

POLYPS OF THE COLON AND THE RECTUM

An Essay

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INTRODUCTION

The term polyp is defined as a smooth projecting growth of hypertrophied mucous membrane(Webster, 1984).

Intestinal polyposis encompasses a spectrum of abnormal growth; hyperplastic polyps, the etiology and significance of which are virtually unknown; inflammatory polyps, which accompany non-hereditary conditions but can lead to cancers; hamartomas, both single and multiple which can follow a hereditary pattern with definable syndromes which are often associated with adenomatous polyps, in which cancers can develop; and finally the neoplastic polyposes, which include numerous inherited syndromes that usually appear to have a mendelian dominant inherited pattern. Familial polyposis, gardner's syndrome, and Turcot's syndromee are all parts of a systemic overgrowth pattern, and the associated with soft tissue, bony, glandular and brain tumours illustrate the wide spectrum of this disorder (Watne, 1987).

There is large evidence supporting the importance of intestinal polyps as a precursor to the development of colorectal cancer. These precancerous polyps are tubular adenoma, villous adenoma, tubulovillous

adenoma, familial polyposis coli, Gardner's syndrome and peutz Jeghers syndrome (Shinya and Wolff, 1979).

Therefore, it is useful to achieve an early detection of intestinal polyposis to prevent their complications especially malignant transformation and the methods of early detection should be considered.

Informations regarding the management of intestinal polyposis will be obtained the management of colorectal polyposis will be obtained from available books, periodicals and journals. An updated review on the subject will be prepared. This will include types, pathology, clinical finding, investigation and different lines of treatment.

**ANATOMY OF THE LARGE
INTESTINE**

ANATOMY OF THE LARGE INTESTINE

The large intestine extend from the distal end of the ileum to to the anus, it is about 1.5 metre long, its caliber is largest near the caecum and gradually diminishes towards the rectum, where it enlarges just above the anal canal. Its function being chiefly absorption of fluids and solutes. It is divided into the caecum-including vermiform appendix, the colon, the rectum and the anal canal (*Goligher, 84*).

ILEO CAECAL- APPENDICULAR REGION:

The terminal centimeters of the ileum, the caecum and vermiform appendix may grouped into an important surgical anatomic composite. During early develop the large intestine is a tube of uniform dimension and its caecal segment present no distinguished features late, the lower part of the caecal segment lags in growth while the upper part keep pace with the growth of the colon. As the difference in size become greater, the lower tapering extremity become the vermiform appendix. At birth caecum has a conical shape, a smooth external and well marked curve in the long axis. The appendix is attached to the medial and posterior aspect of the caecal segment. The location of the base of the appendix is depend on the position of the caecum. The

position of the tip of the appendix in relation to the caecum is variable (Anson and Mc Vay, 1984).

THE CAECUM:

The caecum comprises that part of the large bowel located below a transverse line passing just above the ileocaecal valve. It is about 6.0 cm long and 7.0 cm wide and lies normally upon the iliopsoas muscle in the right iliac fossa, when filled with gas and fluid it is severely distended and may form a palpable and sometimes visible mass. In incomplete obstruction of the transverse colon or sigmoid colon the caecum commonly show the most distension and may rupture because it is the thinnest-walled part of the colon. As a rule, it is completely covered by the peritoneum and is freely dependent in the general cavity. But in some 5 percent of the individual the peritoneal covering is deficient posteriorly and it rests in direct contact with the fascia overlying the iliacus muscle. Coils of small intestine usually conceal the empty caecum. The anterior caecal bands (taenia coli) is a guide to the appendix, as they are continued with outer longitudinal muscle of the appendix. As a consequence of incomplete rotation of the colon, the caecum may occupy a higher position and lies on the right kidney below the liver. In its low position it may lie in the depth of the

pelvis. In the fetus and infant it lies high in the right iliac fossa and in the old people the caecum lies lowerdown. Its elongation and descent with advancing age favor the presence of the caecum and appendix in the sac of the right inguinal hernia.

As the result of faulty development, rotation and fixation of the large intestine the ileocaecal appendicæal segment may occupy almost any portion of the abdominal cavity and have high degree of a practicle surgical intrest because the difficulty in diagnosis and the complications which are introduced by appendicitis (*Anson and Mc. Vay, 1984*)

The vermiform Appendix:

It is a narrow virmin tube arising from the posterior medial border of the caecum, 2-5 cm below the ileo caecal junction and can always be located by following the anterior longitudinal band (taemia) distally. It is 6-12 cm long and 0.8 cm wide its layers are similar to these of large intestine. Its orifice into the caecum is guarded by a crescentic mucosal fold, absence or incoptence of which may account for the presence of faecal material withen the process. The meso appendix is a triangular peritoneal fold attached to the left or lower aspect of the

mesentery of the ileum. Its free border contain the appendicular vessels. The location of the base of the appendix is depend on the position of the caecum usually lies in the right iliac fossa, but in incomplete rotation of the bowel it may lie at a higher level beneath the liver "sub-hepatic" in relation to gall bladder and the duodenum. In this position the symptoms and signs of acute appendicitis may similar to the acute cholecystitis. When the caecum is long and mobile the base of the appendix may lie in the pelvis in which case the tenderness in acute appendicitis is found maximally on pelvic examination. The caecum may even lies in the left iliac fossa and the tenderness due to appendicitis is similar to that found in a cute diverticulitis of the sigmoid colon. The position of the tip of the appendix in relation to the caecum is variable (Anson and Mc.Vay,1984).

The colon:

The colon begins in the right iliac fossa distal to caecum and terminate opposite the body of the third sacral vertebra where it become continous with the rectum. Its general outline resemble on "M." shape or an invested "V" shape because of its fixation, its position is much more constant. The external appearance of the large bowel is readily distinguished

from the small intestine by its greater calibre, its sacculated appearance through most of its length, the appendices epiploicae, the attachment of a part of it to the greater omentum, and the strickling feature in the wall of the colon is the taeniae coli (Goligher, 1984).

The ascending colon:

It lies between the caecum and the right colic "hepatic" flexure. The inferior margin is usually tangent to the iliac crest and the upper margin is on a horizontal plane where the right tenth rib crosses to the midaxillary line, it is about 12.5 - 20 cm long. Posteriorly, it is related to fascia over the iliacus and quadratus lumborum muscles and the lower part of the right kidney it is separated from the kidney by extra-peritoneal and peri-renal fat and the anterior layer of the perirenal fascia. Its relation to the right kidney explains the resonant notes obtained by percussion over tumour anteriorly, the colon may acquire adhesion from an enlarged or inflamed kidney and be in danger of injury in nephrectomy operation. The medial aspect of the ascending colon is related to the psoas muscle and the second part of the duodenum. The peritoneum invests the ascending colon, except

posteriorly it is devoid of peritoneal covering. In resection of the ascending colon the peritoneum on the lateral margin of it is incised and the colon is drawn medially by blunt cleavage of fusion fascia "Told's fascia", in this manipulation there is no injury to either the vessels in ascending colon and its mesocolon or ureter and vessels to kidney because they lie posteriorly to fusion fascia "Told's fascia". When the ascending colon is supplied with mesocolon, it falls away from the loin and drags the hepatic flexure and caecum with it, this condition may be symptomless, it may play an important role in caecal stasis, volvulus and ileo caecal intussusception and also in mobility of the right kidney (Anson and McVay, 1984).

THE RIGHT COLIC "HEPATIC" FLEXURE:

The right colic flexure is formed by the junction of the ascending and transverse colon, it lies under 9,10 costal cartilage in the interval between the inferior surface of the right lobe of the liver and the anterior surface of the lower pole of the right kidney. It is related by its medial surface to the fundus of the gall bladder anteriorly and the 2nd duodenal part posteriorly. A peritoneal band from the lesser omentum passes downward from the right

extremity of the flexure to form "hepatic- colic ligament" (Anson and Mc. Vay, 1984).

THE TRANSVERSE COLON:

The transverse colon cross the abdominal cavity from the right colic flexure to the left colic flexure with a downward curve. In recumbency position it reaches in the midline at or a little below the umbilicus in many patients. Identification of the transverse colon can always be established by finding the greater omentum attached to its superior and anterior surfaces. The right segment is related the gall bladder. The left segment of the transverse colon is related to greater curvature of the stomach. Between the right and the left flexures the transverse colon is connected to the posterior abdominal wall by transverse meso-colon. The relation of the hepatic flexure of colon, transverse colon and gall bladder explain the possibility of gall stone penetrating in the colon and formation of fistula. Also liver abscess may rupture in hepatic flexure of the colon.

THE LEFT COLIC " SPLENIC" FLEXURE:

The left colic flexure may over lie the left kidney. Any where from its upper to its lower ends it is located deeply under cover of the costal margin and

stomach, so that examination of flexure is difficult and the tumour escape early recognition. The posterior aspect is attached to the pancreas by the left extremity of the transverse meso colon. the left phrenicocolic ligament is a peritoneal fold attached between the lateral aspect of the left colic flexure and diaphragm, it is known also as the supporting ligament of the spleen. (Goligher, 1984).

THE DESCENDING COLON:

The descending colon extends from the left colic flexure to the left iliac crest where it continues as sigmoid colon. It varies from 8.0 to 12.0 cm in length. Its posteromedial aspect lies directly upon the fascia covering the quadratus lumborum muscle and is devoid of a peritoneal covering. Its anterior, medial and lateral aspect are covered by the posterior parietal peritoneum. The descending colon is more deeply placed than the ascending colon and rarely has a mesentery (Williams and Warwick, 1989).

THE SIGMOID COLON AND MESOCOLON:

The sigmoid colon begins at the iliac crest and typically ends at the third sacral vertebra. It is divided into a fixed "iliac" and a mobile "pelvic" segments. The iliac segment is that part of the sigmoid