BILHARZIASIS OF COLON AND RECTUM

ESSAY

Submitted By

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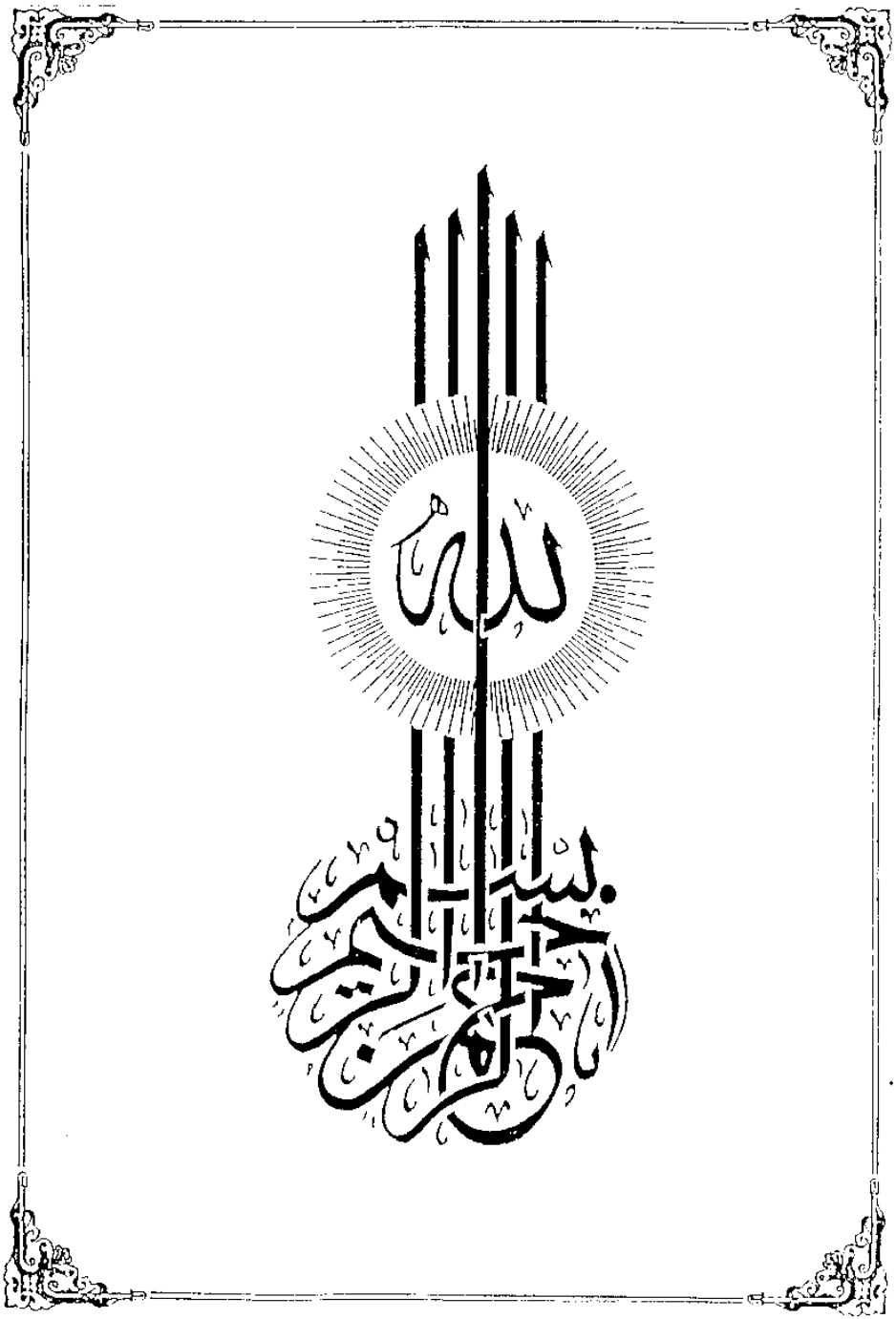

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Introduction

Schistosomiasis is a common disease in Egypt, of special importance is the affection of the colon and rectum by bilharziasis.

The aim of this work is to study bilharziasis of the colon and rectum. The study includes, anatomy, histology analysis of the aetiology, pathological findings, clinical picture, diagnosis and treatment.

ANATOMY
OF COLON & RECTUM

Anatomy of the Colon and Rectum

The large intestine extends from the end of the ileum to the anus, comprises the caecum (and appendix), colon, rectum and anal canal, and is on the average about 135 cm long. Its calibre is greatest at its commencement at the caecum, and gradually diminishes as it is traced distally, but again becomes more dilated in the lowermost part of the rectum just above the contracted anal canal. In its course it describe roughly an arch which surrounds the coils of small intestine. It is readily distinguished from the small gut by its greater calibre, its sacculated appearance throughout most of its length, its possession in many parts of fatty appendages, the appendices epiploicae; the attachment to a part of it of the greater omentum; and its relatively greater fixity.

The striking feature in the wall of the colon is the concentration of the outer longitudinal muscle coat into three narrow bands or taeniae, relatively shorter than the bowel itself, so that the latter is puckered with the production of the typical haustrations or sacculations. The three taeniae commence at the base of appendix which has a complete longitudinal coat. In the distal sigmoid they eventually coalesce to provide a complete

longitudinal muscle coat for the rectum, though sometimes the process of fusion is complete before the rectum is reached. Between the taeniae the colon wall is extremely thin and this accounts for the great and sometimes amazing capacity of this part of the bowel to under go distension when obstructed, the caecum being particularly notable in this respect (Goligher, 1984).

General disposition and relations

The caecum

The caecum lies in the right iliac fossa above the lateral half of the inguinal ligament. Usually it is entirely enveloped by peritoneum but in some 5% of individuals the peritoneal covering is deficient posteriorly and the caecum then rests in direct contact with the fascia overlying the iliacus.

The vermiform appendix projects from the apex or lowermost part of the caecum. The ileum joins the large intestine on the medial and posterior aspect, and the level of this opening is accepted as an arbitrary division between caecum below and ascending colon above (Goligher, 1984).

The ascending colon

The ascending colon is about 15 cm long. It turns

upward from the caecum to the hepatic or right colic flexture. It is invested with peritoneum on its anterior, lateral and medial surfaces, but posteriorly is devoid of peritioneal covering as a rule and lies in direct contact with the iliacus, the quadratus lumborum and the aponeurotic origin of the transversus abdominis below, and at a higher level is closely applied to the lower pole of the right kidney. In front it is in relation with colis of ileum, possibly the right edge of the greater omentum and the anterior abdominal parietes (Goligher,1984).

The hepatic flexure

At the hepatic or right colic flexure, the colon turns sharply, medially, and slightly forward and downward, the site of this bend being just below the right lobe of the liver, and slightly overlapped by it, immediately in front of the lower part of the right kidney. Usually its peritoneal investment is complete except posteriorly (Goligher, 1984).

The transversecolon

This segment of the colon is about 45 cm long in most subjects and forms a loop hanging downward across the upper and middle abdomen immediately below the greater curve of the stomach. Its first 7.5-10 cm lies behind the posterior parietal peritoneum closely applied to the

front of the right kidney, the second part of the duodenum and the pancreas to which it is connected by areolar tissue. This is a most important posterior relationship for, during a right hemicolectomy, the duodenum is drawn up by its adherence to the right end of the transverse colon and may be damaged if care is not taken to separate it.

For the remainder of its course the transverse colon has a complete investment of peritoneum and is connected posterosuperiorly by the transverse mesocolon to the lower border of the pancreas. Behind, it is related to loops of small bowel, including the duodenojejunal flexure. Immediately above this part of the transverse colon lies the stomach and at its extreme left end, the lower pole of the spleen. The greater omentum hanging down from the greater curve of the stomach descends in front of the transverse colon and then ascends to be attached loosely to its anterior surface and to the upper surface of the transverse mesocolon (Goligher, 1984).

The splenic flexure

This bend between the left end of the transverse colon and the descending colon is a much more acute angulation than the hepatic flexure. In addition, it is situated at a rather higher level than the right flexure and lies on a more posterior plane, more under

the cover of the ribs and thus less accessible to surgical approach. It is covered with peritoneum in front, posteriorly it is in direct contact with the outer border of the middle of the left kidney. There is a band of peritoneum extending from it laterally to the diaphragm-the phrenicocolic ligament - which helps to support the colon and spleen (Goligher, 1984).

The descending colon

From the splenic flexure the large intestine runs downwards and slightly medially and then vertically as the descending colon, as far as the iliac crest, a distance usually of about 20 cm. At this level, it becomes the iliac colon, which proceeds downward and medially across the left iliac fassa to the medial border of the psoas major muscle, where it becomes the sigmoid colon(Goligher, 1984).

According to another anatomical terminology the descending colon extends from the splenic flexure to the sigmoid colon, no iliac segment being recognized (Morris, 1893, and Gray, 1926).

On its anterior, medial and lateral aspects, the descending colon is covered by the posterior parietal peritoneum, behind, it is usually devoid of a peritoneal coat and rests directly against the left kidney, quadratus

lumborum and transversus abdominus.

The lower part of the descending colon or the iliac colon usually has a complete covering of peritoneum on all aspects, and is provided with a short mesocolon, but almost invariably, the lateral aspect of this part of the colon and its related mesocolon is adherent to the posterior parietal peritoneum of the left iliac fossa. If these adhesions are divided, however, as is regularly done by the surgeon in the intial stages of a rectal excision, the iliac mesocolon is readily re-established (Goligher, 1984).

The sigmoid or pelvic colon

The sigmoid colon extends from the lower end of the descending colon at the margin of the psoas major muscle, to the upper end of the rectum. It forms a loop which varies greatly in length, in one case being only 13 - 15 cm long in another, more than 60 cm, but on the average is about 38 cm, and normally lies within the pelvis. The actual disposition of the loop in the pelvis varies greatly, but it is convex forward and usually lies mainly in the left half of the pelvic cavity, it ends by joining the rectum in front of the third piece of the sacrum, usually slightly to the left of the midline. The sigmoid colon is completely surrounded by peritoneum

which forms a mesentery, the sigmoid mesocolon; this diminishes in length from the center toward the ends of the loop, where it disappears, so that the loop is fixed at its junctions with the descending colon and the rectum, but has a considerable range of movement in its central portion. The base of the mesocolon has an attachment to the pelvic walls which forms an inverted, V. The upper limb runs from the medial margin of the left psoas major upwards and medially to the midline, crossing in its course the left ureter and iliacs vessels. The lower limb extends vertically downward in front of the sacrum. The sigmoid colon, itself, is related to the loops of small intestine, and usually also to the bladder or uterus and uterine adnexa (Goligher, 1984).

The rectosigmoid

It is always difficult to be quite sure where the sigmoid ends and the rectum begins. That is why in surgical literature the term rectosigmoid has come to have a somewhat indefinite meaning to most surgeons it implies not one point on the bowel, but rather a segment comprising the last 5-8 cm of sigmoid and the uppermost 5 cm or so of rectum.

To provide more precise localization of growths in this situation is was suggested by Morgan and Iloyd-Davis (1956) that their position should always be related

to the promontary of the sacrum. To do this the sigmoid loop is drawn out of the pelvis so that it and the upper rectum lies tautly along the front of the lumbosacral spine. The position of the growth is then noted relative to the sacral promontary, if it lies entirely below the promontary it should be regarded as being in the rectum, and if above in the sigmoid, if it is situated partly above and partly below the promontary it is termed a rectosigmoid growth.

Alternatively, lesion of this region may be localized by reference at operation to the position of the anterior peritoneal reflection of the front of the rectum, but this is a very variable landmark; or localization may be determined-entirely preoperatively by sigmoidoscopic estimation of the distance of the lower edge of the growth from the anal verge - a plan that has much to commend it - the rectosigmoid junction itself being taken to be at 15 cm (Goligher, 1984).

The rectum

Because the cephalic limit of the rectum is indefinite and since there is no uniform opinion regarding its situation, it is not possible to determine the exact length of the rectum, but in general it can be said to be 12 to 15 cm long .

At first the rectum proceeds downward then downward and forward, closely applied to the concavity of the sacrum and coccyx. It ends at the anorectal junction, 2-3 cm in front and below the tip of the latter bone by turning abruptly downward and backward, and passing through the levator muscles to become the anal canal (Goligher, 1984). Others consider the apex of the prostate or the lower fourth of the posterior vaginal walls, as the boundary (Bacon and Recio, 1962).

The curves of the rectum

The rectum curves in both anteroposterior and lateral directions. The anteroposterior curves : (1) convex backwards as the rectum fits into the sacral hollow, and (2) convex foreward where it joins the anal canal, with the anococcygeal body at its junction (Bacon and Recio, 1962).

The lateral curves : usually there are three of them, both the uppermost and lowermost being convex to the right, the middle one convex to the left. The angulation of the bowel on the concave side of each of these curves is accentuated by infoldings of the mucosa known as Houston's valves. There is thus an upper and lower valve on the left side and a middle valve on the right. The last named, which is also known as kohlrausch's fold,