritoneum extends on the front of the rectum as far as the lower end of the prostate.

On the sigmoid colon, the peritoneum is firmly attached to the muscle coat by fibrous connective tissue, but as it descends on the rectum, the peritoneum becomes more loosely attached to the muscle by fatty areolar tissue, thus allowing considerable expansion of this part of the gut.

2] Fascial relations of the Rectum :

1/ On either side of the rectum : The fascia around the middle rectal vessels passes from the postero-lateral wall of the lesser pelvis at the level of the third sacral vertebra to the rectum, constituting on each side the lateral ligament of the rectum, which is triangular in shape with the base on the pelvic side wall and apex joining the side of the rectum.

2/ The posterior aspect of the extra-peritoneal rectum is loosely bound down to the front of the sacrum and coccyx by connective tissue. There is a thin layer of fascia covering the fat , vessels, and lymph glands on the back of the rectum, this is so-called " fascia propria or fascial capsule of the rectum ", which is a part of the visceral pelvic fascia [Goligher, 1984].

Also the rectum and coccyx are covered with stronger, thickened condensed part of the parietal pelvic fascia (presacral fascia), this fascia extends downwards and forwards on the upper aspect of the ano-coccygeal ligament to fuse with the fascia propria of the rectum at the ano-rectal junction.