

Case 4 Postoperative infection



Figure 5.1



Figure 5.2

A secretary aged 42 years was admitted to hospital with a 48 h history of acute abdominal pain, having previously been entirely well. On examination she had the typical clinical features of a general peritonitis. She had a temperature of 38°C, she was toxic, tachycardic and had a coated tongue. Examination of the abdomen revealed generalized guarding and tenderness, especially over the right iliac fossa, where there was marked muscular rigidity. On rectal examination, there was pain on pressing anteriorly in the pouch of Douglas.

She underwent emergency laparotomy later that day through a midline lower abdominal incision and a perforated gangrenous appendix was removed. Metronidazole, penicillin and gentamicin had been started preoperatively, and the course was completed.

Nasogastric suction and intravenous fluids were used and she made a smooth recovery. However, 3 weeks after surgery, having been at home for nearly a fortnight, she presented with a large abscess in the superficial tissues of the lower right abdomen (Fig. 5.1). She was readmitted to hospital and the surgical procedure that she underwent is shown in Fig. 5.2.

What is the definition of an abscess?

An abscess is a localized collection of pus. Pus itself is defined as living and dead phagocytes, usually containing living and dead bacteria.

What general manifestations often accompany an abscess?

A swinging pyrexia, tachycardia, malaise, anorexia and sweating. There is usually a polymorph leucocytosis.

What is the likely cause of the abscess in this case?

Contamination of the tissues of the abdominal incision by pus that escaped at the time of the initial operation. Even if copious lavage is carried out at the time of surgery and prompt antibiotic treatment is initiated, contaminated wounds such as this have a 15–20% risk of the development of postoperative infection.

The fact that the wound infection did not become manifest until 3 weeks after surgery is explained by bacterial inhibition produced by the antibiotic regimen. It is not at all rare to see postoperative infections such as this to be delayed for many weeks – even months – after the initial episode of contamination. Often the pus will be seen to have formed around a piece of suture – a ‘stitch abscess’.

What procedure is being performed in Fig. 5.2?

The abscess is being drained. A small skin incision is made immediately over the centre of the abscess – often this site is through the old incision itself. The track is explored bluntly by forceps, since a scalpel might injure deep structures. This technique is termed Hilton's method.*

When pus is reached, a swab is taken for bacteriological examination. The report on this, by the way, often comes back as 'sterile on culture', again as a result of the

previous antibiotic treatment. A drain is then inserted. This can be a gauze wick or a piece of plastic tubing or a corrugated sheet according to the surgeon's preference. The drain is shortened daily to allow the track to heal from below upwards.

The abscess would have eventually discharged spontaneously, probably through the old incision itself. However, during this time the abscess would have continued to act as a source of toxæmia, the patient would have continued to be febrile and ill and there would be the risk of necrosis of the overlying skin.

*John Hilton (1805–1878), surgeon at Guy's Hospital, London.