Section of Surgery

President R H Franklin FRCS

Meeting April 10 1970
at the Royal Postgraduate Medical School, London

Short Papers

Peritonitis Due to Diverticular Disease of the Colon: Review of 44 Cases

by A P Barabas MD FRCS
(Department of Surgery, Royal Postgraduate Medical School, London W12)

General peritonitis is by far the most serious complication of diverticular disease of the colon. It can arise in three different ways (Fig 1): (1) An uninflamed diverticulum may burst and cause fæcal peritonitis (4 cases in this series). (2) An abscess may rupture and cause purulent peritonitis (4 cases). (3) Severe diverticulitis with or without a necrotic perforation may lead to fæco-purulent peritonitis (36 cases).

Diagnosis

In a previously published series (McLaren 1957) and in the present series correct pre-operative diagnosis was made in only one-third of all cases. In another third acute appendicitis was mistakenly suspected. Two different sets of circumstances may cause diverticulitis to mimic appendicitis: (1) Redundant pelvic colon lying in the right iliac fossa. (2) Inflamed pelvic colon lying in the left iliac fossa, but, because of adherent omentum and small bowel loops around it, perforating towards the right iliac fossa (Fig 2). The following clinical features may help to differentiate this latter type of perforated diverticulitis from appendicitis: early onset of bowel symptoms, sudden shift of pain to the right (at the time of perforation), the feeling of swollen appendices epiploicæ on rectal examination, and the palpation under anæsthesia of a vague mass in the left iliac fossa.

A different diagnostic trap arises in patients with uninflamed burst diverticulum of the colon. In these patients the onset of symptoms is sudden and dramatic, and unheralded by previous symptoms. On examination there is general and boardlike rigidity of the abdominal wall. The clinical picture, therefore, resembles that of a perforated duodenal ulcer and only by close questioning concerning the onset of pain can one distinguish between the two. In the case of a perforated diverticulum the pain starts in the lower abdomen, and often radiates to the rectum, resembling the pain of proctalgia fugax.

Treatment

Burst diverticulum with fæcal peritonitis: Four patients with this condition were operated on within 12 hours of fæcal soiling of the peritoneum. Two had a simple closure of the perforations and in two the perforations were brought out as iliac colostomies. The colostomies were closed within six weeks of the emergency operations. All four patients recovered.

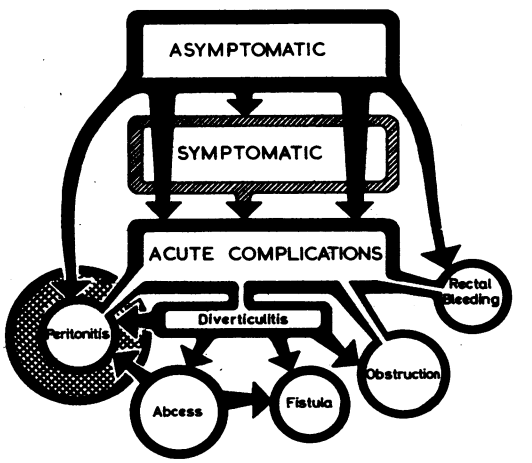

Fig 1 *Complications in diverticular disease of the colon. Note that peritonitis can arise in three different ways: due to a rupture of an asymptomatic diverticulum, due to severe diverticulitis, and due to the rupture of a paracolic abscess*

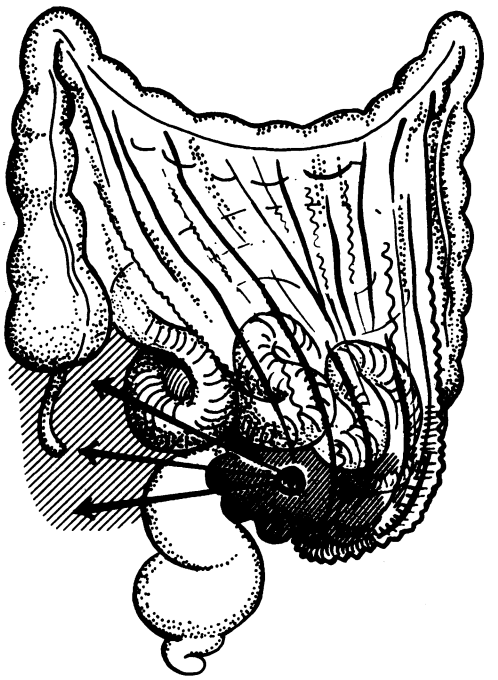

Fig 2 *Operative findings in a case of perforated diverticulitis mimicking appendicitis. A similar mechanism may account for the high rate of misdiagnosis in cases of peritonitis due to diverticulitis*

Burst abscess with purulent peritonitis: In 4 patients a relatively small abscess in or near the wall of the colon burst, causing general peritonitis. There was no communication between the peritoneum and the lumen of the bowel and the colon itself was not inflamed. Drainage of the abscess was carried out and all four patients recovered uneventfully.

Diverticulitis with fæcopurulent peritonitis: In 36 patients the pelvic colon was acutely inflamed, but in only half of these was perforation of the colon identified on laparotomy. All patients had pus in the peritoneal cavity, which often smelt and looked fæculent. Only one patient had an emergency resection of the perforated colon, and died four days later as a result of peritonitis. The remaining 35 patients had the following operations: drainage of the left iliac fossa and proximal colostomy (11), perforation brought out as a temporary colostomy (6), perforation closed with proximal colostomy (6), and drainage of the left iliac fossa alone (12).

There were 3 deaths altogether (one with and 2 without emergency resection). All three were old patients (76, 78 and 81) with more than two days' history of peritonitis and in poor general condition before surgery.

Post-operative Course of Patients

Nineteen of the 41 patients who survived have been followed up for two years or more. Only 6 of the 19 had further symptoms and two of these 6 required elective resection of the colon.

Discussion on Treatment

Routine emergency resection of the perforated colon has been advocated recently (Roxburgh *et al.* 1966). The main advantage claimed for this operation is a reduction in post-operative mortality. However, the high mortality rates quoted for conservative surgery date mainly from times when intensive antibiotic treatment and modern fluid and electrolyte therapy were not available (McLaren 1957). The present series (3 died out of 44) shows that good results can be achieved today without emergency resection. Instead of routine emergency resection, therefore, the surgical procedure should be chosen according to pathological findings. These vary widely from burst diverticulum to ruptured abscess. Emergency resection is probably only justified in cases with large necrotic-edged perforation and/or a severely inflamed colon.

Following recovery from peritonitis the majority of patients in this series have had no further symptoms due to diverticular disease of the colon. This observation, if confirmed, may be used as a further argument against routine emergency resection of the perforated colon.

REFERENCES

McLaren I F (1957) *J. roy. Coll. Surg. Edinb.* 3, 129

Roxburgh R A B, Dawson F L & Yeo R (1966) *Brit. med. J.* iii, 465

Diagnostic Methods in Breast Cancer

by J Ian Burn FRCS

(Breast Unit, Department of Surgery, Hammersmith Hospital and Royal Postgraduate Medical School, London W12)

In recent years much debate has centred round the methods of treating cancer of the breast, but we must be equally concerned with methods of diagnosis. The clinical diagnosis of cancer of the breast is usually correct, but not always. Mastectomy based on clinical diagnosis is rightly eschewed by most surgeons, and some form of biopsy is therefore required to substantiate the diagnosis.

At the Hammersmith Breast Clinic the majority of patients attending have symptoms. About 60% have a discrete lump, while the remainder present with a variety of symptoms, such as pain in the