

Colonoscopic features of early intestinal tuberculosis

Report of 11 cases

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Summary

The colonoscopic findings in 11 patients with early tuberculous colitis included erythema alone in 1 patient (9,1%), mucosal nodules indistinguishable from small adenoma in 8 (72,7%), aphthous ulcers in 3 (27,3%), and a deformed ileocaecal valve in 3 (27,3%). The caecum was the principal site of disease and the ileum was found to be normal in the 4 patients in whom it was entered. In 3 patients (27,3%), skip lesions were present. Acid-fast bacilli were present on histological examination in all cases — in the mucosa of 4 patients and the submucosa or lamina propria in 7 patients.

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In the majority of patients with intestinal tuberculosis, the disease is within the reach of the colonoscope.¹⁻³ Despite this, the colonoscopic diagnosis of intestinal tuberculosis has, until recently, remained sufficiently rare to justify case reports.^{4,5} Larger published series have described florid symptomatic diseases where strictures and deep ulceration have been prominent features.⁶⁻⁸ This series reports the colonoscopic findings in 11 patients with intestinal tuberculosis detected during the screening of patients with pulmonary tuberculosis.

Patients and methods

In a study designed to determine the prevalence of intestinal tuberculosis in patients with severe pulmonary tuberculosis, 11 patients with early colonic tuberculosis were identified. The patients, all men between the ages of 28 years and 59 years, had normal double-contrast radiographic examinations of both the small and large bowel. The tuberculous lesions were small and identified solely by colonoscopy.

Only patients in whom the diagnosis was made by the finding of acid-fast bacilli in biopsy specimens are included in this study. A minimum of 2 biopsy specimens was taken from each site of disease and the size of the lesions was estimated with the aid of the biopsy forceps.⁹ The total number of specimens taken from each patient ranged from 4 to 8.

Results

Colonoscopic findings

The morphology of the lesions encountered is shown in

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Table I. The nodular lesions were 0,2 - 0,5 cm in diameter and resembled sessile polyps. They occurred most frequently on the crests of swollen and red mucosal folds and were present in 72,7% of patients. In 2 patients a solitary nodule was the sole manifestation of tuberculosis. The ulcers encountered were aphthous ulcers, i.e. superficial ulcers 0,1 - 0,3 cm in diameter with a white base; they also occurred on red and swollen mucosa. The ulcers were multiple in all cases and appeared when there were no mucosal nodules in only 2 patients (18,2%). The only abnormality in 1 patient was mucosal erythema. The ileum was entered in 4 patients and found to be normal — all had caecal lesions. The ileocaecal valve was deformed in 3 patients — all had caecal lesions and the ileum could not be entered in these cases.

TABLE I. MORPHOLOGY OF EARLY TUBERCULOUS LESIONS

| | No. | % |
|---------------------------|-----|------|
| Multiple nodules | 6 | 54,5 |
| Superficial ulcers | 3 | 27,3 |
| Deformed ileocaecal valve | 3 | 27,3 |
| Solitary nodules | 2 | 18,2 |
| Erythema only | 1 | 9,1 |

The distribution of the lesions encountered is shown in Table II. In 4 patients more than one section of the colon was involved, and in 3 of these the lesions were discontinuous, i.e. a segmental colitis was present. The extent of the disease is shown in Table III.

TABLE II. DISTRIBUTION OF TUBERCULOUS LESIONS

| | No. | % |
|------------------|-----|------|
| Caecum | 10 | 90,0 |
| Transverse colon | 4 | 36,4 |
| Ascending colon | 2 | 18,2 |
| Rectum | 1 | 9,1 |

TABLE III. EXTENT OF LARGE BOWEL TUBERCULOSIS

| | No. | % |
|---|-----|------|
| Caecum | 6 | 54,5 |
| Transverse colon | 1 | 9,1 |
| Caecum and ascending colon | 1 | 9,1 |
| Caecum and transverse colon* | 1 | 9,1 |
| Caecum, ascending and transverse colon* | 1 | 9,1 |
| Caecum, transverse colon and rectum* | 1 | 9,1 |

*Discontinuous or skip lesions.

Acid-fast bacilli were seen on histological examination in all cases, being identified in lesions situated in the mucosa of 5 patients and in the submucosa in 6 patients.

Discussion

The present series differs from previously published colonoscopic descriptions of intestinal tuberculosis in the low frequency of ileocaecal valve involvement, and by the presence of solitary nodules and erythema alone as the sole manifestations of tuberculous colitis. A segmental colitis has been reported as a manifestation of advanced disease^{10,11} and was present in this series in 3 cases (27,3%). This suggests that, in some cases at least, the disease may be multicentric *ab initio*.

The normality of the ileum in the presence of early caecal disease in the 4 patients in whom it was inspected is in contrast with the usual finding of combined ileocaecal involvement in more florid disease.

None of the features described were pathognomonic of tuberculosis. Aphthous ulceration occurs in Crohn's disease¹² and the mucosal nodules were indistinguishable from small adenomas, thus emphasising the need for biopsy of all lesions encountered at colonoscopy. The diagnosis in each case was established by the finding of acid-fast bacilli in biopsy specimens. This is unusual. In two series^{8,13} involving 21 patients in which between 6 and 10 biopsies were taken from each patient, the yield of acid-fast bacilli from histological specimens was zero. Similar experience has been reported by others⁷ and has been explained on the grounds that the lesions are located submucosally and hence inaccessible to colonoscopic biopsies. This conclusion does not seem appropriate in early disease,

since in this study biopsy samples from the submucosa were frequent and acid-fast bacilli were also demonstrated in the mucosa.

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