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Colonscopic and ileoscopic biopsies increase yield of diagnosis in chronic large bowel diarrhea with normal colonoscopy

Colonoscopy is indicated in patients with chronic large bowel diarrhea (CLBD) with alarm symptoms (blood in stools, anorexia, weight loss, nocturnal diarrhea, family history of colonic cancer). 1 The role of colonoscopic biopsies in patients with CLBD and normal colonoscopy is controversial. We prospectively evaluated the value of taking biopsies from the colon and terminal ileum in patients with CLBD and normal colonoscopy.

Patients presenting with CLBD (small volume stools, more than four times a day, loose to semi-soft for more than 4 weeks) were enrolled. Exclusion criteria were presence of alarm symptoms, HIV positivity, antibiotics intake within six weeks before the onset of diarrhea, and abnormal liver function test, renal function test and blood glucose levels. Stool examination for ova/cyst was done three times, and stool culture was done. Patients with a positive stool examination were advised to undergo colonoscopy if the diarrhea persisted even after treatment for stool detected infection.

After taking consent, colonoscopy was performed. Four biopsies each were taken from terminal ileum (TI), cecum, ascending colon, transverse colon, descending colon, sigmoid colon and rectum. Biopsies from all sites were sent in separate vials; those from the sigmoid colon and rectum were sent in one vial. Sections were stained with H&E and evaluated by the hospital’s pathologist (S Kulkarni) for the presence of edema, inflammation, cryptitis, crypt abscesses, ulceration, granu-
lomas, acid fast bacilli and *Entameba histolytica*. Microscopic colitis (lymphocytic and collagenous colitis) were diagnosed according to previously documented histological criteria. Non-specific colitis/ileitis (NSCC) was defined as mild chronic inflammation of colonic mucosa without granulomas or architectural distortion of the crypts. This was distinguished from microscopic colitis by milder severity and more shallow distribution of inflammatory cells in the lamina propria and normal number of intraepithelial lymphocytes (IEL). Ethics committee of the hospital approved the study.

Two hundred and forty one patients (mean age 44.1 years [range 12-60]; 138 men) underwent colonoscopy, ileal intubation was possible in 230 (95.4%) patients. The table shows the histopathological diagnosis in all patients. The definitive diagnosis included granulomatous colitis, amebic colitis, lymphocytic colitis and ulcerative colitis. There were 62 patients whose biopsies were initially reported as NSCC. These were re-evaluated by the second pathologist and 20 were reported as normal; in the rest, the diagnosis was unchanged. Histology was abnormal in 22 (9.5%) ileal biopsies.

If biopsies would have been taken from rectum and sigmoid colon only, a histological diagnosis would have been made in 30 patients only (Table). Among the 25 patients with a diagnosis of tuberculosis, all responded to standard 4 drug anti-tubercular therapy. Of 16 patients with ulcerative colitis, 9 patients are continued on mesalamine 400 mg BD. The remaining six patients stopped medication after 3 months; one of them developed diarrhea again and responded to mesalamine. Two patients diagnosed to have indeterminate colitis did not follow up.

Sigmoidoscopy with biopsies is indicated in patients with CLBD, who have non-inflammatory diarrhea and no alarm symptoms. If biopsies were taken only from rectosigmoid, an etiology would have been established in 12.4% patients only. Thus, colonoscopic biopsies increased the yield of etiological diagnosis significantly.

It is controversial whether biopsies should be taken from a macroscopically normal colon in evaluation of CLBD. Earlier studies have reported that a definitive diagnosis could be established in 10% to 32% of cases with unexplained diarrhea and a normal colonoscopy. In our study, abnormal histology was reported in 57.2% of patients; a definitive diagnosis could be established in 31.5% patients.

In patients with CLBD, TI should be examined for presence of infection or inflammation and biopsies taken if any abnormality is found. Geboes at al reported a diagnostic yield in about half of 251 biopsies when there was macroscopic abnormality in the TI. Yusoff et al reported an insignificant contribution of TI biopsies when ileoscopy was normal. Misra et al found that biopsy from endoscopically normal TI increased the diagnostic yield by 8% in patients.

Non-specific inflammation was found in 42/124 (17.4%) of the cases in our study. This incidence is higher than that reported from the west. Yusoff et al reported NSCC in 8% of patients of CLBD with an endoscopically normal colon. In a study from India, NSCC was reported in 36% of patients with CLBD and a normal colonoscopy. The significance of NSCC is not clear. One reason for the higher prevalence of NSCC in India could be commonly acquired enteric infections, which may cause mild symptoms for a long period of time. Secondly, patients with a diagnosis of NSCC may have another underlying etiology of CLBD including MC, functional diarrhea, systemic mastocytosis and inflammatory bowel disease.

In conclusion, colonoscopic and ileoscopic biopsies marginally increase the diagnostic yield in patients with CLBD without alarm symptoms and a normal colonoscopy. The significance of presence of non-specific inflammation needs to be reviewed.

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References


References