Case Report
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Amyand's Hernia - A Case Report

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Abstract

The finding of a vermiform appendix as the content of an inguinal hernia sac is rare. Even rarer is the finding of an inflamed appendix in the hernia sac, referred to as Amyand's hernia. We report a case of a 5-year-old boy who presented with an inflamed appendix as the content of an incarcerated right inguinal hernia.

Keywords: Amyand's hernia, acute appendicitis, children, appendicectomy, herniotomy.

Introduction

The contents of an inguinal hernia sac vary from the more common to the rare; the common ones are small bowel and omentum, while the rare contents are the bladder, a Meckel's diverticulum[1] and the uterus. The presence of a vermiform appendix in an inguinal hernia sac was first described by Claudius Amyand, surgeon to King George II, in 1735 in an 11-year-old boy with a perforated appendix in the sac[2]. According to Hutchin-son, the first appendicectomy was actually performed by Claudius Amyand when he operated this 11-year-old boy. Since then this pathology i.e. the presence of an appendix in an inguinal hernia, has borne his name and is considered an extremely rare condition in children[3]. There are a lot more documented findings of an appendix (inflamed or un-inflamed) in an inguinal hernia sac in adults[4-6] than in children in the literature. We present a case of Amyand's hernia in a 5-year-old boy who was seen with a provisional diagnosis of incarcerated right inguinal hernia.

Case Report

A 5-year-old boy who previously had a reducible right inguinal hernia since the age of 2 years presented to the emergency consulting room of our hospital with a 2-day history of painful right groin swelling. The mass on the right side of the groin enlarged in size after 24 hours and was associated with intense pain and was irreducible. Physical examination revealed a healthy-looking child, who was afebrile. He had a swollen, erythematous (Fig 1) and tender scrotum, more severe on the right side. The scrotal skin was oedematous and more tender when stretched; when the scrotum was elevated and supported there was no relieve of the pain (positive Prehn's sign). A diagnosis of an incarcerated right inguinal hernia was made, with a differential of a right testicular torsion. Emergency ultrasonographic report indicated the presence of bowel in the right hemiscrotum with a normal right testis displaced downwards. The admission diagnosis of an incarcerated right inguinal hernia was changed to a strangulated right inguinal hernia and the child prepared for, and had emergency herniotomy.

Through a right inguinal skin crease incision, a thick, oedematous spermatic cord was found and the sac was isolated from it at the proximal aspect and opened. The finding was: an appendix of about 8 cm long which was inflamed, with the tip adherent to the fundus of the sac. The appendix was easily separated from the sac and appendicectomy performed. Herniotomy was also done. The postoperative period passed uneventfully and the child was discharged home on the 5th day after surgery. Histology

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Fig.1: The appearance of the groin of a 5-year-old child with a suspected incarcerated right inguinal hernia, which turned out to be Amyand's hernia

confirmed a diagnosis of acute appendicitis, with submucosal lymphoid hyperplasia and a transmural infiltrate of acute (predominantly eosinophils) and chronic inflammatory cells involving the serosa.

Discussion

The incidence of Amyand's hernia among children has not been widely documented as in the case of adults. The presence of an appendix as the content of a hernia sac, Amyand's hernia, remains relatively unknown despite having been first reported over 170 years ago in a child[1,2]. The frequency of this condition is about 0.5% for un-inflamed appendix and 0.1% for the rarer inflamed appendix[7]. Amyand's hernia is mostly seen on the right inguinal area but the appendix has also been found in the left inguinal hernia sac[1,8,9] in some instances. Left-sided Amyand's hernias may be associated with intestinal malrotation, situs inversus or a mobile caecum[10] which can only be confirmed or ruled out in the postoperative radiological investigations such as a barium enema. A mobile caecum was the only associated pathology present, and therefore, the likely contributory factor for the presence of appendix in the inguinal hernia sac in the index patient.

The majority of Amyand's hernias are diagnosed as strangulated inguinal hernias and the correct diagnosis is usually made intraoperatively[1,11,12]. This difficulty of correctly diagnosing Amyand's hernia preoperatively is due to its unusual and infrequent clinical presentation[13]. It has been suggested that the use of CT scan can help make the correct diagnosis of Amyand's hernia in individuals preoperatively[13,14]. In our patient, ultrasound scan confirmed the presence of bowel in the hernia sac and excluded the possibility of torsion of the testis and also obviated the need for a CT scan. In expert hands, ultrasound scan can also be used to diagnose Amyand's hernia preoperatively[15]. In developing countries, CT scan is expensive and is not used routinely for emergencies like obstructed or strangulated inguinal hernias since the next obvious step in the management of such emergencies is surgery. We did not suspect the child had Amyand's hernia, for which we would have wished to confirm the diagnosis preoperatively using CT scan since the radiologist could not identify the appendix. The final diagnosis was made intraoperatively just as in many such cases[1,3,4].

The treatment of Amyand's hernia has expanded with the advent of laparoscopic surgery. This type of hernia, like any inguinal hernia, can be repaired laparoscopically/endoscopically[17,18] or by open method. Intraoperatively, the surgical options for managing Amyand's hernia, in the case of a normal appendix, are to replace the appendix into the peritoneal cavity and do a herniotomy[1,19], the rationale being that the appen-dix may be needed for other purposes, such as ureteroplasty[19] or as a biliary conduit in biliary atresia[20] in the future. However, a transherniotomy appendicec-tomy is performed in the case of acute appendi-citis[4,5,8,18,21]. For this particular child, a transherniotomy appendicectomy was performed since the appendix was considered to be inflamed. As was in this case, the right testicle should be routinely

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L'hernie d'Amyand - Un Rapport De Cas

Résumé

Il est rare de trouver un appendice vermiforme comme le contenu d'un sac de l'hernie inguinale. Il est encore plus rare de trouver dans le sac herniaire un appendice enflammé, connu sous le nom d'hernie d'Amyand. Nous rapportons le cas d'un garçon âgé de 5 ans qui s'est présenté avec un appendice enflammé comme le contenu d'une hernie inguinale incarcérée.
Mots-clés: L'hernie d'Amyand, appendicite aiguë, enfants, appendicectomie, herniotomie.

References

1. Gupta S., Sharma R., Kaushik R. Left-sided Amyand's hernia. Singapore Med. J. 2005; 46(8): 424 -425.
2. Hutchinson R. Amyand's hernia. J. R. Soc. Med. 1993; 86: 104 - 105.
3. Livaditi E., Mavridis G., Christopoulos-Geroulanos G. Amyand's hernia in premature neonates: report of two cases. Hernia. DOI 10.1007/s10029-007-0242-3. Published online: 1 June 2007.
4. Solecki R., Matyja A., Milanowski W. Amyand's hernia: a report of two cases. Hernia. 2003; 7: 50 -51.
5. D'Alia C., Lo Schiavo M.G., Tonante A. et al. Amyand's hernia: case report and review of the literature. Hernia. 2003; 7: 89 - 91.
6. Sharma H., Gupta A., Shekhawat N. S. et al. Amyand's hernia: a report of 18 consecutive patients over a 15-year period. Hernia. 2007; 11: 31 -35.
7. Gurer A., Ozdogan M., Ozlem N., Yildirim A., Kulacoglu A., Aydin R. Uncommon content in groin hernia. Hernia. 2005; 10: 152 - 155.
8. Gupta N., Wilkinson T. R. V., Wilkinson A., Akhtar M. Left-sided incarcerated Amyand's hernia. Indian J. Surg. 2007; 69: 17 - 18.
9. Breitenstein S., Eisenbach C., Wille G., Decurtins M. Incarcerated vermiform appendix in a left-sided inguinal hernia. Hernia. 2005; 9: 100 - 102.
10. Bakhshi G. D., Bhandarwar A. H., Govila A. A. Acute appendicitis in left scrotum. Indian J. Gastroenterol. 2004; 23: 195.
11. Milburn J.A., Youngson G. G., Amyand's hernia presenting as neonatal testicular ischaemia. Pediatr Surg Int. 2006; 22: 390 - 392.
12. Salemis N.S., Nisotakis K., Nazos K. et al. Perforated appendix and periappendicular abscess within an inguinal hernia. Hernia. 2006; 10: 528 - 530.
13. Ash L., Hatem S., Ramirez G. A. M., Veniero J. Amyand's hernia: a case report of prospective ct diagnosis in the emergency department. Emergency Radiology. 2005; 11: 231 - 232.
14. Luchs J. S., Halpern D., Katz D. S. Amyand's hernia: prospective CT diagnosis. J. Comput. Assist Tomogr. 2000; 24(6): 884 - 886.
15. Coulier B., Pacary J., Broze B. Sonographic diagnosis of appendicitis within a right inguinal hernia (Amyand's hernia). J. Clin Ultrasound. 2006; 34(9): 454 - 457.
16. Sarker S. K., Jackson K. Laparoscopic extraperitoneal repair of Amyand's inguinal hernia. JSLS. 2006; 10(4): 528 -530.
17. Saggar V. R., Singh K., Sarangi R. Endoscopic total extraperitoneal management of Amyand's hernia. Hernia. 2004; 8: 164 - 165.
18. Franko J., Raftopoulos I., Sulkowski R. A rare variation of Amyand's hernia. AJG. 2002; 97(10): 2684 - 2685.
19. Merrot T., Teklali Y., Zerhouni H., et al. [Appendix-ureteroplasty in a child: report of a case]. Ann. Urol (Paris). 2003; 37(1): 27 - 29.

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