

Localised perforation of an incarcerated femoral hernia

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Section: Abdominal imaging

Area of Interest: Abdomen Abdominal wall

Procedure: Computer Applications-Detection, diagnosis

Imaging Technique: CT

Special Focus: Acute Hernia Obstruction / Occlusion

Case Type: Clinical Cases

Authors: Saunders DJ, Tolan D

Patient: 66 years, female

Clinical History:

Increasing confusion, haemodynamic instability with evidence of sepsis and lower abdominal peritonism. Elevated lactate.

Imaging Findings:

Dilated, fluid-filled small bowel from the duodenal-jejunal flexure to the distal ileum indicating obstruction with a transition point within a right femoral hernia. Associated free gas within the hernial sac and inflammatory change with the surrounding peritoneal fat.

Discussion:

Background: Femoral hernias account for less than a fifth of groin hernias, are more common in women [1] and some authors suggest more prevalent on the right hand side [2]. A localised sac descends into the femoral canal unlike inguinal hernias which either pass through the inguinal canal or directly through a defect in the posterior wall of the canal.

Clinical Perspective: All groin hernias can present as a focal lump or pain and clinical differentiation can be challenging. Complications associated with femoral hernias, including incarceration and bowel obstruction are more common than with inguinal hernias [3] with an increased associated morbidity and mortality [4].

Imaging perspective: CT is often used in both symptomatic and asymptomatic cases due to its availability and ability to demonstrate complications or an alternative cause for the symptoms.

Commonly hernias are differentiated by location with the femoral type being inferior to the inguinal ligament and medial to the femoral bundle/triangle. Femoral hernias also commonly occur as a localised sac causing compression of the femoral vein which is a specific sign [2].

Outcome: When incarceration or obstruction is present the management is surgical regardless of the hernia subtype but the approach and incision can vary so a clear and accurate report is essential for operative planning. On exploration of suspected inguinal hernias a femoral hernia can be overlooked [5]. Owing to the increased risk of complication early elective surgery is considered in femoral hernias even when acute features are not present.

Take home message / teaching points: Caution is required when differentiating inguinal from femoral hernias as

regardless of the presence or absence of complication the approach to management can be very different. Close liaison with the surgeons is also required as the approach to a reducible femoral hernia without evidence of complication is often via an inguinal approach, but if there is evidence of incarceration or strangulation on CT or the hernia is clinically irreducible a sub-inguinal approach tends to be favoured [6]. In the presence of perforation or obstruction a preperitoneal approach or midline laparotomy may be required with increased associated surgical morbidity and mortality, especially with increasing age [7]; both of these approaches also often require a general anaesthetic further increasing potential risks.

When a femoral hernia is identified a careful evaluation for possible complication is essential with important negatives mentioned in the report.

Differential Diagnosis List: Localised perforation of an incarcerated femoral hernia, Incarcerated femoral hernia (without perforation), Incarcerated inguinal hernia

Final Diagnosis: Localised perforation of an incarcerated femoral hernia

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Figure 1

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Description: Right femoral hernia sac with evidence of perforation. **Origin:** Saunders D, West Yorkshire Radiology Academy, Leeds General Infirmary, West Yorkshire, UK.

Figure 2

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Description: Femoral hernial sac below the inguinal ligament with evidence of obstruction. **Origin:** Saunders D, West Yorkshire Radiology Academy, Leeds General Infirmary, West Yorkshire, UK.