LITTRE'S HERNIA: A SURGICAL DILEMMA

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ABSTRACT Meckel's diverticulum in a hernia sac is designated as a Littre's hernia. It is an uncommon type of hernia. The diagnosis is invariably made at the time of surgery. Resection anastomosis of the adjacent segment of the small bowel with the diverticulum is a contentious issue. A case of Littre's hernia is reported. A case of Littre's hernia in a 17-year-old boy is reported to highlight the diagnostic and therapeutic issues confronting the attending surgeon. A short segment resection anastomosis of the small bowel along with the Meckel's diverticulum was done. A herniorrhaphy was done with no complications. The diagnostic challenges, the dilemma of selecting the best option for removing Meckel's diverticulum, and the choice of hernia repair are discussed. Littre's hernia is invariably diagnosed intraoperatively. A short segment resection anastomosis of the adjacent small bowel and Meckel's diverticulum prevents complications arising due to the diverticulum. A herniorrhaphy for a young patient and the use of an absorbable mesh for other age groups is advisable.

KEYWORDS Meckel's Diverticulum, Littre's Hernia, Treatment

Introduction

Littre's hernia is a clinical entity defined as a Meckel's diverticulum within the hernial sac. Littre's hernia is 1% of all presentations of Meckel's diverticulum cases. [1] It can be the content of any hernia sac, such as in the groin, incisional or paraumbilical hernias. The appearance of Littre's hernia is like any other routine groin hernia containing the gut, thereby making the pre-operative diagnosis unlikely. A French surgeon first described Littre's hernia in 1700 by Alexis de Littre, who reported 2 cases.[1] Later, Rienke established this term in 1841 as a Meckel's diverticulum inside the hernial sac.[1] Diagnosis is established intraoperatively while exploring the hernia sac. What needs to be done to the Meckel's diverticulum at the time of surgery continues to be a debatable issue.

Case report

A 17-year-old male presented with an irreducible left inguinal swelling of one-day duration. The patient complained of pain at the site of swelling but did not complain of vomiting and distension of the abdomen. He did not give any previous episode of this kind. On physical examination, the patient was diagnosed as a case of left-sided irreducible inguinal hernia. The patient underwent investigations, including ultrasound, which revealed an irreducible left-sided inguinal hernia containing the gut. The patient underwent inguinal exploration. After opening the sac, a giant Meckel's diverticulum (length greater than 5 cm) and the adjacent segment of the small intestine were present. (Figure 1) A short segment resection anastomosis of the small bowel along with the Meckel's diverticulum was done. Since the operation became a clean, contaminated type, no mesh was placed for reinforcement. The transversalis facia was plicated with 2-0 polypropylene sutures. The deep ring was narrowed, and a herniorrhaphy repair was performed. Post-operative recovery was uneventful. The patient has been following up for the last 6 months with no recurrence or other symptoms related to the operation or the abdomen.

Discussion

Meckel's diverticulum has a reported incidence of 0.6 to 4%. [1] It is a true diverticulum as it contains all three layers of the gut. It is situated at the anti-mesenteric border of the ileum, approximately 2 feet from the ileocecal junction. It is a remnant of the omphalomesenteric duct, which connects the allantois to the yolk sac during foetal life. The presence of ectopic mucosa is responsible for the majority of complications. These include gastric mucosa (23-50%), pancreatic tissue (5-16%) and rarely colonic mucosa. [2] In most cases, Meckel's diverticulum continues to be a silent organ. Complications include bleeding,

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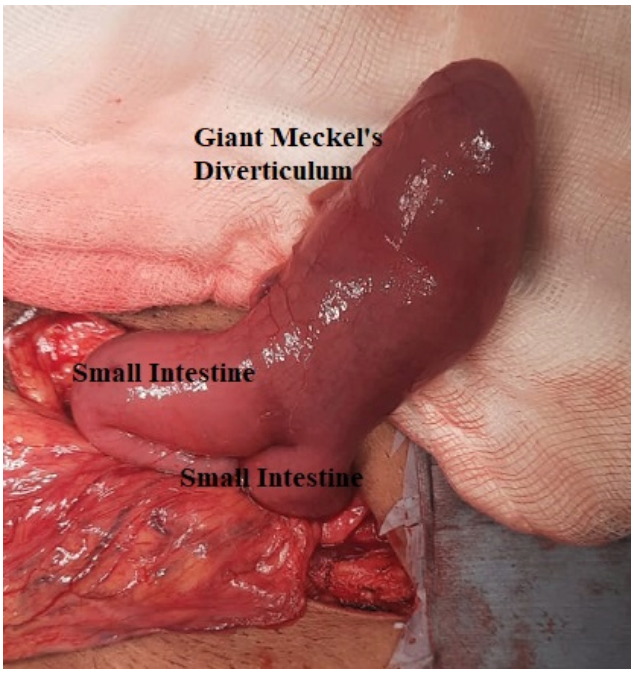

Figure 1: The inguinal hernia sac opened, showing a giant Meckel's diverticulum with an adjacent small bowel.

diverticulitis, perforation, intestinal obstruction and rarely intussusception. Littre's hernia is one of the rarest presentations of Meckel's diverticulum. Approximately 53 cases have been published in the literature to date. [1, 2]

There is no standardised algorithm for the surgical management of Littre's hernia. Critical issues challenge the attending surgeon, viz. pre-operative diagnosis, choice of intraoperative surgical procedure with respect to the Meckel's diverticulum and the type of repair thereafter. [3] Preoperative diagnosis in Meckel's diverticulum is extremely difficult. Imaging modalities such as ultrasound and CT scan usually reveal only bowel as the hernia sac content. [4] Therefore, pre-operative planning of the procedure is not possible. Most cases of Littre's hernia are therefore diagnosed on the operating table during surgery. There are two types of variants of Littre's hernia. True Littre's hernia is the most common and contains the Meckel's diverticulum alone and may sometimes be confused for a Richter's hernia. The mixed type of Littre's hernia contains a segment of the adjacent small bowel in addition to Meckel's diverticulum and is commonly reported. The case presented was a mixed Littre's hernia.

Littre's hernia, therefore, poses the biggest challenge of what needs to be done for Meckel's diverticulum. The chances of complications developing later if the Meckel's diverticulum was left inside is determined by the dimensions of the Meckel's diverticulum. A broad-based Meckel's diverticulum is considered to be a much safer one than a narrow-based one. Therefore, a diverticulectomy is advisable.[4,5] However, irrespective of the diameter, one needs to consider the high possibility of ectopic mucosa, which is usually situated at the base of the diverticulum extending into a small portion of the adjacent small intestine. Therefore, it would be prudent for the surgeon to resect the diverticulum along with the adjacent segment of the small intestine to ensure that no complications develop in the future. A short segment resection anastomosis of the adjoining small bowel was performed in the case presented. The next debatable issue is the choice of hernia repair. In a young patient, as in the case presented, local tissues can be utilised in view of good strength by way of performing a herniorrhaphy procedure in the form of either Bassini's or Shouldice's repair.[6] However, if the surrounding structures are weak, as in a middle-aged individual, an absorbable mesh could be a good option. The use of a non-absorbable prosthetic mesh is not advisable as there is a high chance of the mesh getting infected.[7] In the case presented, as the surrounding musculo-aponeurotic structures were strong, a Bassini's herniorrhaphy repair was performed with no recurrence.

Conclusion

Diagnosis of Littre's hernia is invariably intraoperative. Removal of Meckel's diverticulum is advisable to prevent complications at a later date. Depending upon the patient's age, a herniorrhaphy can be performed in a young patient, or an absorbable mesh can be used for other age groups if the surrounding tissues are weak.

Informed Consent:

Written informed consent was obtained from all the participants. Personal details of the patients have not been included in this article.

Ethics Committee Approval

According ethics consent.

Conflict of Interest:

No potential conflict of interest relevant to this article was reported.

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