CASE REPORT

INCARCERATED LITTRE'S FEMORAL HERNIA: CASE REPORT AND REVIEW OF THE LITERATURE

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Meckel's diverticulum is the most prevalent congenital abnormality of the gastrointestinal tract associated with many diverse and unusual complications. Meckel's Diverticulum is a true diverticulum comprising all intestinal layers. Its diagnosis is usually difficult despite the availability of modern tools. A high index of suspicion is mandatory. In most cases it is an incidental finding. Hernial strangulation of Meckel's diverticulum (Littre's Hernia) is a rare anatomo-clinical form. Surgery is the mainstay of treatment.

Keywords: Litter's Hernia

INTRODUCTION

Meckel's diverticulum is the most prevalent congenital abnormality of the gastrointestinal tract with an accepted incidence of 1 to 3 percent.[1-4] There are many diverse and unusual complications related to Meckel's diverticula (Table 1).[3] Despite the availability and wide use of modern imaging techniques, the diagnosis of Meckel's diverticulum remains elusive.[5] We herein present an infrequent complication, incarcerated Meckel's in a Femoral hernia(Littre's Hernia) (Fig 1), that only became evident during surgery.

Figure 1

CASE REPORT

A 49 year old lady was admitted with a 24 hour history of a painful lump in the right groin noticed during work. She had had no previous similar complaints. She denied any gastrointestinal symptoms and had no associated fever. There was no history of lower limb trauma or infection.

Regarding past history the patient was fairly healthy with only occasional episodes of bronchial asthma.

On admission examination the patient appeared well with normal vital signs. She had a soft non-distended non-tender abdomen with no guarding and no palpable mass or visceromegaly. Normal bowel sounds were audible on auscultation. In the right inguinofemoral region was a mildly tender 3cm diameter firm smooth mass. This was incompressible, irreducible and non-pulsatile. Overlying skin was normal. The mass was negative for transillumination and no cough impulse could be elicited. Rest of the systemic examination was unremarkable.

A complete blood count reported haemoglobin of 9.15g % and a white blood cell count of 8.88 per mm^3. Blood urea, electrolytes and liver function tests were normal. An abdominal x-ray and ultrasound scan were unremarkable while a scan of the right groin suggested a hernia with a loop of bowel with surrounding fluid. (Fig 2) A diagnosis of an incarcerated groin hernia was made. Exploration of the right groin revealed an incarcerated Meckel's diverticulum protruding into a femoral hernia (Littre's hernia) (Fig 1) This was excised through a standard McEvedy's Approach. The patient made a rapid and uneventful postoperative recovery.

Figure 2

DISCUSSION

In 1700, Alexis Littre (1658-17265), a French surgeon was the first to report three cases of incarcerated femoral hernia containing a small bowel diverticulum. Since then hernia sacs containing only Meckel's diverticulum have been called Littre's hernia.[1-3]

Johann Friedrich Meckel (1781-1833) described diverticula of the distal ileum in 1812 and suggested their congenital origin.[1-4,6]

Meckel's Diverticulum is a true diverticulum comprising all intestinal layers.[3,5,6] It is the result of a persisting vitello-intestinal duct that normally disappears by the 5th to 7th week of intrauterine life.[1-4,7] When it persists it can result in a number of diverse anomalies (Table 1).[1-4,7,8]

Table 1[3]. Anomalies resulting from incomplete obliteration of the vitello-intestinal duct

Meckel's diverticulum
Entero-umbilical fistula
Umbilical sinus
Persistent fibrous cord
Mesodiverticular vascular band
Omphalomesenteric duct cyst
Strawberry umbilical tumor

Heterotopic tissue of gastric, duodenal, pancreatic, or colonic morphology in a Meckel's has been reported to occur in 6 to 17%.[2]

The literature is replete with reports of complications related to Meckel's diverticulum.[1-4, 6-8] (Table 2).

Table 2[3]. Complications associated with Meckel's diverticulum

Haemorrhage
Obstruction
Diverticulitis
Umbilico-enteric fistula
Perforation
Intussusception
Foreign bodies
Neoplasia-benign or malignant
Peptic ulceration
Littre's hernia

In most cases the Meckel's diverticulum is an incidental finding.[4] In approximately 4% of cases, a Meckel's diverticulum leads to complications, most commonly, GI bleeding, inflammation and obstruction.[3,4]

Factors associated with a higher risk of complications include; male sex, age below forty, a diverticulum more than 2cm in length or with a narrow neck, the presence of heterotopic mucosa, or the existence of a diverticular band.[3,4]

Hernial strangulation of Meckel's diverticulum (Littre's Hernia) is a rare anatomo-clinical form representing 10% of all complications of Meckel's diverticulum.[1,2]

Although Littre's original report related to femoral hernias, 50% of the Meckel's diverticula are in inguinal hernias, 20% in femoral, 20% in umbilical and remaining 10% in other miscellaneous hernias.[1-3]

Diagnosis of a strangulated Littre's Hernia is unlikely to be made preoperatively as the presenting signs and symptoms are more subtle and evolve more slowly than those of strangulated small intestine.[1,2,4] A high index of suspicion is therefore needed to diagnose it correctly and expeditiously as the source of disease. Fever pain and signs of intestinal obstruction occur late or not at all.[1,2] There may be no specific sign of bowel involvement other than local inflammation surrounding the hernia until an enterocutaneous fistula develops.[1,8] Obstruction can occur if the base of the diverticulum is broad enough to cause narrowing of the intestinal lumen. A tender mass in proximity to a hernial orifice may be present with nausea vomiting and abdominal pain being the main symptoms as well as local pain. With strangulation local groin pain and swelling increase and pyrexia may develop.[1]

The swelling over the hernia site may be small at first, and may be missed as the cause of symptoms. Peritonitis is rare.[1]

Surgery is the mainstay of treatment.[1,4] The diverticulum is locally excised and small intestine sutured transversely. If the base of diverticulum is wide or the intestine appears nonviable, resection of the involved loop of ileum with end to end anastomosis may be required.[1] This is then followed by repair of the femoral hernia.

Lastly, if one thought is to be left behind, it should be: "Meckel's is a great mimic that must be considered in all cases of intra abdominal disease in which the cause is not readily apparent".[6,7]

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