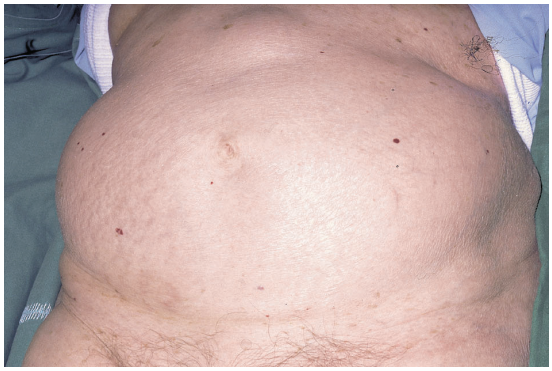
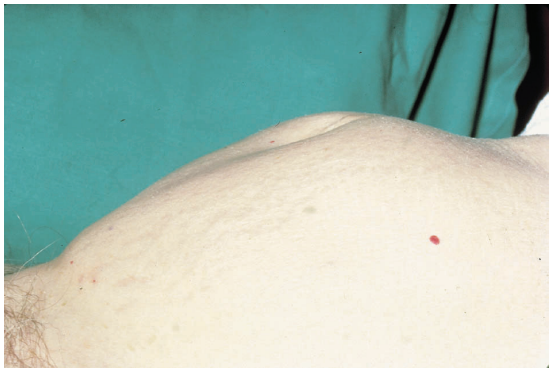
Case 58 An acutely painful, distended abdomen



(a)



(b)

Figure 58.1

A housewife aged 56 years was admitted to hospital as an acute surgical emergency. Twelve hours before admission, shortly after she had gone to bed, she suddenly experienced acute central abdominal pain and vomited up her supper. The pains recurred every few minutes, were getting worse and made her double up. She vomited several more times, now greenish fluid. Her bowels had not acted and she had not passed flatus since the pain began. Ten years previously she had her appendix removed as an emergency through a right paramedian incision and the surgeon told her afterwards that it was gangrenous and had nearly burst.

Apart from this, she had previously been quite well. She was on hormone replacement therapy and had had three children, all normal deliveries. Until this episode, her bowels had moved normally.

On examination, she was in obvious pain, which was coming on in spasms every few minutes – she said 'like labour pains, but worse'. Her temperature was 37°C, pulse 100 and blood pressure 130/78 mmHg. She was dehydrated with a dry, coated tongue. Inspection of the abdomen revealed the appearance shown in these photographs of the patient (Fig. 58.1).

What are your inspection findings?

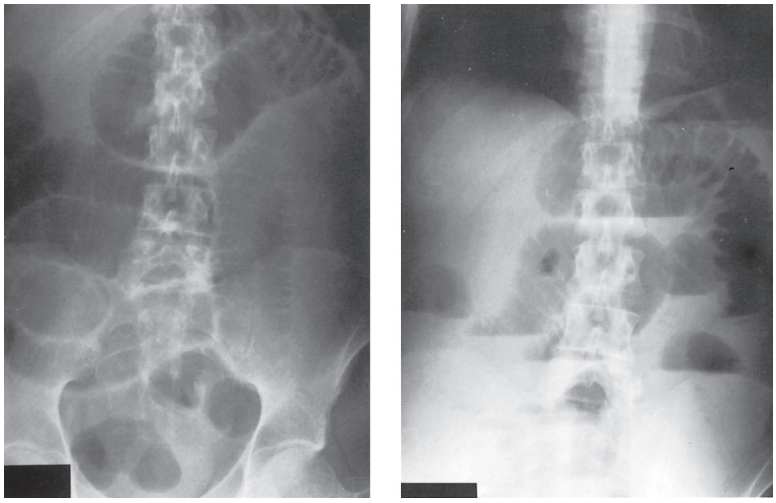
The abdomen is grossly distended. There is a well healed, low right paramedian operative scar. There are no obvious herniae at the umbilical, inguinal or femoral orifices. Careful inspection, over a few minutes, detected obvious visible peristalsis, waves of contraction being seen to pass from left to right across the abdomen. Palpation revealed no abdominal masses, but the abdomen was diffusely tender and there was marked guarding. There was no clinical evidence of free fluid on percussion, but noisy bowel sounds were obvious on auscultation. Rectal examination revealed an empty rectum and no masses were felt.

Putting all this information together, what is your clinical diagnosis now?

She has all four of the classical features of acute intestinal obstruction:

- Acute colicky abdominal pain.
- Abdominal distension.
- Vomiting.
- Absolute constipation – i.e. for flatus as well as faeces.

The fact that she has had a previous abdominal operation



(a) (b)

Figure 58.2 X-ray of the abdomen: (a) supine and (b) erect.

– no matter how long ago – together with the absence of any evidence of a strangulated hernia at the umbilical, inguinal or femoral orifices – makes obstruction due to adhesions or an adhesive band by far the most likely cause of this emergency.

What radiological investigation is used to help confirm the diagnosis?

A plain X-ray of the abdomen or a CT scan.

A plain abdominal X-ray was carried out, and the two films that were taken are shown in Fig. 58.2.

What is the position of the patient in the X-rays and what do these films show?

The patient is supine in Fig. 58.2a and erect in Fig. 58.2b. The first shows dilated loops of bowel in a ladder pattern. The valvulae conniventes can be seen to pass transversely right across the bowel wall, which is typical of small intestine. Figure 58.2b shows multiple fluid levels. The X-rays strongly support the clinical diagnosis of small bowel obstruction.

It is important to note that a small percentage of patients with this condition show no obvious anomaly on plain abdominal X-rays. This is explained by the loops of distended bowel being completely filled by fluid.

CT scan with oral water-soluble contrast would help identify the site of obstruction and rule out any other causes, including unusual internal hernias such as obturator hernias. The small bowel above the obstruction would be dilated and full of fluid with occasional fluid levels; the bowel distal to the obstruction would be collapsed.

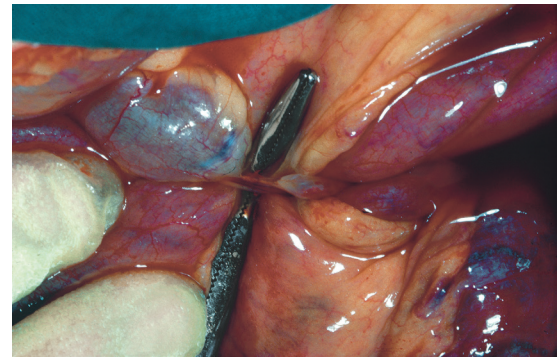


Figure 58.3 A band adhesion is seen in front of the surgical instrument and obstructing the adjacent bowel loops.

What is the initial management of this patient?

- Reassurance that she is going to get better – the first thing to do with every emergency patient!
- Relieve the pain with opiates, best given intravenously.

- Nasogastric suction to empty the distended stomach.
- Commence intravenous replacement of fluid and electrolytes.
- Prophylactic antibiotic therapy is indicated only if surgery is to be undertaken and is given at the induction of anaesthesia. Otherwise, if the patient is septic, it should be started following culture of blood, urine and sputum (if present). Simple obstruction does not cause a septic picture so an alternative diagnosis should be considered in such patients.

The patient failed to settle on conservative management and was operated upon 48 h later. The abdomen was explored through a lower midline incision. Distended loops of small intestine were immediately encountered. An adhesive band was found to pass across a loop of small intestine and obstruct it (Fig. 58.3). The band was divided and the patient made a smooth recovery.