Case: A 38-year-old computer engineer is referred to surgical outpatients complaining of pain in the right groin. He has noticed this over the past few months and his pain is worse on exertion. He has also noticed an intermittent swelling. He is otherwise fit and well. There is a family history of bowel cancer. He is a smoker of 25 cigarettes per day and drinks 10 units of alcohol per week. He is a pyrexial with normal blood pressure and pulse. The abdomen is grossly normal but there is some tenderness in the right groin. The patient is asked to stand. In the right groin, there is a swelling, which is more pronounced when the patient coughs. The other groin and the scrotal examination are normal.

**Questions**

• What is the likely diagnosis?

• What are the anatomical boundaries?

• What are the complications associated with this condition?

• How should the patient be treated?

**ANSWER:**

The patient is likely to have an inguinal hernia. The boundaries of the inguinal canal are:

• Anteriorly: the external oblique and internal oblique muscle in the lateral third

• Posteriorly: the transversalis fascia and the conjoint tendon (merging of the pubic attachments of the internal oblique and transverse abdominal aponeurosis into a common tendon)

• Roof: arching fibres of the internal oblique and transverse abdominus muscles

• Floor: the inguinal ligament

Inguinal herniae are more common in males and in the right groin. Indirect inguinal hernia sacs are found lateral to the inferior epigastric vessels at the deep inguinal ring. Direct hernias are found medial to the inferior epigastric vessels and are a result of a weakness in the posterior wall. This distinction between the two can only be made with certainty at the time of surgery. The key in distinguishing between femoral and inguinal herniae is their point of reduction. Femoral herniae reduce below and lateral to the pubic tubercle, and inguinal herniae above and medial to the tubercle.

**! Complications of an inguinal hernia**

• Incarceration, i.e. irreducible

• Bowel obstruction

• Strangulation

• Reduction en-masse: reduction through the abdominal wall without pushing bowel contents out of the hernial sac. The patient should have a surgical repair of the hernia. This can be done by either an open or laparoscopic approach. Both involve reduction of the hernia and placement of a mesh to prevent recurrence.

**KEY POINTS**

• Indirect and symptomatic direct herniae should be repaired to prevent the risk of future strangulation.

• Irreducible inguinal herniae should be repaired promptly to avoid strangulation.

• Easily reducible symptomless direct herniae need not always be repaired, especially in elderly patients with significant comorbidities.