Content available at: https://www.ipinnovative.com/open-access-journals

IP International Journal of Medical Paediatrics and Oncology

Journal homepage: https://www.ijmpo.com/

Case Report

Amyands hernia in pediatric case: Manageable but challenging to diagnose preoperatively

Praveen Jhanwar[1,*], Sohail Rehman[1]

[1]*Dept. of General Surgery, Pacific Medical College & Hospital, Udaipur, Rajasthan, India*

ARTICLE INFO

Article history:
Received 13-09-2023
Accepted 28-10-2023
Available online 09-11-2023

Keywords:
Amyands hernia
Appendicitis
Herniotomy

ABSTRACT

Vermiform appendix within inguinal hernial sac is known as amyands hernia which is rare entity. Incidence varies from 0.5% to 1%. Vermiform appendix may or may not present as appendicitis however the trapped appendix may incarcerate and may present with perforation and strangulated.
Here we report a case of 2 year old baby presented as right sided inguinoscrotal, reducible, painless swelling since birth. He was diagnosed as inguinal hernia. During herniotomy appendix was found as its content.
This case report aims to document another case of amyands hernia impersonating as inguinal hernia as patients often are asymptomatic with low level of suspicion even on routine ultrasonography hence surgeon may encounter unexpected intraoperative findings.

1. Introduction

Inguinal hernia may contain rare entities such as ovary, fallopian tube, urinary bladder, large bowel diverticula or meckels diverticulum described as Littre.[1] These rare content make hernia surgery a new challenge.

Presence of vermiform appendix within inguinal hernia sac with or without inflammation is termed as amyands hernia first described by cladius amyands in London in 11 years old boy and performed successful appendectomy.[2,3]

Appendix in hernia sac content incidence varies from 0.5% to 1%, may become complicated by acute appendicitis in 0.8% to 0.13% as inflamed/uninflamed, stretched/curved, adhered/not adhered to sac wall.[4–6] Here we report a case of amyands hernia in 2 year child without inflammation managed successfully by appendectomy and herniotomy.

2. Case Report

A 2 year male baby presented with right sided inguinal swelling since birth. On examination, the swelling was inguinoscrotal, reducible, painless. Laboratory findings revealed leucocytosis with lymphocytocis with no evidence of urinary tract infection. Ultrasonography of scrotum revealed right indirect inguinal hernia with no testis involvement and normal epididymis both sides. Intraoperative findings during herniotomy reveals presence of appendix approx 12 cm longc(Figure 1), ceacum as its contents with mild adhesions within. All adhesions were relieved and appendectomy was performed (Figure 2) with caecum reduced back to peritoneal cavity with closure of sac. Baby had smooth postoperative recovery, discharged without complications.

3. Discussion

Amyands hernia was first described by Claudius in 1735. Losanoff and basson's described the classifications with types.[7–12] Later Athena's modification describes

* *Corresponding author*.
E-mail address: jhabbuu@gmail.com (P. Jhanwar).

https://doi.org/10.18231/j.ijmpo.2023.023

Fig. 1: Intraoperative finding 12cm long appendix within hernia sac

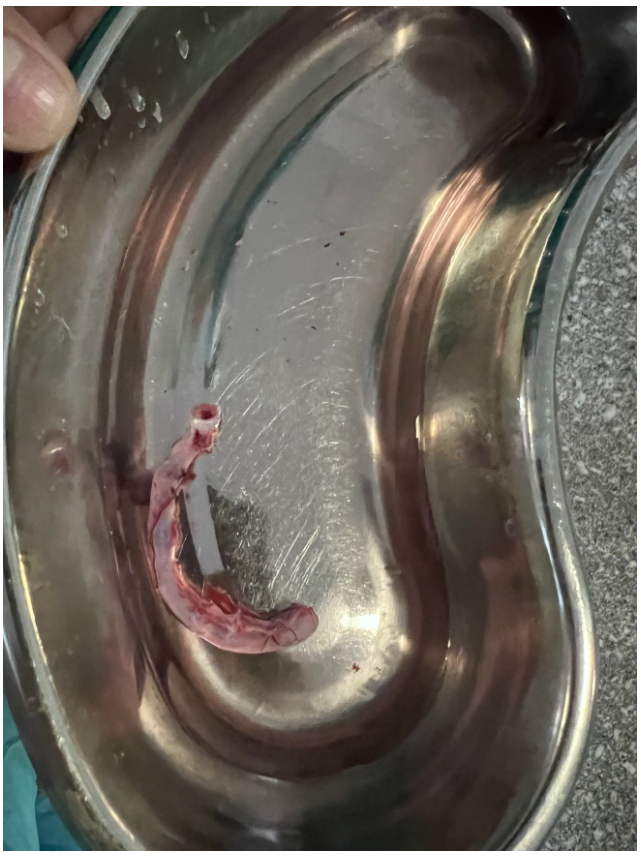

Fig. 2: Appendectomy followed by hernia sac closure.

intraoperative findings.

Types	Losanoff and basson classification	Athena's modification
Type 1	Normal appendix within inguinal hernia	Incidentally found healthy appendix in hernia sac
Type 2	Acute appendicitis within inguinal hernia, no abdominal sepsis	Hernial appendicitis with exclusive inguinoscrotal manifestations
Type 3	Acute appendicitis within inguinal hernia, abdominal wall/peritoneal sepsis	Hernia appendicitis with exclusive inguinogenital and abdominal manifestations.
Type 4	Acute appendicitis within inguinal hernia, related/unrelated abdominal pathology	Hernia appendicitis with associated ileocolic morbidity like hirschsprungs's disease
Type 0		Hernial appendicitis manifesting primarily as occult sepsis.

Amyands hernia reduction alone or with appendectomy is described depending upon intraoperative findings. Appendectomy with herniotomy is preferred to reduce future complications that lead to appendicitis. Long appendix if spared May poses higher risk of inflammation due to stretching of caecum.

Mechanism of acute appendicitis within amynads hernia is due to decreased blood supply to appendix due to adhesions/compressions at external ring due to non reducibility leads to recurrent inflammation. Appendectomy helps structural reduction with anatomical repositions.

Appendicitis within amyands hernia is rare presentation due to incarceration from oedema at internal ring or contracted abdominal muscle at inguinal canal.[4,5] Gold standard procedure in pediatric age group is herniotomy with appendectomy to minimize future reoccurrence as required in our patient. According to Athena's modification our baby is in type 1 category, where we found appendix intraoperatively as contents accidentally. Appendectomy was done and content reduced which is considered standard treatment protocol.[7–12]

Initial USG radioimaging have cost effective approach towards sensitive evaluation with correlation of patients history but sometimes initial scans may be misleading as

they misinterpret the contents and can only be confirmed during intraoperatively. Hence definitive preoperative diagnosis is challenging. Right sided amyands hernia occurrence is comparatively higher in incidence due to appendix anatomical location.

4. Conclusions

Clinical sign and symptoms in hernia presentations can be misleading regarding its content even during preoperative screening in USG where high sensitivity is promised. Surgeons during intraoperatively can land up into dilemma in cases such as amyands hernia where its content (appendix) may prevail accidentally. However findings may surprise surgeons but a systematic approach and standard intraoperative protocol always leads to good outcome.

5. Source of Funding

None.

6. Conflict of Interest

None.

References

1. Gurer A, Ozdogan M, Ozlem N, Yildirim A, Kulacoglu H, Aydin R. Uncommon content in groin hernia sac. *Hernia*. 2006;10(2):152–7.
2. Shekhani HN, Rohatgi S, Hanna T, Johnson J. Amyand's hernia: a case report. *Raiol Case*. 2016;10(12):7–11.
3. Amyand C. VIII. Of an inguinal rupture, with a pin in the appendix coeci, incrusted with stone; and some observations on wounds in the guts. *Philos Trans R Soc London*. 1736;1736:329–36.
4. Faiz N, Ahmad N, Singh R. Case series on different presentations of Amyand's hernia. *Arch Int Surg*. 2016;6(3):176–85.
5. Mishra VK, Joshi P, Shah JV. Amyand's hernia: a case of unusual inguinal hernias. *Indian J Surg*. 2013;75(1):80.
6. Kakodkar P, Neo W, Khan M. An incidental discovery of Amyand's Hernia; a case study and literature review on its intraoperative management. *Cureus*. 2020;12(12):e11858. doi:10.7759/cureus.11858.
7. Losanoff JE, Basson MD. Amyand hernia: what lies beneath-a proposed classification scheme to determine management. *Am Surg*. 2007;73(12):1288–90.
8. Losanoff JE, Basson MD. Amyand hernia: a classification to improve management. *Hernia*. 2008;12(3):325–6.
9. Burgess PL, Brockmeyer JR, Jhonson EK. Amyand hernia repaired with Bio-A:a case report and review. *J Sur Educ*. 2011;68(1):62–8.
10. Salvatore P, Dorotea B, Deboro M, Angelo A, Rosalia L, Antonio DC. Incarcerated Amyand's hernia: a case report. *Int J Surg Case Rep*. 2018;51:265–72.
11. Vehbi H, Agirgun C, Agirgun F, Dogan Y. Preoperative diagnosis of Amyand's hernia by ultrasound and computed tomography. *Turk J Emerg Med*. 2016;16(2):72–4.
12. Kimberly AS, Eric MM, Ross D. Two rare cases of appendicitis; Amyand's hernia and de garengots's hernia, Case Rep. *Emerg Med*. 2019;p. 6759206. doi:10.1155/2019/6759206.

Author biography

Praveen Jhanwar, Associate Professor

Sohail Rehman, PG Resident

Cite this article: Jhanwar P, Rehman S. Amyands hernia in pediatric case: Manageable but challenging to diagnose preoperatively. *IP Int J Med Paediatr Oncol* 2023;9(3):108-110.