SHORT REPORTS

Intensive intravenous regimen for membranous colitis

For several years we have used a standard five-day intravenous regimen for severe attacks of ulcerative colitis,¹ and we report here the successful use of this regimen for treating membranous colitis.

Patients, treatment, and results

Six patients were diagnosed as having membranous colitis in the past 20 months (see table). The diagnosis was based on sigmoidoscopic appearances, confirmed in each case by typical features on rectal biopsy; three patients also had typical radiological features. Each patient was treated with the intravenous regimen of Truelove and Jewell.¹ For five days nothing was taken by mouth except sips of water. During this period the patient was given intravenous fluids, 3-4 litres daily, composed of 0.9% saline or 5% dextrose, with 1 litre of Aminoplex 5 intravenous feeding solution each day or on alternate days, blood when needed, and KCl as required. Drugs were added to the bottles of intravenous fluids (but not to Aminoplex 5 or to blood) to give daily doses of 40-60 mg prednisolone-21-phosphate and (empirically) 1 g tetracycline. The patient was also given a rectal drip of 100 mg hydrocortisone hemisuccinate in 120 ml warm normal saline twice daily. This regimen was continued for five days, after which the patient was allowed back on a normal diet and treated with prednisolone 20 mg daily by mouth and prednisolone retention enemas nightly for a further six weeks. This treatment was then tailed off over the next two weeks.

All six patients responded dramatically and recovered promptly from their attack of membranous colitis. The first four patients remained well during at least three months of follow-up; the other two patients were treated in the past month and have made a good recovery to date (see table).

Comment

Membranous colitis (also known as pseudomembranous colitis) is an inflammatory condition of the large intestine in which a membrane of fibrin, mucus, and inflammatory cells forms on the mucosa. The small intestine is also often affected. The membrane can usually be seen sigmoidoscopically as patchy white plaques on a considerably

hyperaemic mucosa. The diagnosis can be confirmed by rectal biopsy, which shows characteristic features.² Barium enema examination also often shows characteristic features.³

The condition is now seen most often after the use of broad-spectrum antibiotics, especially lincomycin and clindamycin, but it was also seen in the days before antibiotics, and major surgery and septicæmia can predispose to the condition.⁴ In some post-antibiotic cases many staphylococci are found in the stools, but usually no specific pathogenic bacteria can be identified.

The patients present with profuse diarrhoea and the stools usually contain mucus and blood. The colitis can be of all grades of severity and it is not unusual for the more severe forms to cause death. As judged from reports, the fatality rate seems to be about 10-20%.⁴ The disease, however, is self-limiting. Although subtotal colectomy has been performed as a life-saving measure, it is desirable to avoid such an operation if possible in the absence of chronic colonic disease.

The severely ill patient with membranous colitis loses fluid and blood and may be shocked, requiring appropriate treatment. ACTH has been given with good results⁵ and systemic corticosteroids have also been used successfully, sometimes in combination with steroid enemas.³ Because of the possibility of a fatal outcome in this condition it is essential to use vigorous medical treatment, such as the intravenous regimen reported here.

¹ Truelove, S C, and Jewell, D P, *Lancet*, 1974, **1**, 1067.

² Whitehead, R, *Mucosal Biopsy of the Gastrointestinal Tract*, p 162. London, Saunders, 1973.

³ Valberg, L S, and Truelove, S C, *American Journal of Digestive Diseases*, 1960, **5**, 728.

⁴ *British Medical Journal*, 1974, **4**, 65.

⁵ Prohaska, J V, Govostis, M C, and Taubenhaus, M, *Journal of the American Medical Association*, 1954, **154**, 320.

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Clinical details of the six patients with membranous colitis treated with the five-day intensive regimen

Case No.	Age and Sex	Preceding illness	Preceding antibiotic treatment	Symptoms	Fever (°C)	White-cell count ($\times 10^9/l$)	Presence of typical histological features	Presence of typical features on barium enema	Response to intravenous regimen	Follow-up	
										Sigmoidoscopy	Symptomatic
1	58 M	None	None	Abdominal pain, diarrhoea with blood and mucus	37.0	9.9	+	Doubtful	Rapid improvement within 24 hours	Normal at 3 months	Well at 3 months
2	67 F	Skin graft for varicose ulcer	Cloxacillin	Diarrhoea with mucus	38.7	19.7	+	+	Rapid improvement within 24 hours	Normal at 3 months	Well at 9 months
3	68 M	Subphrenic abscess after vagotomy and pyloroplasty for perforated duodenal ulcer	Gentamicin, ampicillin, cloxacillin, kanamycin, lincomycin, cephalothin, clindamycin	Diarrhoea with blood and mucus	37.9	24.3	+	+	Rapid improvement within 24 hours	Normal at 3 months	Well at 9 months
4	68 F	Septic toe	Clindamycin	Colicky abdominal pain, watery diarrhoea with traces of blood	37.7	13.1	+	Minimal ulceration of sigmoid	Rapid improvement within 24 hours	Normal at 4 months	Well at 6 months
5	85 F	Wound infection after partial colectomy for diverticulitis	Erythromycin	Profuse diarrhoea	37.1	18.3	+	+	Improvement within 48 hours	Improved at 2 weeks*	Well at 2 weeks*
6	65 F	Wound dehiscence after perforated gastric ulcer	Ampicillin, cloxacillin	Diarrhoea	38.0	17.7	+	(Not done)	Rapid improvement within 24 hours	Improved at 2 weeks*	Well at 2 weeks*

*Patient treated in the month before report was written.