

Our Experience of Amyand's Hernia Over A Period Of Five & Half Years

Dr Sujay pal¹, Dr. Arindam Ghosh², Prof.Koushik saha³, Prof. Bidyut Debnath⁴

¹Assistant Professor of Pediatric Surgery, Dr.B.C.Roy PG IPS,

²Senior Resident of NRS Medical College and Hospital,

³Prof. and HOD department of Pediatric surgery at NRS Medical College and Hospital

⁴Prof. & HOD Dr.B.C.Roy PG IPS

Corresponding Author: Dr Sujay Pal

Abstract:

Introduction: In our prospective study we tried to find out contents of congenital right sided inguinal hernia, where most of cases of our study we found omentum, small intestines, but only in two cases we found where only Appendix was the content of sac (Amyand's Hernia). Most of the cases were diagnosed intra operatively, decisions of management was based on condition of appendix, in inflamed appendix always appendectomy along with herniotomy, but in noninflamed appendix management depends on age.

Materials & Methods: This study was conducted in department of Pediatric surgery, Dr B C Roy PG IPS & N R S Medical College and Hospital, Kolkata, West Bengal during the period of January 2015 to June 2020 of 230 cases of right sided inguinal hernia diagnosed clinically as well as by Sonological scan, ages between 3 months to 8 years, 198 were male & 32 were female. Open herniotomy performed in 180 cases and laparoscopic herniotomy performed in 50 cases. Among 230 cases 17 presented with irreducible hernia, one strangulated hernia and 212 were reducible hernia.

Results: In our study out of 230 cases only 2 cases of Amyand's hernia were found, both the cases were male. One of them presented with a feature of strangulated hernia and other as reducible congenital inguinal hernia. In our study we did Ultrasonography for all the cases, but in Amyand's hernia did not able to diagnose pre operatively, only diagnosed it per operatively. Although in both the cases we did appendectomy along with herniotomy, post operatively two cases were recovered well. Histopathology of appendix in elder child had features of acute appendicitis & second one found with follicular hyperplasia but no features of inflammation. Incidence of Amyand's hernia in our study was 0.87%, both the cases were male, one presented as strangulated hernia, although there was no strangulation, rather acute appendicitis within the hernial sac, in other case appendix was only incidental finding.

Conclusion: Incidence of Amyand's hernia is very rare (about 1% of all inguinal hernia, only 0.1% with appendicitis (although in our study it was 0.4%), all were male child.

Keywords: Appendicitis, Hernia, Histopathology, Ultrasonography

Date of Submission: 15-12-2020

Date of Acceptance: 29-12-2020

I. Introduction

Amyand's hernia is a rare form of an inguinal hernia where appendix is included in the hernial sac. The condition is named after a French Surgeon, Claudius Amyand (1660-1740),^[1] who performed the first successful appendectomy in 1735.^[2]

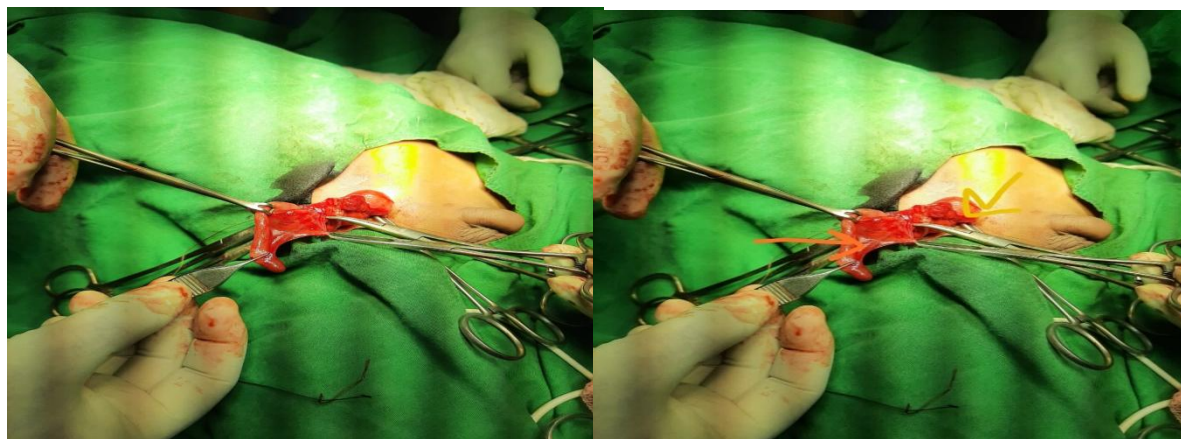
Most of the cases were diagnosed intraoperatively and a preoperative diagnosis was rarely made in such cases. Management should be individualized according to appendix's inflammation stage. The decision should be based on factors such as the patient's age, the size and anatomy of the appendix, and in case of appendicitis, standard appendectomy and herniotomy should be the standard of care.^[3]

Amyand's hernia sometimes misdiagnosed as an ordinary incarcerated hernia. Symptoms mimicking appendicitis in few cases. Treatment consists of a combination of appendectomy and hernia repair.^[4] The inflammatory status of the appendix determines the type of hernia repair and the surgical approach. Incidental appendectomy in the case of a normal appendix was not favoured.^[5]

II. Materials And Methods

During the period of January 2015 to June 2020 about two hundred & thirty cases (230) of right sided congenital inguinal hernia diagnosed clinically as well as by Sonologically, ages between 3 months to 8 years, 198 were male and 32 were female, open herniotomy performed in 180 cases and laparoscopic herniotomy

performed 50 cases. Among 230 cases 17 presented with irreducible hernia, one with strangulated hernia 212 were reducible hernia. Contents of sac in 228 cases were small gut and omentum, two cases found where only appendix was the content (Amyand's hernia). In two cases of Amyand's hernia both were diagnosed per operatively. One of the child age was 6 years male, another was 3 years male. Elder one (8 years) presented with painful swelling, signs of strangulation, open approach initiated, within the sac inflamed appendix identified, appendectomy along with herniotomy performed. Younger one (3 years) presented with painless reducible right sided inguinal hernia, but there was a history of lower only right inguinal swelling but was spontaneous reducible, here also only appendix was the content of the sac, appendectomy along with herniotomy was done.



III. Results

In our study out of 230 cases only two cases of Amyand's hernia were found, both the cases were male. One of them presented with a feature of strangulated hernia and other as reducible congenital inguinal hernia. In our study we did ultrasonography for all the cases, but in Amyand's hernia did not able to diagnose preoperatively, only diagnosed it per operatively. Although in both the cases we did appendectomy along with herniotomy, post operatively two cases were recovered well. Histopathology of appendix in elder child was feature of acute appendicitis & second one found follicular hyperplasia but no features of inflammation. Incidence of Amyand's hernia in our study was 0.87, all were male, one presented as acute condition (like strangulated hernia, but there was no strangulation), acute appendicitis within sac (0.4%), another was incidental.

IV. Discussion

The incidence of an Amyand's Hernia is ~1% of inguinal hernias occurring most often in male patients. They are most commonly located on the right side due to the location of the appendix. The appendix has also been found in obturator, umbilical and incisional hernias [1]

In our study the incidence was 0.87% of inguinal hernias, only 0.1% has an inflamed appendix, whereas in our study it was 0.4% (1 of 230 cases)

Losanoff and Basson created a classification scale to identify and treat Amyand's hernias (Table 1) [6]

Table 1:

Losanoff and Basson classification of Amyand's hernia [6-7]

Classification	Description	Surgical management
Type 1	Normal appendix in an inguinal hernia	Hernia reduction, mesh repair
Type 2	Acute appendicitis in an inguinal hernia, without abdominal sepsis	Appendectomy, primary repair of hernia without mesh
Type 3	Acute appendicitis in an inguinal hernia, with abdominal wall or peritoneal sepsis	Laparotomy, appendectomy, primary repair without mesh
Type 4	Acute appendicitis in an inguinal hernia, with abdominal pathology	Manage as Type 1-3, investigate pathology as needed

Our patient had a Type 1 & Type 2 Amyand's hernia and underwent herniotomy along with appendectomy. In the paediatric population, however, a prophylactic appendectomy would have been performed, because children and adolescents have a higher risk of acquiring acute appendicitis [6&8].

In summary, Amyand's hernia is a rare occurrence, but offer variety in their presentations and managements. Our case of a Type 1 & 2 Amyand's hernia were managed with herniotomy along with appendectomy.

V. Conclusions

Incidence of Amyand's Hernia is very rare, about 1% of all inguinal hernia, in our study it was 0.87, only 0.1% with appendicitis although in our study it was 0.4%. Almost all are male child, diagnosis possible only during operation[9-10]. Management -With appendicitis, appendectomy along with herniotomy, Without appendicitis, only herniotomy, but prophylactic appendectomy should be done because children and adolescents have a higher risk of acquiring acute appendicitis [6-10].

References

- [1]. *Amyand's Hernia* at Who Named It? Philosophical Transactions, 1736, 39: 329-336.
- [2]. Amyand, Claudius (1735). "Of an inguinal rupture, with a pin in the appendix caeci, incrusted with stone; and some observations on wounds in the guts". *Philosophical Transactions of the Royal Society of London*. **39** (443): 329–336. doi:10.1098/rstl.1735.0071
- [3]. Faiz N, Ahmad N, Singh R. Case series on different presentations of Amyand's hernia. *Arch Int Surg* [serial online] 2016 [cited 2017 Mar 18];6:176-9. Available from: <http://www.archintsurg.org/text.asp?2016/6/3/176/202373>
- [4]. Hutchinson, R (February 1993). "*Amyand's Hernia*". *Journal of the Royal Society of Medicine*. **86** (2): 104–105. [PMC 1293861](#). [PMID 8433290](#).
- [5]. Sharma, H., Gupta, A., Shekhawat, N.S. et al. Hernia (2007) 11: osano
- [6]. Losanoff JE, Basson MD. Amyand hernia: what lies beneath—a proposed classification scheme to determine management, *Am Surg*, 2007, vol. 73 (pg. 1288-90)
- [7]. Psarras K, Miltiadis L, Baltatzis M, Pavlidis E, Tsitlakidis A, Symenodis N, et al. Amyand's hernia—a vermiform appendix presenting in an inguinal hernia: a case series, *J Med Case Rep*, 2011, vol. 5 pg. 463 10.1186/1752-1947-5-463
- [8]. Losanoff JE, Basson MD. Amyand hernia: a classification to improve management, *Hernia*, 2008, vol. 12 (pg. 325-6) 10.1007/s10029-008-0331-
- [9]. yEmineBircuciggsar et al. *JPediatr Surg*. 2016 Aug. found out of 4498 with inguinal hernias, among these 46 (about 1.02%) had an Amyand's hernia, 33 normal, 9 inflamed and one perforated appendix, 3 were adherent with sac, all were boys,
- [10]. A Michalinos et al. *Hernia*. 2015 Dec. showed Amyand's hernia consists 1% of all inguinal hernia while appendicitis in an Amyand's hernia accounts for 0.1% of all appendicitis cases, in this study author did prophylactic appendectomy of all cases, even without having any signs of inflammation.