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Case report

Collagenous colitis – a relapsing and remitting disease

K R PALMER, H BERRY, P J WHEELER, C B WILLIAMS, P FAIRCLOUGH, B C MORSON, AND D B A SILK

Department of Gastroenterology and Nutrition Central Middlesex Hospital, Department of Rheumatology, King's College Hospital, Departments of Gastroenterology and Histopathology, St. Mark's Hospital, and Department of Gastroenterology, St. Bartholomew's Hospital, London

SUMMARY We report four cases of collagenous colitis. These show the variable course of the disease and emphasise the difficulties that this involves in assessing therapy.

Collagenous colitis was first described by Lindstrom in 1965.[1] The disease is characterised clinically by profuse watery diarrhoea and histologically by marked thickening of the colonic subepithelial basement membrane. Although at least 15 further cases have since been described[2–10] relatively little is known of the natural history, intestinal distribution and treatment.

Case 1

Mrs D, a 74 year old white housewife presented an 18 month history of fluctuating, profuse watery diarrhoea. Neither blood nor mucus were noted in the stools. Physical examination and sigmoidoscopy were normal. Routine serum biochemistry and haematology were normal and stool cultures were negative. Small and large bowel contrast radiology, pancreatic secretion tests and a jejunal biopsy were all unremarkable. There was no clinical or biochemical evidence of laxative abuse and serum gastrointestinal polypeptide hormone concentrations were normal. Treatment with antidiarrhoeal agents and with salazopyrin 3 g daily was ineffective and therapy was stopped. Bowel habit returned to normal but six months later severe watery diarrhoea recurred. Colonoscopy was then carried out. The colonic and terminal ileal mucosa appeared macroscopically normal but colonoscopic biopsies showed marked subepithelial basement membrane thickening. Terminal ileal biopsies were normal. Oral prednisolone, 5–20 mg daily, induced initial but unsustained symptomatic benefit.

Address for correspondence: Dr D B A Silk, Department of Gastroenterology, Central Middlesex Hospital, Acton Lane, London NW10 7NS.

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Case 2

Mrs BM a 45 year old white woman presented with a six year history of intermittent diarrhoea. She had not recently travelled abroad before the onset of her symptoms. At its most severe the diarrhoea occurred more than 10 times daily and was associated with marked urgency and occasional incontinence. In between these severe episodes her bowel habit was normal. Blood and mucus were absent from the stool. Physical examination, sigmoidoscopy, and barium enema were normal. Serum biochemistry and haematology, small bowel and barium enema examinations were normal. Stool cultures were negative. Colonoscopy done six years after the barium enema revealed a macroscopically normal mucosa but multiple biopsies of the colon were characterised by thickening of the subepithelial basement membrane (Figure). Terminal ileal histology was normal. Treatment with salazopyrin was ineffective.

Case 3

Mrs SB a 42 year old white female secretary who had not recently undertaken foreign travel, presented with a one year history of fluctuating diarrhoea associated with urgency and colicky lower abdominal pain. There was a six year history of a seronegative symmetrical arthritis affecting fingers, wrists, elbows, and feet. She was taking non-steroidal anti-inflammatory drugs. Physical examination revealed signs of rheumatoid arthritis but was otherwise normal. Sigmoidoscopy showed patchy erythema. Routine haematology and serum biochemistry were normal. Over a 72 hour period in hospital she passed 1·2 kg of stool, although the output of faecal fat was normal. Stool cultures were negative. Colonoscopy was macroscopically normal but multiple biopsies

Figure *There is a moderate increase in the mononuclear cell content of the lamina propria mostly plasma cells. Lymphocytes can be seen insinuating between the epithelial cells lining the crypts. The surface epithelium is attenuated and beneath it there is prominent thickening of the subepithelial collagen plate. H and E ×100.*

from the colon showed subepithelial basement membrane thickening. Treatment with salazopyrine was ineffective, but prednisolone, 5 mg daily, induced a symptomatic remission which has been sustained over a six month period.

Case 4

Mrs OZ an Iranian female aged approximately 65 years travelled from Iran to London for investigation of a 40 year history of fluctuating diarrhoea. Weeks of profuse watery diarrhoea were followed by months of normal bowel function. There was no history of rectal bleeding or mucous. Physical examination was normal. Sigmoidoscopy revealed an erythematous rectal mucosa and biopsies showed a mild superficial proctitis and minor goblet cell depletion. The haemaglobin concentration was 9·8 g/dl with an iron deficient film. Serum liver function tests and thyroid function were normal. Stool cultures were negative. Colonoscopy was macroscopically normal, but multiple colonic biopsies were all characterised by marked thickening of the subepithelial basement membrane. Histological examination of biopsies obtained from the terminal ileum was normal.

Discussion

The four women described in this report present the classical picture of collagenous colitis. In each case the subepithelial basement membrane thickness was more than 15 μ. Gledhill and Cole[11] have shown that the upper limit of the normal basement membrane is 5–10 μ and that a 15 μ basement membrane is invariably associated with diarrhoea. The disease is much more common in women.[11] The reasons for this are clearly unknown although the association in one of our cases with a seronegative arthropathy may imply an autoimmune basis. This association has not previously been reported and previous workers have failed to show immune complex deposition within the abnormal basement membrane.[12]

Each case presented with an extremely variable disordered bowel habit. In the same patient prolonged episodes of watery diarrhoea with urgency and abdominal cramps would be followed by a temporary return to relative normality. The explanation for this is not clear because the basement membrane thickening is due to the deposition of dense mature collagen[2 5] and the pathological changes were found in each case throughout the colon. The recent observation of Farrar *et al*[10] that the histological lesions of collagenous colitis may regress after treatment with salazopyrin suggests that the disease is a dynamic rather than an inevitably progressive one. Our experience shows that collagenous colitis is a relapsing and remitting disease and this implies that assessment of therapy is difficult. Reports of success with mepacrine[4] and with salazopyrin[10] may be premature and drugs should only be accepted as effective after long periods of observation. In our cases salazopyrin was uniformally ineffective. The efficacy of corticosteroid treatment is not proven although at least one of our patients (case 3) entered a sustained remission over a six month period after the institution of therapy with prednisolone 5 mg daily.

We have shown for the first time that the characteristic basement membrane abnormality of collagenous colitis is indeed localised to the colon. Previous workers[12] have shown that the disease is distinct from collagenous sprue[13] and jejunal biopsies from one of our cases were normal. Biopsies from the terminal ileum were also normal in our cases confirming the colonic localisation of this rare disease.

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