

Carcinoma of the Colon and Rectum

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Miss Asoka Roy, former Editor of the Journal, has sent this article from the U.S.A. —Editor.

HOW has the pendulum swung? The leading cause of death in U.S.A. in 1900 was tuberculosis, and cancer was 8th on the list. In 1955 tuberculosis became a negligible cause and cancer ranked second next to heart diseases. Cancer of the colon and rectum accounts for 16 per cent. of all deaths due to cancer.¹ With this as our incentive, I would like to write on some of the aspects of carcinoma of the colon and rectum.

Cancer is an infiltrating disease which bears its importance according to the area affected and organs involved. In consequence, the functions which are disturbed in the course of the disease, more or less, are signified by the symptoms that imply. The functions of the large bowels and rectum are absorption, storage and evacuation. A lesion that interferes with this functioning, and the process of defaecation, would bear detrimental changes in the individual.

It is not uncommon to find the fact that so many patients complaining of bleeding from the rectum, severe constipation, low abdominal pain, have been treated symptomatically without the benefit of a physical examination. About 20 per cent. of patients have been subjected to operations for haemorrhoids, cystocele or rectocele, without having the benefit of a local or general examination.² Every patient with carcinoma of the colon and rectum may have haemorrhoids also.

The relationship of haemorrhoids suggests pressure, involvement of blood vessels due to new growth, or constipation and such. It may be, on the other hand, associated with other benign causes. To operate for local lesions without having a knowledge of the whole state of the patient, is bad practice. Any change in bowel habit is one of the seven main danger signals of cancer; in spite of this, a cathartic or a paregoric sometime replaces the indication for complete examination.

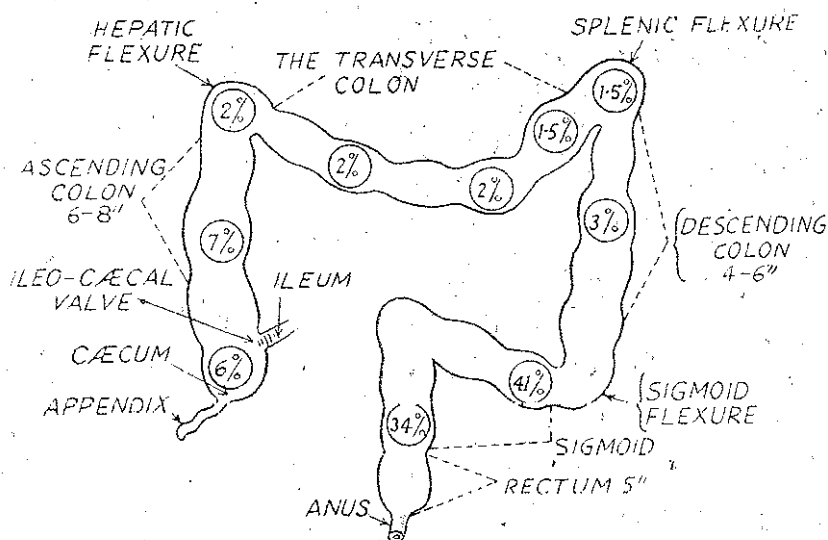
It has been reviewed that the incidence of cancer of the colon and rectum is somewhere near 16.4 per cent. of all cancers. Ninety-four per cent. of cancer of the colon and rectum are found to be in the age group of 40 years or more.³ There appears to be no striking difference in the sex incidence. To evaluate the classification for the purpose of study, seventy-five per cent. of lesions were found in the sigmoid and the rectum,⁴ where the majority of cases could be visualised by proctosigmoidoscopy. The frequency of cancer of the colon and stomach are about the same.

We may briefly review the anatomical structure in a diagram, marking the frequency of cancer at the various sites. The junction of the caecum is marked by the ilio-caecal

valve, which allows the ready escape of intestinal content into the caecum, and effectually prevents the reverse return from the caecum to the ileum. Thus the ascending colon is subject to harsher treatment, as bowel content is in a more roughage state. Altered bowel habits as constipation and diarrhoea are further causes for irritation. It is in these areas we find a higher incidence of cancer. The incidence in the ascending colon is somewhat high and not so readily diagnosed. On the other hand, the highest incidence is in the sigmoid section and the rectum which can readily be seen and felt by the physician. The ascending and descending colons are retro-peritoneally situated, and tumours are not readily palpable. Differential diagnosis is difficult in tumours of the ascending colon, due to the adjacent structures of the liver, right kidney and ureter.⁶

1. Statistical Research Section. 1958, page 2.
2. "Cancer of the Colon and Rectum," American Cancer Society 10th series, 1956, page 4.
- 3 & 4 Bockus H.L., M.D., Kalser M.H., M.D. Disease of the Colon and Rectum, Vol. 2 Jan-Feb. No. 1, 1959, page 58.
6. Collier F.A., M.D., Cancer of the Colon and Rectum, 1956, 10th series page 46.

DIAGRAM NO. 1



The anatomical sites of carcinoma of the colon

The sigmoid loop extends from the *psoas major* muscle to the beginning of the rectum, suspended by the mesentery. Because of the taenial bands, the colon is puckered up or sacculated; these are clearly shown on X-rays after administration of a barium sulphate enema. The blood supply and lymphatics involved, will be taken into account as we touch upon the subject of the disease.

Signs and Symptoms

The symptoms vary according to area of lesions. As the growth develops these symptoms to some degree or other, become more constant and marked. The usual accompanied symptoms are indigestion, dyspepsia, local discomfort and ill-defined pain, which tend to persist. Altered bowel habits are manifested in diarrhoea, increasing constipation and frequent passage of mucous along with some blood. The presence of blood may be in or on the stool. A palpable mass in the abdomen, may be accidentally

discovered by patient or felt by doctor on a routine examination; this occurs in about 10 per cent. of cases and is the first sign of the disease without any previous warnings.

Symptoms resulting from anaemia may be pallor, fatigue, weakness, dizziness, dyspnoea and palpitation. Despite the anaemia, there may be no visible loss of blood. Anorexia, indigestion and weight loss are often the persisting complaints, occurring from lesions elsewhere in the colon.

Diagnosis

The fate of cancer of the colon and rectum usually lies in the hands of the first physician consulted. Most type of lesions produce symptoms that suggest the necessity for complete examination. Cancer of the colon and rectum, perhaps, has the best prognosis, if disease remained local. It is only the routine physical examination that can help in early diagnosis, prior to any symptoms. Careful study of case

history, symptoms and painstaking examinations, require facilities and doctors experienced in the field. With an understanding of cancer Nurses can advise patients to seek early medical attention.

The diagnostic methods are simple. There are three important indispensable tools:

1. *The examining finger*—Half the cases examined are diagnosed by finger alone.

2. *The Sigmoidoscope*—Two-thirds of all cases examined are diagnosed by this indispensable instrument.

3. *The Barium Sulphate Enema*—This shows up one-third of all cases who are X-rayed.

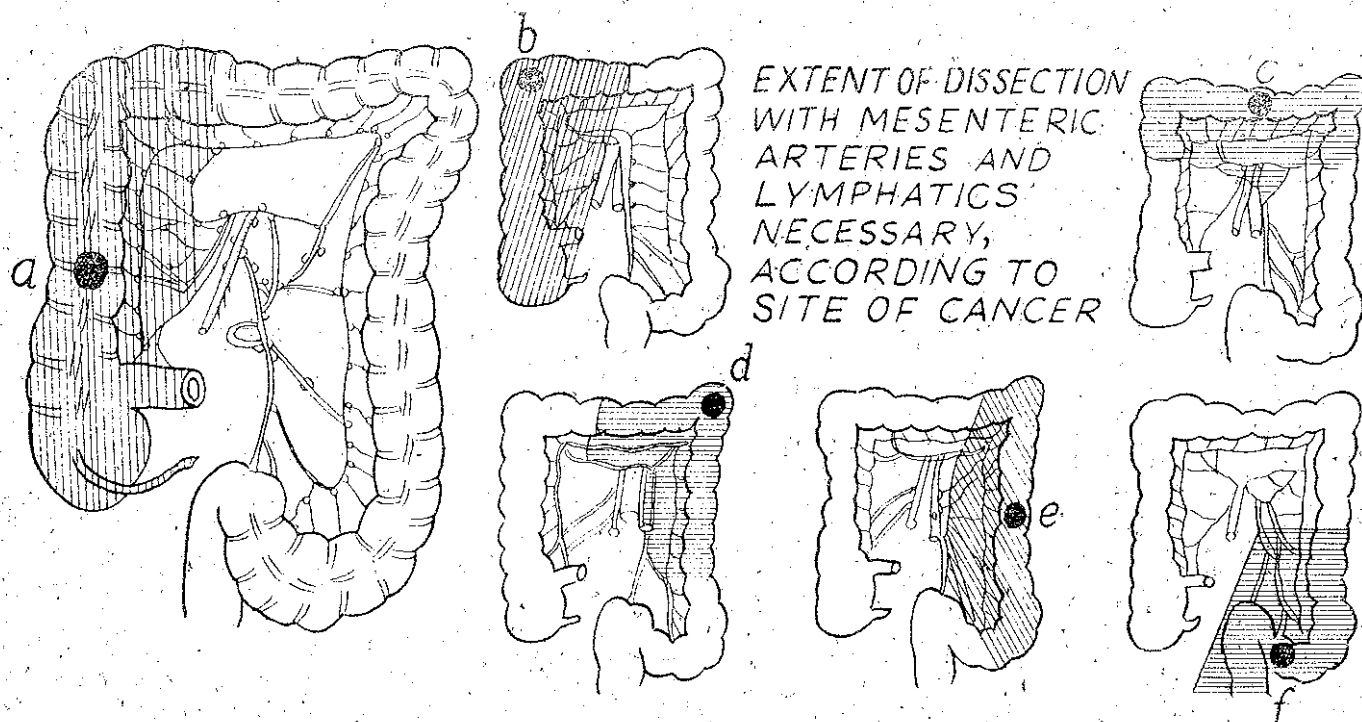
Treatment

Surgery

Surgery applied early while the disease is still local offers good prognosis. In diagram No. 2 resections of local lesions of different areas are shown.

DIAGRAM NO. 2

Resection of the Colon for Carcinoma



Diseases of the colon and rectum. (Vol. 2, Jan.-Feb. No. 1, 1959, pages 128-131.)

Types of Surgery

1. *Cæcostomy or transverse colostomy.*

This is done in cases of acute obstruction and gradual obstruction, as a temporary or a permanent measure, and requires a formal enclosure by second operation in suitable cases when resection of carcinoma is done with anastomosis.

2. *Resection of Colon.*

The affected area with blood vessels and lymph nodes involved are resected, and end to end anastomosis of the remaining colon done. Diagram 2 gives areas of resection with approximate sites of carcinoma.

3. *Complete colectomy.*

This may be performed if rectum is free from cancer or for familial polyposis as a preventive measure. Also rectal anastomosis is done.

4. *Combined abdomino-perineal resection.*

This is the operation of choice for cancer below the peritoneal reflexion. It is done as a one stage operation with a permanent colostomy. The rectum, anus and all perirectal tissues are resected. The *levator ani* muscles may also be resected if necessary. This operation requires judgment according to grade of malignancy and state of health. For example, a case of a man aged 69 years who underwent the operation, died at the age of 83, with no recurrence of the disease after 19 years of active and useful life since operation.

Antibiotics in Surgery.

Antibiotics are valuable in surgery of the colon and rectum, to reduce the bacterial flora.

Electrolyte Balance.

It is important to ascertain the electrolyte derangement in cases of cancer of the colon and rectum. The serum sodium, potassium chloride, carbon dioxide and blood non-protein nitrogen are done. Treatment is to replace the necessities with normal saline or hypotonic saline solution with potassium chloride, 5 per cent. glucose and invert sugar, to correct the depletion.

Radiation.

(a) Radiation may be given in

combination with surgery. A temporary colostomy is done to relieve the immediate symptoms, then followed by radiation therapy. In some cases complete regression of tumour is shown. A second operation is then done to close the colostomy. This two-stage operation with radiation has shown good results.

(b) Radiation is also used as a palliative treatment in inoperable cases.

The Nurse and Her Care

Preventive work can be done within and without the hospital. The patient and their relatives are links for education. For the public health nurse, each member in her family folder is an instrument she can set to work. Since the cards are laid out before us, we should not miss the opportunities. At the clinic while we listen to patient's complaints, we can school the patients to procedures and make him feel more at ease. The fears are there, whether shown or not, as when preparations are necessary for sigmoidoscopy; the lithotomy position may be frightening and simple explanations are necessary. Examinations carefully done are not painful, a momentary twinge may be felt when the sigmoidoscope reaches the flexure; patient should be assured. Warm instruments are helpful to lessen contractions. Tissues for microscopical examination should always be taken at the same time rectal washings are done for cytology. The nurse can be of assistance with all the necessities at hand and save delay in an uncomfortable position. From the clinic, the patient carries impressions of fear and reflections of behaviour. This is enough to lose or gain the confidence of people.

At the bedside of the patient, who is about to undergo surgery and radiation, there is much that a nurse can offer in the psychological aspect. She begins to answer questions of the disturbed mind prior to surgery. She has to weigh and measure how far of the truth she can explain, also how much is advisable in each case. Her explanations must at all times be assuring, hopeful and must reflect sincerity. These are important to the patient.

In the post-operative care of patients with surgery of the colon and the rectum, the nurse must be alert to the complications to be able to help the patient mentally and physically. The likely complications are:

1. Cardio-vascular complications.
2. Infection, which is 9.3 per cent.
3. Abdominal wound abscess 3.6 per cent.
4. Perineal wound abscesses 3.6 per cent.
5. Complications related to colostomies which is high, about 20.6 per cent.
 - a. Strictures of colostomy
 - b. Herniation around colostomy
 - c. Bladder disfunction which develops as an early complication
 - d. Retraction of colostomy
 - e. Urinary fistulae
6. Retention due to associated conditions as hypertrophy of prostate.
7. Fluid and electrolyte imbalances.

These details must be borne in mind and while going round to each case, it is important not only to listen to complaints that may point to something, but inspect and ascertain with questions. While dressing and changing patients, many useful teachings can be imparted.

The perineal resection in male patients may bear important consequence. The hypogastric plexus and pelvic nerves may be injured. This involves the normal physiology of the sexual function and micturition. These symptoms are again early post-operative symptoms which may involve retention of urine. The principle of nursing care is based on correct knowledge and a sense of responsibility. The nurse's report is the outcome of her observations and understandings of such cases.

The care of colostomy

Usually colostomies are opened on the 2nd or 3rd day after operation. The first irrigation may not be done for 7-8 days. By this time the patient has recovered from procedure that entailed surgery. However, he has an important psychological stage to go through. A colostomy is new to him; he is going to observe with interest how his nurse is about to attend to his