Strangulated femoral hernia without intestinal obstruction? Be aware of Meckel's diverticulum: a case report of a Littre's hernia

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DESCRIPTION

A 51-year-old woman with a free medical history and no surgical intervention was admitted to our emergency department (ED) reporting for a sudden painful bulging in the right groin accompanied by mild fever 37.5°C and nausea. She did not mention any pathology or previous hernia in this area. During physical examination normal bowel sounds were auscultated, there were no signs of abdominal flatulence or tenderness and a painful swelling was palpated in the right groin, just below the inguinal ligament. Although the most likely diagnosis was a strangulated femoral hernia, the absence of clinical signs for intestinal obstruction and an abdominal X-ray without air-fluid levels created doubts regarding the correct diagnosis. A CT was performed in order to obtain more information preoperatively. The CT scan showed a blind ending tubular structure, surrounded with fluid in the right femoral canal, closely related to a small intestine loop, raising suspicion for a Littre's hernia (figure 1A,B). In the CT, the neck of the hernia was well recognised and as well the closed affiliation with the femoral vein to the right. The patient underwent emergency surgery and a low groin approach was decided with an oblique incision just above the hernia. The hernia sac was opened and an incarcerated Meckel's diverticulum (MD) with reversible ischaemic lesions was found (figure 2). The hernia ring was incised on its medial aspect and the MD was removed with a stapler. The hernia sac was reduced and a plug mesh was used to close the defect, which was sutured to the inguinal

Figure 2 Meckel's diverticulum with ischaemic lesions protruding from the femoral canal.

ligament and into the pectineal fascia. The patient was discharged on the fourth postoperative day without any complications.

MD is a remnant of the omphalomesenteric duct and it occurs in about 2% of the general population. Only 4% of patients with MD will require admission to the ED due to complications. The existence of MD inside a hernia sac is even more unusual, with unknown frequency and it is defined as Littre's hernia.¹ Femoral hernia occurs more often to women and is a quite uncommon diagnosis, accounting only 4%–5% of all hernias.² A painful bulging in the groin area is not always a femoral hernia and it has to be distinguished from an inguinal hernia, enlarged lymph nodes, hydrocele, varicose of great saphenous vein or a femoral artery aneurysm.³ Another rare cause of bulging in the right groin area is Amyand's hernia, where the appendix is entrapped in the hernia sac inside the inguinal canal.⁴ The symptoms of a femoral hernia depend on the contents of the hernia sac. Usually, it contains a loop of small intestine and it is presented with signs of intestinal obstruction. When the hernia sac contains a hollow viscus, without causing intestinal obstruction other rare diagnosis have to be considered. Richter's hernia, where only a part of the intestinal wall is strangulated, De Garengeot hernia, where the appendix is incarcerated in the femoral canal and Littre's hernia belong to this category of strangulated femoral hernias without intestinal obstruction.⁵ A true Littre hernia, that contains only MD, presents with no signs of intestinal obstruction and the normal function of the gastrointestinal tract is preserved. The rarity of this hernia and the silent clinical signs lead to a difficult preoperative diagnosis and the definite diagnosis of Littre's hernia

Figure 1 (A) Tubular-shaped structure with thickened wall and fluid, medial to the femoral vessels (red arrow). (B) Tubular-shaped structure in the femoral canal (red arrow), neck of the hernia sac (green arrow) and femoral vein (blue arrow) are shown in the CT scan.

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is usually reached intraoperatively.^{6,7} In our case, the presence of a femoral hernia without signs of intestinal obstruction lead to the CT scan that revealed the above diagnostic sign and Littre's hernia was established as the primary diagnosis. The repair of Littre's hernia includes both MD removal and hernia repair.

Learning points

- ▶ Littre's hernia is an extremely rare entity occurring usually in the femoral canal.
- ▶ A femoral hernia with no signs of intestinal obstruction should raise suspicions preoperatively for the presence of a Littre's hernia. In such patients conducting a CT scan may have a key role in reaching this difficult diagnosis before surgery.
- ▶ The number of patients with Littre's hernia in the literature is scarce and more cases need to be reported in order to achieve the best clinical management.

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