and corticosteroid treatment started the prognosis is excellent. Our first patient improved markedly on steroids with disappearance of her dyspnoea, clearing of the chest radiograph and improvement in pulmonary function. Patient 2 was not given steroids because open lung biopsy was reported to reveal very advanced fibrosis. No further follow-up was available on this patient. Patient 3 was given a short course of steroids, which were withdrawn because of the development of steroid psychosis. However, her symptoms settled and there was a vast improvement in her chest radiograph and in the results of pulmonary function tests. Over the years there have been an increasing number of reports of adverse reactions to nitrofurantoin. Consequently it has been suggested that its role in the treatment of urinary tract infections should be re-examined. Furthermore, since its introduction over 28 years ago, newer antibiotics have been developed which have a broader spectrum of activity, are more effective in preventing recurrences and are associated with fewer side-effects. Hence it would seem that, certainly in the long-term treatment of chronic urinary tract infections, it has at best a minor role. Its use in acute infections could also be seriously questioned.

Addendum

Patient 2 returned for re-assessment 1 year after her initial admission. During this time she had gained weight and her effort tolerance had improved. Improvement in lung function was confirmed objectively: her FEV₁, had increased to 63%, FVC to 53%, TLC to 60%, and TLCO₂ to 60% of their predicted values. Thus, despite our initial assessment of irreversible lung damage, significant improvement followed cessation of nitrofurantoin therapy.

REFERENCES


Gastrocolic fistula complicating benign gastric ulcer

A case report and review of the literature

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Summary

Gastrocolic fistula complicating gastric or colonic surgery is a well-recognized entity. It is extremely rare, however, to encounter this condition in patients with benign peptic ulceration who have not undergone previous abdominal surgery.

Such a patient was seen recently at Addington Hospital, Durban. The diagnosis was confirmed by means of barium enema examination and subsequent successful surgical resection of the fistula was performed.

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Barium meal examination confirmed the presence of duodenal scarring together with some antral distortion, but there was no evidence of a fistula. Gastroscopy revealed a distorted antrum with a reddened and inflamed pylorus which could not be entered. The findings suggested pyloric stenosis. On barium enema examination, however, contrast medium was seen to flow from the mid-transverse colon into the stomach, entering at the greater curve; this suggested the presence of a gastrocolic fistula (Fig. 1). All routine blood tests were negative and laparotomy was performed on 21 August 1980.

At operation a large penetrating ulcer on the greater curve of the stomach with fistulization into the transverse colon was detected. There was evidence of duodenal scarring due to old ulceration. The operative procedure included vagotomy, Polya gastrectomy and limited transverse colectomy. The patient's postoperative course was uneventful and she has since been free of symptoms.

Histological examination of the specimen confirmed the presence of a chronic benign gastric ulcer with gastrocolic fistulization.

Discussion

Gastrocolic fistula as a result of benign peptic ulceration is rare. Fistulas have been reported in association with surgery, malignant lesions of the stomach and colon, trauma, irradiation, ulcerative colitis, perforated colonic diverticulum and intra-abdominal abscess. In a significant number of cases there was a history of steroid or aspirin ingestion, and it is suggested that in patients on ulcerogenic drugs gastric ulcers most often develop in the greater curve aspect of the stomach, thus increasing the likelihood of colonic fistulization following penetration of the ulcer.

Another causative factor may be the anti-inflammatory effects of drugs such as aspirin and cortisone which decrease the inflammatory reaction associated with penetrating ulcer, thereby leading to silent penetration into the adjacent viscus. Our patient, however, had no history of ingestion of ulcerogenic drugs.

The symptoms of gastrocolic fistula include epigastric pain, diarrhoea, weight loss and vomiting; in some cases there is faecal vomiting. Anaemia with or without melaena occurs in about 15% of patients, and in a small number abdominal masses have been detected. The most reliable means of establishing the diagnosis is barium enema examination; this is accurate in 90 - 95% of cases, whereas barium meal examination is only accurate in 40 - 70%.

This was confirmed in our patient; the barium meal examination failed to demonstrate the fistula while the diagnosis was evident from the barium enema examination. Endoscopy is unreliable as a primary diagnostic tool because since the fistulous tract is normally small and can be hidden between gastric folds or in the base of an ulcer crater it is easy to miss. Once the diagnosis is suspected, however, endoscopic biopsy is important to exclude a malignant lesion. For the same reason, when the diagnosis is established a thorough pre-operative screening programme is essential.

The basic management of gastrocolic fistula consists of surgical exploration, with primary excision and restoration of gastro-intestinal continuity. The majority of patients reported in the literature (70%) were treated (as was our patient) by en bloc resection of the fistulous tract with partial gastrectomy and partial colectomy. In the past, staged operations with an initial colostomy have been recommended, but if the disease is not active primary excision may be accomplished without any significant increase in morbidity and mortality. If active inflammatory processes with peritonitis are present a more conservative approach such as a staged procedure with an initial colostomy is probably indicated. Various other procedures have been described. These include excision of the fistula with closure of the gastric and colonic defect, partial gastrectomy and closure of the colonic defect, and partial colectomy and closure of the gastric defect. Most of these, however, are reported in earlier series and appear to be associated with higher mortality.

There is no doubt that in the diagnosed, prepared patient the treatment of choice is one-stage en bloc resection with partial gastrectomy and partial colectomy.

REFERENCES