



Case report

Unusual form of inguinal hernia: A case report of Littre's hernia strangled

Tamassi Bertrand Essobiyou^{a,*}, Essomondjona Pali^b, Alexandre Palissam Keheou^b,
Mohamed Issa^b, Ekoue David Dosseh^b

^a General Surgery Department, Dapaong Regional Hospital Center, Dapaong, Togo

^b General surgery department, Sylvanus Olympio University Hospital Center, Lome, Togo



ARTICLE INFO

Keywords:

Hernia
Littre
Inguinoscrotal
Diverticulum
Meckel
Complication

ABSTRACT

Introduction: Littre's hernia is a rare condition related to Meckel's diverticulum. Its diagnosis is per operative and its treatment is surgical. We report a case of Littre's hernia strangled, discovered in a 67-year-old adult in Togo. **Case report:** A 67-year-old farmer was seen in the emergency room for a painful right inguinoscrotal swelling. The diagnosis of strangulated right inguinoscrotal hernia was retained and a surgical indication was given. Intraoperatively, a Meckel's diverticulum was found in the hernia sac and an intraoperative diagnosis of Littre's hernia was made. The patient underwent a T-shaped resection with terminal ileo-ileal anastomosis. The postoperative course was simple.

Conclusion: Littre's hernia is a rare and exceptional disease whose preoperative diagnosis is difficult. Surgery is the therapeutic modality for this condition.

1. Introduction

Meckel's diverticulum is a rare condition found in 1–3 % of the population and is predominantly male [1]. It is the most common malformation of the digestive tract [2,3]. It results from the involution of the omphalomesenteric duct [1–3]. Usually asymptomatic and discovered incidentally (intraoperatively or on imaging), Meckel's diverticulum is discovered in 4–6 % of cases by complications [1,2]. These include infection (diverticulitis), perforation, haemorrhage, intussusception, and strangulation occlusion (torsion or flange) [1]. A rare form of presentation of Meckel's diverticulum was reported in 1700 by Alexandre Littre: the presence of Meckel's diverticulum in a hernial sac [1,4]. The treatment of this condition is surgical [1]. We report in our work on the management of a case of Littre's inguinal hernia strangled, discovered in a hospital in Togo.

2. Case report

He was a 67-year-old male farmer with a painless, spontaneously reducible, impulsive and expansive right inguinoscrotal swelling for about 6 years. He was admitted to the surgical emergency room with a painful, irreducible, non-impulsive right inguinoscrotal swelling that had been present for more than 8 h and was diagnosed with a right inguinoscrotal hernia. The indication for a hernia repair was given. He

was treated preoperatively with analgesics combining nefopam and paracetamol. The preoperative emergency check-up showed a haemoglobin level of 13.7 g/l, uraemia of 0.13 g/l and creatinemia of 12 mg/l. Surgical treatment was performed by a general surgeon 7 h after admission. In the operating room, we proceeded with a direct approach. Intraoperatively, exploration of the contents of the pouch revealed necrosis of the ileal ansae, which led to conversion to a median laparotomy (Fig. 1). Intraoperatively, a blind ileal loop was found on the anti-mesenteric border and approximately 70 cm from the ileocaecal junction. We, therefore, concluded that it was Meckel's diverticulum. We proceeded with resection of the necrotic loops, removing the blind loop from the same specimen, followed by a terminal ileo-ileal anastomosis. We then proceeded to a hernia repair using the SHOULDICE technique. Exploration of the resection specimen postoperatively revealed a mucosal presence within this blind loop in continuity with the ileal mucosa (Fig. 2). We concluded that it was a Meckel's diverticulum and retained the diagnosis of Littre's hernia strangled. He received postoperative antibiotic therapy with amoxicillin-clavulanic acid (1 g every 8 h), analgesics with tramadol (50 mg every 8 h). He started feeding again on the third day. The postoperative course was uncomplicated and the patient was released on the sixth postoperative day. The evolution in the 3rd month was positive. The patient returned to work in the 4th-month post-op.

* Corresponding author.

E-mail address: tamassi2343@outlook.com (T.B. Essobiyou).

<https://doi.org/10.1016/j.ijscr.2022.107570>

Received 23 July 2022; Received in revised form 26 August 2022; Accepted 27 August 2022

Available online 31 August 2022

2210-2612/© 2022 The Authors. Published by Elsevier Ltd on behalf of IJS Publishing Group Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).



Fig. 1. Intraoperative appearance of extensive ileal necrosis with a blind loop on the antimesenteric edge (arrow).



Fig. 2. Post-operative appearance of the blind loop (arrow) showing continuity between its mucosa and the ileal mucosa.

3. Discussion

Littré's hernia is described as the presence of Meckel's diverticulum in a hernial sac [1,4,5]. It was first reported by Alexandre Littré in 1700 [1,4].

Meckel's diverticulum has its origin in embryonic evolution [5]. It results from involution of the omphalomesenteric duct and is predominantly male [1–3,5]. It is the most common malformation of the gastrointestinal tract and concerns about 1–3 % of the world population [1–3]. Meckel's diverticulum lies on the antimesenteric border of the small intestine at the termination of the superior mesenteric artery and between 30 and 90 cm from the ileocaecal junction [4,5]. In our case, it was located approximately 70 cm from the ileocaecal junction. Anatomically, several forms have been described. Apart from the classic forms with true blind loop, there are misleading forms: plated, minimally invaginated or invaginated Meckel diverticulum [5]. Our patient presented a classic form with a true blind loop. Meckel's diverticulum usually has an asymptomatic presentation in favour of an incidental finding during abdominal surgery or imaging. However, in 4–6 % of cases, it is revealed by complications. These may include infection

(diverticulitis), perforation, haemorrhage, intussusception, and strangulation occlusion (torsion or flange). An unusual finding of Meckel's diverticulum is its discovery in a hernia sac during a hernia repair: this is known as a Littré hernia [1,4–6].

The diagnosis of Littré's hernia is most often made intraoperatively as was the case in our patient [4,6]. However, clinical manifestations may point to this hernia; these include incomplete reduction of an uncomplicated hernia, an enterocutaneous fistula through a hernia sac or painless rectal bleeding [4]. Littré's hernia can be umbilical or inguinal in location [4]. In the inguinal position, it occurs in about 98 % of cases on the right [5]. In our case, it was right inguinal.

Although the management of the hernia is surgical, there is no real consensus on the management of Meckel's diverticulum itself [2–4]. In the case of a symptomatic Meckel's diverticulum, surgical resection is required [2,4]. Three resection techniques are possible: wedge-shaped excision, tangential stapling, and T-resection [2–5]. The latter is recommended by some authors because of the risk of leaving ectopic tissue accompanying the Meckel diverticulum during suture excision [1–5]. In the case of asymptomatic Meckel's diverticulum, opinions are divided [2,4]. The arguments in favour of immediate resection are the risk of subsequent complications associated with their subsequent diagnostic difficulties that may induce mortality [4]. Nevertheless, factors predictive of a subsequent diverticular complication have been described: length of more than 2 cm, male sex, young subject, fibrous band of ectopic tissue [2,4]. The attitude in our case was an extended T-resection allowing us to remove the entire necrotic ileal portion.

4. Conclusion

Meckel's diverticulum is a rare condition but represents the most common malformation of the intestinal tract. Its presence within a hernial sac in the context of Littré's hernia is an unusual situation. Strangulation of Littré's hernia is an exceptional complication. Diagnosis is per operative and treatment is surgical combining diverticular resection and hernia repair. This manuscript was written according to the rules of the SCARE [7].

Sources of funding

The authors declare they have received no funding for the preparation of this document.

Ethical approval

The study protocol fulfilled the requirements of the Hospital Ethics Committees and was approved.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Guarantor

ESSOBIYOU Tamassi Bertrand

Provenance and peer review

Not commissioned, externally peer-reviewed.

CRedit authorship contribution statement

The study design and data acquisition were done by ETB. IM and KAP carried out the literature review. The manuscript was written by ETB, PE

and KAP. All the authors participated in the revision of the manuscript.

Declaration of competing interest

the authors have no financial, consultative, institutional, or other relationships that might lead to bias or conflict of interest.

References

- [1] B. Diop, P.S. Touré, A. Ba, A. Wilson, S.M. Sarre, Giant Meckel's diverticulum encased in a left inguinoscrotal hernia, *J. Afr. Hepatol. Gastroenterol.* 8 (2014) 82–84.
- [2] A. Diop, O. Thiam, M.L. Gueye, M. Seck, A.O. Touré, M. Cissé, et al., Complicated Meckel's diverticula: a case report on 15 cases, *Pan Afr. Med. J.* 29 (2018) 81–86.
- [3] J. Lequet, B. Menahem, A. Alves, A. Fohlen, A. Mulliri, Meckel's diverticulum in the adult, *J. Visc. Surg.* 154 (4) (2017) 253–259.
- [4] S.B. Noukpozoukou, I. Lawani, O.T.A. Elegbede, D.M. Seto, B.R. Assan, A.S.C. R. Houegban, et al., Littre's strangled umbilical hernia in children: a rare complication due to a common malformation of the small bowel, *Pan Afr. Med. J.* 30 (2018) 214–219.
- [5] P. Carlioz, in: *The Meckel's Diverticulum, Embryology to Surgery. e-Memories of the National academy of Surgery* 13(2), 2014, pp. 1–6.
- [6] G.L.H. Belemlilga, C. Zare, B.G. Sanon, V. Konsegre, B.L. Benao, Littre's hernia: a case report, *Rev. Afr. Chir. Spec.* 12 (2) (2018) 34–37.
- [7] R.A. Agha, T. Franchi, C. Sohrabi, G. Mathew, for the SCARE Group, The SCARE 2020 guideline: updating consensus Surgical Case Report (SCARE) guidelines, *Int. J. Surg.* 84 (2020) 226–230.