

Case 67

A symptomless finding on a barium enema examination



Figure 67.1

A high-powered business man aged 64 years – a health freak who worked out in the gym every day, a non-smoker, non-drinker, who prided himself on being in ‘top condition’ but who was also a self-confessed hypochondriac – went to a private clinic to have a very complete (and expensive) check up. Not only did this include an exhaustive questionnaire (‘bowels regular, once a day, no blood or slime’), a full physical examination (entirely negative), a battery of blood tests (all within the normal range), but also a number of imaging examinations, all of which were normal apart from the barium enema. Figure 67.1 shows a typical image from the study.

What lesion does the X-ray show and how commonly is it found in subjects of this age group?

There are extensive diverticula of the transverse, descending and sigmoid colon. Autopsy studies have shown that colonic diverticula are present in about a third of subjects over the age of 60 in the developed world. They are most commonly found in the sigmoid colon, but may, as in this case, extend into the rest of the left side and the transverse portion of the colon. Occasionally they are found in the right colon. The rectum is never involved.

Is there a known cause of this condition?

Colonic diverticula were rare until the early 20th century and are still uncommon in many parts of Asia and Africa.

The underlying pathology is thickening of the muscular wall of the affected part of the colon due to deposition of, mainly, elastin. The raised intracolonic pressure produces outpouchings of mucosa at the sites of potential weakness of the bowel wall that correspond to the supplying vessels to the colon, as shown in Fig. 67.2. Figure 67.3 shows a close-up of an opened segment of colon with diverticula, which demonstrates faecoliths (arrowed) within the diverticula and marked hypertrophy of the wall (between the double arrows):

Diets that are low in bulk tend not to distend the bowel wall, resulting in the development of high intramural pressure, which can be shown by manometric studies. It is suggested that the modern low roughage Western diet may be responsible for the marked variation in the geographical distribution of this condition.

Part 2: Cases

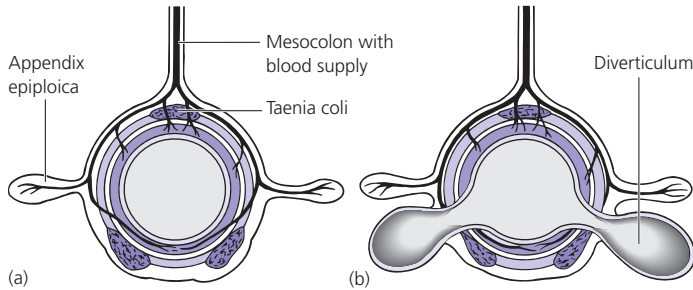


Figure 67.2 The relationship of diverticula of the colon to the taenia coli and to the penetrating blood vessels: (a) normal colon and (b) colon with diverticula; both shown in transverse section.

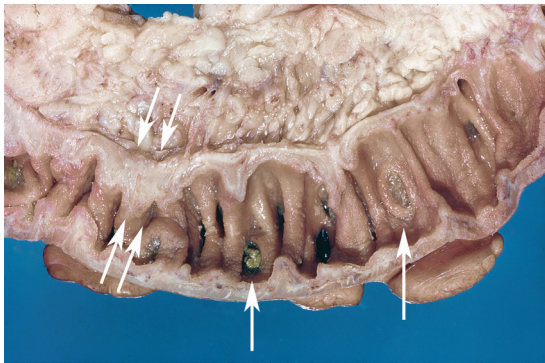


Figure 67.3 A segment of colon with diverticula showing faecoliths (arrowed) and marked hypertrophy of the wall (between double arrows).

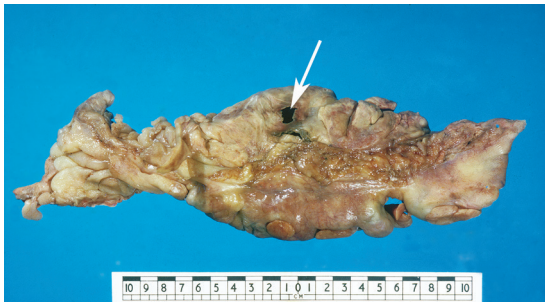


Figure 67.4 A section of sigmoid colon showing a perforated diverticulum (arrowed) at autopsy on a woman of 82 admitted in a moribund state with a faecal peritonitis. She had died in the emergency department.

What are the complications of colonic diverticula?

- The thickened bowel wall may produce subacute obstruction – constipation, bloating and abdominal discomfort. This is referred to as chronic diverticular disease.
- A diverticulum may become acutely inflamed (acute diverticulitis). This may:
 - Perforate into the general peritoneal cavity (Fig. 67.4).
 - Form a localized pericolic abscess.
 - Fistulate into an adjacent organ (the commonest cause of a vesicocolic fistula).
 - Erode a blood vessel in the neck of the diverticulum to produce acute bright red rectal bleeding.

All these complications are seen quite frequently in the surgical wards, yet the great majority of patients with colonic diverticulosis remain symptom-free throughout their lives.

Is there any advice you would give to this patient?

Poor fellow, he is going to be very upset. Explain that he has a very common condition, which probably will never give him trouble and which 30% of his business friends probably have. It would be reasonable to advise a high roughage diet.