

Case 81 A large swelling in the groin



Figure 81.1

Figure 81.1 is a photograph of a 57-year-old vagrant, who had 'lived rough' for the past decade. He had noticed a lump in his right groin several years previously, which gradually enlarged until it reached its present size a couple of years ago. It was now getting to be uncomfortable but did not hurt. He found that the lump would disappear after he had lain down for a few minutes, but would return on standing up. Apart from the lump and a 'smoker's cough' (he smoked as many cigarette ends as he could collect), he was surprisingly fit.

Just on this brief history and on inspection of Fig. 81.1, what would be your working diagnosis?

An indirect, reducible, right inguino-scrotal hernia.

Describe the anatomical basis of this swelling

The sac of an indirect inguinal hernia, a protrusion of the parietal peritoneum, enters the inguinal canal at the internal (deep) ring. This orifice lies lateral to the inferior epigastric vessels. The sac then passes obliquely along the inguinal canal. This canal is about 4 cm in length. Its posterior wall is made up of the transversalis fascia, rein-

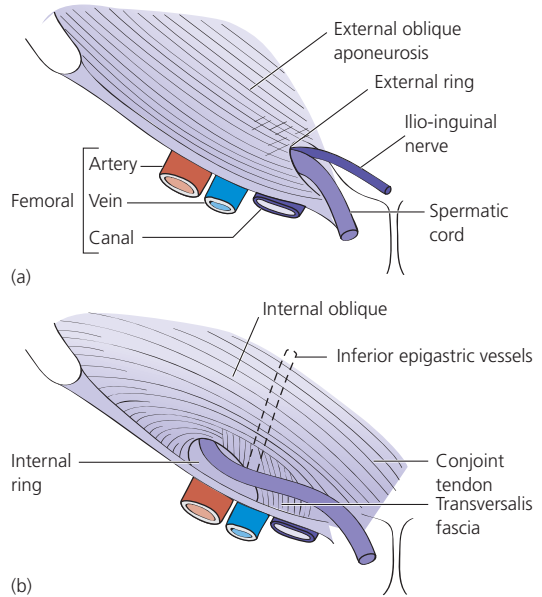


Figure 81.2 The right inguinal canal (a) with the external oblique aponeurosis intact and (b) with the aponeurosis laid open.

forced medially by the conjoint tendon, while its anterior wall comprises the aponeurosis of the external oblique reinforced laterally by fibres of the internal oblique. The canal terminates at the external (superficial) ring, which is a slit-like opening in the external oblique.

The canal transmits the spermatic cord in the male, together with the ilio-inguinal nerve (Fig. 81.2). In the female, the much narrower canal transmits the round ligament to the labium majus, together with the ilio-inguinal nerve.

Note that when the hernia is reduced, the peritoneal sac remains *in situ* but empty. When the subject coughs or strains, or in this case merely stands up, the hernia contents – which are usually small intestine but may also comprise large bowel, omentum or indeed any intraperitoneal viscus – descend into the sac.

What further tests would you perform in your clinical examination of this patient to confirm (or refute) your initial working diagnosis?

Lay the patient flat on the examination couch. In his case, the hernia contents reduced spontaneously. Sometimes gentle massage is required to reduce the hernia. This distinguishes a reducible from an irreducible hernia.

Now identify the position of the internal ring. This is done by palpating the femoral pulse at the groin, half way between the anterior superior iliac spine and the midline (the pubic symphysis), and sliding the index finger just above the line of the inguinal ligament above this point. Get the patient to cough – the hernia is controlled. Now release your finger, get the patient to cough again – the hernia appears and is seen to pass obliquely downwards into the scrotum. If visible and/or audible peristalsis is detected in the mass, this indicates small bowel contents.

What is the difference between a direct and an indirect inguinal hernia?

A direct inguinal hernia is a bulge of peritoneum through the posterior wall of the inguinal canal. Since this usually results from some progressive weakening of the transversalis fascia it is very rare in children and not common in young adults. It is also unusual in females, due to the small size of the inguinal canal. The hernia is seen to pass directly forward ('direct') on coughing, and does not descend towards or into the scrotum. Its neck lies medial to the inferior epigastric vessels and therefore the hernia is not controlled by finger pressure over the internal ring. Because it has a wide neck it immediately reduces on lying down. The wide neck also accounts for the fact that the direct hernia is at little risk of strangulation.

Often the differential diagnosis is suggested by careful inspection. Look at this photograph of a 67-year-old man with bilateral inguinal herniae (Fig. 81.3). The left is passing towards the top of the scrotum, while the right is bulging directly forward. The diagnosis of direct right and indirect left inguinal hernia was confirmed at operation later that day. (Note also the large sebaceous cyst with punctum to the right of his umbilicus, which was also removed.)

Not unusually at operation a patient is found to have an indirect sac descending into the spermatic cord through the internal ring and a direct bulge through the posterior wall of the canal medial to the inferior epigas-



Figure 81.3 Bilateral inguinal herniae.

tric vessels. This is given the evocative name of a pantaloon hernia. Indeed, the standard technique of inguinal hernia repair involves removal of the indirect sac and reinforcement of the internal ring orifice and of the posterior wall of the canal with a prosthetic mesh.

Which is the more common side for an inguinal hernia?

For some unknown reason, inguinal herniae are much commoner on the right side – 60% of unilateral herniae. Another 20% are on the left and 20% are bilateral.

What is the very real danger of leaving this man's hernia untreated?

Indirect inguinal herniae are likely to strangulate, and this especially so in large inguino-scrotal herniae such as this. Often, following a cough or straining, the contents of the sac are trapped – usually at the internal or the external ring – their blood supply cut off and gangrene of the trapped viscus will occur unless the hernia is operated upon urgently and the obstruction relieved.

Note that although large inguino-scrotal herniae such as this were common in the UK 40 or 50 years ago – and

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in consequence strangulated inguinal hernia headed the list of causes of small bowel obstruction – today the majority of patients report at a much earlier stage in the evolution of their herniae and are submitted to elective

repair. In emerging countries, with poor medical facilities, giant inguinal herniae remain common and are a frequent cause of obstruction.