CASE REPORT

Littre's hernia with an impalpable testis in a boy: a diagnostic dilemma

Rashmi Roshan Singh, Chandrasen Kumar Sinha, Ashwini Joshi

Department of Paediatric Surgery, Barts Health NHS Trust, London, UK

Correspondence to
Rashmi Roshan Singh,
Rashmi.singh@ucl.ac.uk

Accepted 27 March 2014

SUMMARY

Littre's hernia is a rare clinical entity. The presence of a Littre's hernia in a 2-year-old boy with an impalpable testis is even rarer. We describe this interesting case with a review of the literature.

BACKGROUND

In 1933, Charles Mayo wrote, "Meckel's diverticulum (MD) is frequently suspected, often looked for and seldom found."¹ Eighty years since then, the preoperative diagnosis of MD is still challenging. MD is one of the commonest congenital small intestinal abnormalities, with an incidence of 0.5–4.5%.^{2–4} However, Littre's hernia is quite rare in children accounting for 0–11% presentation of MD.^{5–10} In the literature, 70 cases of Littre's hernias in children have been reported since the early 1900s.⁹ We present an interesting case of Littre's hernia with undescended testis, which created a diagnostic dilemma among clinicians preoperatively. We present our experience with review of the literature. To the best of our knowledge, there has been only one previous report of Littre's hernia in an infant with impalpable testis.¹⁰

CASE PRESENTATION

A 2-year-old boy presented to the local emergency department with non-bilious vomiting and abdominal pain. He was discharged with a diagnosis of gastroenteritis. He re-presented 24 h later with intractable vomiting and abdominal pain. The referring physician found a right groin lump and ipsilateral impalpable right testis. The parents gave a history of right impalpable testis. The boy was awaiting a urology review, but the groin lump had never been noticed before. The boy was then transferred urgently to our paediatric surgical unit. On physical examination, he had a 7×3 cm sausage-shaped lump in the right groin with an empty right scrotum. This was tender and firm. We did not attempt manual reduction and proceeded for a right groin exploration with the clinical suspicion of torsion of the right undescended testis and/or incarcerated inguinal hernia.

DIFFERENTIAL DIAGNOSIS

A young boy presenting acutely with signs of obstruction (ie, vomiting and constipation) and a painful lump in the groin has to be treated as a strangulated hernia.

At the same time a young boy presenting with an empty scrotum and painful lump in the groin has

to be considered for an emergent management of torsion of an undescended testes.

In both the situations, history from the parents and examination of the boy can offer important clues. However, the difficulty in communication with a distressed boy and rapid deterioration as a boy's systemic response to any insult worsens; should always keep the treating physician vigilant.

TREATMENT

An examination under anaesthesia confirmed a swelling in the right groin along with an impalpable right testis. No attempt was made to reduce the swelling. On exploration, we found an irreducible right hernia. On opening the hernia sac, there was a congested and indurated MD (figure 1). We succeeded in resecting the diverticulum with a segment of the ileum and performed an end-to-end anastomosis through the groin incision. The hernia sac was closed with 3/0 vicryl. The deep ring opening was extended laterally to reduce the bowel back into the abdomen and was closed with 3/0 vicryl. The right testis was adjacent to the hernial sac in the inguinal canal, and was healthy, with a slightly congested epididymis. An orchidopexy was performed at the same instance. Anterior wall of the inguinal canal was reconstructed with 3/0 vicryl. The wound was closed in layers. Postoperative recovery was uneventful. Histopathology confirmed our finding of MD with normal mucosa.

OUTCOME AND FOLLOW-UP

At follow-up 18 months postoperatively, the boy is doing well and both testes are palpable in the scrotum.

DISCUSSION

In 1809 a German anatomist, Johann Friedrich Meckel described MD as a remnant of the omphalomesenteric duct.¹¹ Almost 100 years before, in 1700, Alexis Littre described what later was known as the 'MD' in a femoral hernia. Since then, the presence of MD in any hernial sac is called Littre's hernia. Littre's description of the hernia (more than 300 years ago) is still pertinent.

Littre's hernia is a diagnosis made at the operating table.⁸ Littre's hernia has been reported to be inguinal in 50% of cases, umbilical in 12–30% and femoral in 19–30% cases.¹⁰ Ectopic tissue may give rise to rectal bleeding, strangulation and necrosis of the diverticulum leading to faecal fistula or abscess formation. However, ectopic gastric tissue has been reported only in 3/19 (15.8%) of children with MD.¹² A case of a 2-year-old boy presenting with

CrossMark

To cite: Singh RR, Sinha CK, Joshi A. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2014-203849

Figure 1 Indurated Meckel's diverticulum (MD) in the hernia, explored through a groin incision.

an acute hemiscrotum due to a perforated inguinoscrotal Littre's hernia was reported by Vaos¹³.

The absence of a palpable testis can make it difficult to differentiate from an undescended testis or testicular torsion. Mishalany *et al*¹⁰ described a 10-month-old boy, with a 2-month history of an intermittent lump in the right groin and an impalpable testis. He did not have any acute symptoms and was scheduled for an inguinal hernia repair. They found MD adhered to the testis and performed a resection and anastomosis followed by a hernia repair.

Learning points

- ▶ Littre's hernia is a rare complication of Meckel's diverticulum (MD). The presence of an impalpable testis makes the distinction between an irreducible hernia versus torsion difficult preoperatively.
- ▶ This should always be considered as a differential in a child presenting acutely with an impalpable testis.
- ▶ The MD in Littre's hernia can be resected successfully through a groin incision, avoiding a formal laparotomy.

The management of an uncomplicated Littre's hernia has been wedge resection of the MD. In the case of an incarcerated inguinal hernia, the oedema and consequent distorted anatomy can make it difficult to deliver the diverticulum and adjacent ileum through the deep ring, using the groin incision. Often these require a laparotomy. When the bowel is indurated or ulcerated, resection of the diverticulum with anastomosis of the ileum is the safer option. Laparoscopy can be used in the management in an elective and emergency setting as a diagnostic and therapeutic tool.¹⁴

Contributors RRS has reported the work. CKS and AJ have reviewed and edited the manuscript. RRS is the guarantor.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 DeBartolo HM Jr, Van Heerden JA. Meckel's diverticulum. *Ann Surg* 1976;183:30–3.
- 2 Moses WR. Meckel's diverticulum—report of two unusual cases. *N Engl J Med* 1947;237:118–22.
- 3 Perlman JA, Hoover HC, Safer PK. Femoral hernia with strangulated Meckel's diverticulum (Littre's hernia). *Am J Surg* 1980;139:286–9.
- 4 Messina M, Ferrucci E, Meucci D, *et al*. Littre's hernia in newborn infants: report of two cases. *Pediatr Surg Int* 2005;21:485–7.
- 5 Ein SH, Njere I, Ein A. Six thousand three hundred sixty one pediatric inguinal hernias: a 35-year review. *J Pediatr Surg* 2006;41:980–6.
- 6 Johns TNP, Wheeler JR, Johns FS. Meckel's diverticulum and Meckel's diverticulum disease a study of 154 cases. *Ann Surg* 1959;150:241–56.
- 7 Weinstein EC, Remine WH. Littre's hernia review of the mayo clinic experience. *Am J Surg* 1964;108:870–3.
- 8 Ravikumar KK, Khope SS, Ganapathi BP. Littre's hernia in a child—an operative surprise (case report). *J Postgrad Med* 1989;35:112–13.
- 9 Pampal A, Aksakal ED. Littre hernia in childhood: a case report with a brief review of the literature. *Afr J Paediatr Surg* 2011;8:221–4.
- 10 Mishalany HG, Pereyra R, Longerbean JK. Littre's hernia in infancy presenting as undescended testicle. *J Pediatr Surg* 1982;17:67–9.
- 11 Meckel JF. Über die divertikel am darmkanal. *Arch Physiol* 1809;9:421–53.
- 12 Das PC, Rao PL, Radhakrishna K. Meckel's diverticulum in children. *J Postgrad Med* 1992;38:19–20.
- 13 Vaos G. Perforation of an inguinoscrotal Littre's hernia due to Meckel's diverticulitis: an unusual cause of acute hemiscrotum. *Acta Paediatr* 2006;95:251–2.
- 14 Chan KW, Lee KH, Mou JW, *et al*. The use of laparoscopy in the management of Littre's hernia in children. *Pediatr Surg Int* 2008;24:855–8.

Copyright 2014 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow