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ACUTE REGIONAL ILEITIS*

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THERE APPEARS to be some difference of opinion as to the incidence and eventual outcome in cases of acute regional ileitis. Does the condition subside completely or does it go on to the chronic form of the disease? Is appendectomy performed in these cases a bad procedure?

In an effort to answer these questions a series of cases of Crohn's disease have been examined, and a few cases of the acute form have been followed up after a period of years.

Crohn's description of the lesion in acute regional ileitis is a bright red, œdematous, soggy, congested segment of terminal ileum, a few to 18 inches in length. The mesentery is thickened, reddened and œdematous. The adjacent mesenteric lymph nodes are enlarged and firm. The serosa of the bowel may be covered with a fibrinous exudate. There may be free serous fluid in the peritoneal cavity. In some cases there may be reddening of a localized segment of ileum with minimal œdema and induration.

The clinical features of the condition often closely resemble those of appendicitis, and the condition is usually mistaken for it. There are abdominal pains, mid-abdominal or in the right lower quadrant, which are often colicky in nature. Occasionally there may be nausea or vomiting. There is tenderness and guarding in the right lower quadrant and a mass may be palpable. There is usually an elevated temperature and a raised leukocyte count. There may be loose bowel movements, although this is rare in our experience.

Besides this characteristic acute ileitis, there is a form of mesenteric lymphadenitis in which there may be some œdema of the terminal ileum and cæcum and the symptoms may also resemble those of appendicitis. The possible relationship of mesenteric lymphadenitis and acute ileitis is intriguing. In some of these cases an upper respiratory infection or an episode of acute gastro-enteritis has preceded the onset of the acute abdominal pain.

1943-49 SERIES

About four years ago, 26 cases of Crohn's disease whose records were in the files of the Vancouver General Hospital for the years 1943 to 1949 inclusive were studied. These were classified and compared with Crohn's much larger series as follows:

	V.G.H.	*Crohn*
Chronic regional ileitis	10	222
Acute ileitis	14	16
Ileo-jejunitis	1	38
Combined ileo-colitis	1	22

The 14 cases of acute ileitis were all operated on with a diagnosis of acute appendicitis and in each case ileitis was found and recorded. The appendix was removed in all cases, and interestingly enough in one case acute appendicitis was also reported by the pathologist and another showed mild subacute appendicitis. Ages ranged from 11 to 68 years. Two patients had temporary wound discharge which healed spontaneously. One patient had diarrhœa postoperatively but this cleared up about the time the patient left hospital.

The 14 acute cases in a series of 26 contrasts strangely with 16 out of 222 in Crohn's series. Crohn stated also that 9 of his 16 cases went on to the chronic phase, whereas none of our patients has been readmitted for subsequent treatment of the regional ileitis.

In an effort to trace these cases further a questionnaire was sent to each patient in 1953-54, asking whether there had been any further abdominal trouble, any diarrhœa, any operations, etc., since appendectomy. Only five patients responded, but none of these had had any further trouble. Three of them agreed to a barium meal follow-through x-ray examination at the hospital's expense and each was reported as showing no abnormality in the small bowel or cæcum. One patient had had a subsequent cholecystectomy, at which time the surgeon reported normal appearance of the bowel with only some adhesions present.

Brief histories of these five cases follow:

1. B.C., aged 12 years. Admitted November 10, 1945. Severe abdominal pain, generalized but more in right lower quadrant. No vomiting or diarrhœa. Tenderness and splinting in right lower quadrant. Temperature 99.4° F. Diagnosis—acute appendicitis. At operation the last two inches of ileum were acutely inflamed and œdematous. There were many large mesenteric lymph nodes with the mesentery reddened over them. The appendix was externally injected but was reported as showing only chronic productive changes. No trouble following operation.

2. Mrs. W.R., aged 30 years. Admitted December 5, 1946. Abdominal pains for 2½ days. Nausea and constipation. Tenderness diffuse but mainly in right lower

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quadrant. Preoperative diagnosis—appendicitis. At operation regional ileitis found. Appendix removed but essentially normal. Good recovery. No further trouble to 1953. X-ray examination of small bowel and proximal colon reported negative August 28, 1953.

3. Mrs. E.H., aged 50 years. Admitted August 19, 1945. Pains in middle and lower abdomen at intervals for a month, severe and steady before admission. Some pain in shoulders and knees. Tenderness in right lower quadrant. No vomiting or diarrhœa. Temperature 101° F. White cell count 15,500 with 76% granulocytes, 4% staff cells, 14% lymphocytes, 3% monocytes. Preoperative diagnosis—acute appendicitis. Appendix normal. Last few feet of ileum injected and swollen. Some free fluid in peritoneal cavity. Convalescence somewhat stormy. Frequent loose, light brown and foul stools. Wound discharged purulent and later fæculent material. All drainage ceased about the time the patient went home on the 15th day. Subsequent admission on October 8, 1950, for cholecystitis and cholelithiasis. Cholecystectomy performed. Bowel noted to be normal except for some adhesions. Response to questionnaire negative 1953. X-ray examination of small bowel and proximal colon reported normal August 29, 1953.

4. Mrs. F.T., aged 55 years. Admitted October 15, 1947, with acute pain across lower abdomen, maximal in right lower quadrant. Rebound tenderness; some distension. Temperature 102.2° F., pulse 104. White cell count 13,950 with 62% granulocytes, 28% staff cells, 8% lymphocytes, 2% monocytes. Operation—acute ileitis noted; appendectomy. Pathologist reported mild subacute appendicitis. Good recovery. Small subcutaneous abscess cleared before discharge on October 30, 1947. Culture *B. coli* and streptococci. Response to questionnaire—no further trouble.

5. Mr. W.G.W., aged 36 years. Admitted January 27, 1948 for acute appendicitis. Intermittent crampy abdominal pains for two weeks. Tenderness in epigastrium and right lower quadrant. Pain shifted to right lower quadrant. Operation—appendix normal. Acute ileitis of distal six inches, inflamed and thickened, with several large nodes in the mesentery. Cæcum involved also. Biopsy of lymph node reported as hyperplasia. Mesenteric swab culture grew staphylococci, streptococci and Gram-negative bacillus. Good recovery. Response to questionnaire—no further trouble. Barium meal investigation of small bowel and proximal colon reported negative in 1954.

From this unselected sampling of 14 cases of acute regional ileitis and from the fact that none of the patients has been readmitted to the General Hospital in a chronic phase of the disease after 5-10 years, it would seem that most if not all of these early cases subside completely. It may be that cases reported elsewhere, many of which went on to the chronic state, were in reality cases of an acute exacerbation of the chronic disease when subjected to operation. This might also explain why appendectomy was followed by sinus formation in 3 out of 6 of Crohn's cases. This is supported also by the fact that 11 of his 16 cases had diarrhœa before operation while none of ours had it. It would seem that, in cases in which diarrhœa, fever, abdominal mass and rectal fistulæ (or recent rectal operation) are features, particularly if there is a history of a previous similar attack, appendectomy should probably not be done.

1949-1954 SERIES

In order to verify these conclusions a further survey of Crohn's disease cases was made recently, covering the period March 1949 to December 1954. During this time there were a further 34 authenticated cases. Of these 15 were cases of chronic regional enteritis, colitis[1] or jejunitis,[1] and 19 were cases of acute ileitis proven at operation. All of the latter group except one had appendectomy performed, and all the wounds healed well (only one had a slight amount of suppuration). The preoperative diagnosis was acute appendicitis in 16 cases, small bowel obstruction in one and ruptured ectopic in two. Interestingly enough, 12 out of the 19 acute cases occurred in the years 1949 to 1950 and only 7 in the years 1951 to 1954. One wonders whether the newer antibiotics have played any part in this reduced incidence. None of these 19 cases has been readmitted for the same condition, and it is well over four years since the majority of them were first seen.

One patient in this second series who had a typical acute enteritis in 1950 had a laparotomy for endometriosis in 1952 and no evidence of bowel disease could be found.

In three of these cases an acute or subacute inflammation of the appendix was reported by the pathologist. It would seem that the cæcum and appendix may be involved to a degree in at least some of the cases.

It is certain that no more extensive surgery should be attempted at this stage because resolution will almost certainly occur spontaneously.

CONCLUSIONS

In conclusion, it can be said that in our experience the early acute form of ileitis is more common than one has been led to believe. It would appear that complete recovery usually occurs, and in most cases without any specific therapy. Two cases were seen at subsequent operations to be free of disease. Five patients traced after 5-10 years are well, three having negative radiographs. None of a total of 33 cases has become chronic. Appendectomy, which was carried out in all but one of our 33 cases, was not followed by any serious sequelæ; acute appendicitis was reported in three cases, and subacute appendicitis in two.

REFERENCE

1. CROHN, B. B.: Regional ileitis, Grune & Stratton, New York, 1949, p. 7.

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