Case reports

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Myopericarditis complicating ulcerative colitis

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A patient is described with chronic ulcerative colitis who experienced recurring episodes of myopericarditis, initially coinciding with relapse of his bowel symptoms. He has also suffered one episode of renal colic. The available published reports are briefly reviewed.

Extra colonic manifestations of ulcerative colitis are now well recognized, may at times be profound, and may be unrelated to the extent or degree of activity of the colitis (Goligher *et al.*, 1968; Young, 1967; Edwards and Truelove, 1964). Only four cases of ulcerative colitis with involvement of the myopericardium have been reported (Young, 1967; Mukhopadhyay *et al.*, 1970). We report a case of ulcerative colitis complicated by recurring myopericarditis, and a single episode of renal colic due to a proven calculus of the left ureter.

Case report

A boy of 15 years was first admitted to hospital in 1963 with a 6-week history of weight loss, anorexia, and bloody diarrhoea. His previous health had been excellent. On the basis of the sigmoidoscopic, rectal biopsy, and barium enema appearances a diagnosis of ulcerative colitis was made, with involvement from the splenic flexure distally. Soon after admission, he complained of a vague retrosternal discomfort. An electrocardiogram showed ST segment abnormalities and T wave inversion. He was treated with systemic steroid and steroid enemata in addition to sulphasalazine, and after several weeks his bowel and other symptoms were sufficiently controlled for him to return home. His discharge electrocardiogram was normal.

He remained well until 1969 when once more he had a relapse of his inflammatory bowel symptoms with fever, tachycardia, raised ESR, and bloody diarrhoea. Again he began to complain of retrosternal discomfort. His chest x-ray was normal but his electrocardiogram again showed features of myopericarditis (Fig. 1) with sinus tachycardia, ST segment abnormalities, and T wave inversion. Again the sigmoidoscopic, rectal biopsy, and barium enema appearances were those of active ulcerative colitis, with no radiological evidence of extension of the disease. Again, after a moderately severe illness during the course of which surgical intervention was considered, remission of both his chest and bowel

symptoms was induced by systemic steroid, steroid enemata, and sulphasalazine and his electrocardiogram returned to normal (Fig. 2).

In May 1971 he had yet another attack of chest pain in association with a relapse of his ulcerative colitis. On this occasion both his bowel symptoms and chest discomfort were difficult to control even with high doses of steroid. During this admission his chest pain was mainly pleuritic in character. His electrocardiogram now showed sinus tachycardia, pronounced ST segment and T wave abnormalities (Fig. 3), and for the first time his aspartate aminotransferase rose and a pericardial friction rub was easily heard. His steroids were maintained at a high dosage for several weeks and eventually both his bowel and cardiac symptoms were completely controlled.

Extensive investigations revealed no known cause for his myopericarditis. He had no eye symptoms, and though he did have vague fleeting discomfort in both knee and his right hip joints, x-ray examination of these proved normal. X-ray examination of his spine and in particular of his sacroiliac joints also was normal. His rheumatoid factor was negative. At no time did he have a urethral discharge and his gonococcal complement-fixation test and Wassermann reaction were both negative. Other investigations included: antinuclear factor negative; no lupus erythematosus cells detected; smooth muscle antibody, mitochondrial antibody, and antiheart antibody tests were all negative; serum IgG, IgA, and IgM were normal; extensive viral studies were negative as were his Coxsackie neutralization tests; serum uric acid was repeatedly normal. His liver function tests, small bowel function tests, and small bowel radiology were normal.

Although discharged on a small maintenance dose of oral prednisone and sulphasalazine, in November 1971 he had yet a further episode of myopericarditis. At this time his ulcerative colitis was symptomatically, sigmoidoscopically, and radiologically quiescent. A brief increase in his steroid dosage once more reduced and eventually abolished his symptoms.

One month later he was admitted as an emergency

FIG. 1 Electrocardiogram during exacerbation of proctocolitis in 1969.

with left renal colic which on IVP examination was shown to be due to a non-opaque calculus at the lower end of the left ureter. Despite careful observation including filtration of all urine passed by the patient during the period of in-patient care no renal calculus was recovered for analysis. Though his serum uric acid levels were repeatedly normal and his urine contained no urates, it was assumed after detailed calcium metabolic studies were normal, that this represented an episode of uric acid stone. He was treated empirically with a high fluid intake and alkalinization of his urine and repeat IVP examination one week later was normal. When about to be discharged, he had a further episode of myopericarditis. His ulcerative colitis was again inactive.

Since then his ulcerative colitis has remained quiescent, he has had no further episodes of renal colic, but he has required to continue on prednisone 7.5 to 10 mg orally per day to prevent relapse of his myopericarditis symptoms.

Discussion

Young (1967) gives little detail on his case of pericarditis complicating inflammatory bowel disease. Mukhopadhyay *et al.* (1970) describe two men with ulcerative colitis and one woman with probable granulomatous colitis. In all 3 cases the pericarditis responded to steroids and one required repeated courses of steroid to control his pericardial disease despite remission of his bowel symptoms. In the other 2 cases the pericarditis was less severe but also did not run a parallel course with the colitis. The patients all had other extra colonic manifestations.

It is possible that this patient's renal calculus has occurred independently of his ulcerative colitis, but an association between renal calculi and ulcerative colitis, though rare, is now well recognized especially after ileostomy (Deren *et al.*, 1962;

FIG. 2 *Electrocardiogram returned to normal.*

Maratka and Nedbal, 1964; Modlin, 1972). It is presumed that this patient's stone was of uric acid.

This patient illustrates two rare complications of ulcerative colitis. In terms of published cases myopericarditis is a particularly rare complication. It is possible that this latter complication may occur more commonly and should especially be looked for in inflammatory bowel disease.

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FIG. 3 *Electrocardiogram during exacerbation of proctocolitis in 1971.*