

sugar restriction and metformin. Biochemical tests showed: serum glucose concentration 6.7-10 mmol/l, glycosylated haemoglobin 11.2%, urine δ -aminolaevulinic acid concentration 69.5 μ mol/l (normal <38 μ mol/l), urine porphobilinogen concentration 37.1 μ mol/l (normal <13.2 μ mol/l), and erythrocyte uroporphyrinogen-I-synthase activity 5.4 nmol/h.l (normal 10-32 nmol/h.l).

Comment

In patients who have acute intermittent porphyria porphyric attacks often tend to be less frequent and finally stop after the age of 40. The stopping of these attacks in our patient, however, was somewhat surprising, not only because his porphyria was aggressive but also because it stopped rather too abruptly. On the other hand, it is obvious that this period free of attacks coincided well with the latent and early clinical stages of diabetes. As a high intake of glucose or carbohydrate offers protection from porphyric attacks⁴ it is not unreasonable to suggest that constant hyperglycaemia due to latent or overt diabetes can have a similar effect.

This assumption seems to agree with recent experimental findings in rats that have had diabetes induced by streptozotocin.⁵ In these animals δ -aminolaevulinic acid synthetase activity showed a 36% decrease but was restored to normal values after treatment with insulin.

There are some sporadic reports of diabetes mellitus in patients who have acute intermittent porphyria, but we have found no mention of the course of the porphyria after the onset of diabetes.⁴ Our patient will possibly have a lifelong remission from his porphyria if he is not overtreated for his diabetes. Thus we have avoided severely restricting his carbohydrate intake (monosaccharides and disaccharides excluded), although he was overweight. He was given metformin as it does not produce hypoglycaemia and sulphonylureas are contraindicated in porphyria.²

Patients who have a long remission from porphyric attacks should be investigated to see if they have subclinical diabetes.

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Steroids, non-steroidal anti-inflammatory drugs, and serious septic complications of diverticular disease

Colonic diverticular disease may be present in as many as one third of people aged over 60.¹ Complications requiring surgery, however, occur in only a small proportion of those who have this condition, and the most serious complication—that of generalised peritonitis—is quite uncommon.² Because of this the factors that determine the development and severity of these complications are not well understood. A connection between corticosteroid treatment and severe septic complications of diverticular disease has been reported.³ In addition, an increased risk of perforation of the small and large bowel, not necessarily related to diverticular disease, has been found in patients who were taking a variety of anti-inflammatory drugs.⁴

We present here evidence that supports an association between severe septic complications of diverticular disease and both corticosteroid and non-steroidal anti-inflammatory drug treatment.

Patients, methods, and results

Patients undergoing operative treatment for diverticular disease or its complications at Ipswich Hospital from 1972 to 1985 were identified from data

from the Hospital Activity Analysis and operating theatre records. Patients who were not operated on and who died from complications of diverticular disease and underwent necropsy were also identified. For 192 patients (median age 67 years, range 25-88, 76 men) records were adequate for a retrospective analysis of drug history and operative and pathological findings.

When patients were divided into eight groups according to these findings there seemed to be an excess of patients who were taking corticosteroids or non-steroidal anti-inflammatory drugs among those who had the most serious complications (table). Logistic regression analysis was therefore used to compare patients who did and did not have extracolonic sepsis after allowance for any confounding effects of age and sex. The extension of sepsis outside the colon was strongly associated with both corticosteroids (relative risk = 13.2, 95% confidence interval 1.81 to 96.5) and non-steroidal anti-inflammatory drugs (relative risk = 4.85, 95% confidence interval 1.58 to 14.8).

Complications in patients treated for colonic diverticular disease. (Figures are numbers of patients)

Complication	Total	Treatment		
		Corticosteroids	Non-steroidal anti-inflammatory drugs	Both
No extracolonic sepsis:				
Diverticular disease only	16		2	
Inflammatory mass confined to colon	46		2	
Colonic adhesions but no extracolonic pus	15	1		
Extracolonic sepsis:				
Fistula	17	2	2	1
Extracolonic abscess	26	2	3	1
Purulent peritonitis	51	6	13	3
Faecal peritonitis	18	2	2	2
Septicaemia and portal pyaemia	3			1

There were 12 different indications for the corticosteroids and non-steroidal anti-inflammatory drugs taken by the patients who developed extracolonic sepsis, the most common being osteoarthritis (14 patients).

Comment

These findings support the previously reported association between corticosteroid treatment and severe septic complications of diverticular disease.³ They also suggest an association between these complications and the use of non-steroidal anti-inflammatory drugs. This is consistent with the increased incidence of perforations of the small and large bowel previously reported in patients who were taking these drugs.⁴ Such associations could have arisen because septic complications are related to an underlying condition for which steroids and non-steroidal anti-inflammatory drugs are prescribed. In this series, however, there were many different indications for treatment, and none could explain the association on its own. Another possibility is that the drugs impair the ability of the colon to limit or terminate inflammatory processes occurring within diverticula. Alternatively, or in addition, they may mask symptoms so that patients present with more advanced disease.

In view of the comparative rarity of serious complications of diverticular disease and the great benefit that steroid and non-steroidal anti-inflammatory drug treatment can give, it would be incorrect to withhold these drugs from an elderly person for fear of producing complicated diverticulitis. Caution, however, should probably be exercised when prescribing such drugs for patients who have a history of diverticulitis.

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