

Amyand's hernia in an eighteen month old boy: A case report

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Abstract

Amyand's hernia is a rare type of hernia in which vermiform appendix is found in the hernial sac. We describe the case of an 18 month old boy in which a non-inflamed appendix was found incidentally in the hernial sac of right sided inguinal hernia while doing herniotomy by Mitchell- Banks' technique. We also discuss the different types of Amyand's hernia and how they can be managed by reviewing the literature.

Keywords: Amyand's Hernia, Appendicitis.

Introduction

One of the most common cause of paediatric surgical referral is inguinal hernia.¹ Its reported prevalence in mature infants is upto 15% while it is slightly higher in pre-mature infants where it is reported to be between 10-30%.^{1,2} Its cause is failure of closure of processus vaginalis in children and it may contain all types of contents such as ovaries, fallopian tubes, Meckel's diverticulum, gut etc.³ Depending upon the type of unusual contents; these hernias are named differently as Littre's hernia if the sac contains Meckel diverticulum or Richter hernia if the sac contains a portion of the circumference of intestine.^{3,4} Both these types are quite well known in literature but there is a third type which is relatively not very well known, called as Amyand's hernia. Amyand's hernia contains the appendix in inguinal hernia sac and is of 4 types. The frequency is 0.4-1% without appendicitis; but with appendicitis, it is 0.1%.³⁻⁵

Case Report

An 18 month old boy presented to the Paediatric Surgery department of Mayo Hospital Lahore in September 2017 with complaints of swelling in right inguino-scrotal region since birth. The swelling was initially noted by parents only when the child cried. There were no other active complaints but for the last 15 days, parents noted that the swelling did not disappear. At the time of examination, he was afebrile and had a non-tender, incarcerated right inguinal hernia with normal abdominal examination. His

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haemoglobin was 10.6 g/dl. X-Ray abdomen did not show any intestinal obstruction and ultrasound inguinal canal showed presence of gut loop only. An elective right inguinal herniotomy was planned after informed consent.

After administration of general anaesthesia, incision was made over the right superficial inguinal ring in inguinal skin crease and herniotomy was done by Mitchell-Banks' technique (without opening the inguinal canal).⁶ Hernial sac was separated from the cord. Contents of sac could not be reduced so sac was opened. Incidentally, the appendix was found to be within the sac with minimal adhesions to the sac (Figure). Appendix was separated from the sac by adhesiolysis and since it was not inflamed, appendectomy was not performed and after reduction, high ligation of sac was done by gently lifting superficial inguinal ring. Patient was shifted to the ward. He was given 2 shots of injection Cephadrine 250 mg one pre-op prior to induction and second post-op. He had uneventful recovery and was discharged on the same day. On follow up after 1 month, he has not developed appendicitis.

Ethical permission was taken to publish this case report.

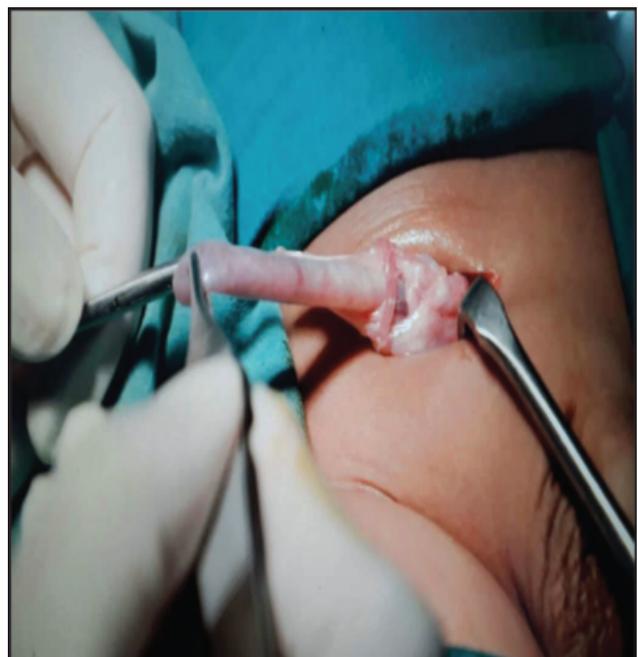


Figure: Non inflamed appendix in hernial sac.

Discussion

Amyand's hernia was named to honour the famous surgeon Claudius Amyand who described it first, almost 180 years ago in 1735, in a patient with a faecal fistula in inguinal region.³ Since it is a rare happening so it has lead to a few case series and many case reports but large studies or meta analysis are deficient.^{3,7}

Amyand's hernia is predominant in males and its incidence has been reported in patients varying in age between 6 weeks to 88 years of life.⁷ It is three times more common in children due to patent processus vaginalis. Majority of the cases are reported to be on the right side, possibly because of natural position of caecum and appendix.⁴ Few cases are reported on the left side and can happen only if there is malrotation, situs inversus or mobile caecum.^{5,8}

Amyand's hernia is rarely suspected preoperatively.^{4,7} Most of these hernias present as a painful or irreducible lump in the inguinoscrotal region and are diagnosed as incarcerated or strangulated hernias and are operated in emergency.⁷ Others can present with abdominal pain due to necrotizing fasciitis and Fournier's gangrene. The only imaging modality used in emergency is usually X-ray Abdomen which might or might not suggest bowel obstruction. Prospective diagnosis with CT scan is possible but it is rarely employed pre operatively while ultrasound is a good diagnostic modality in children but is operator dependant.^{7,9}

The management of Amyand's hernia depends upon the status of appendix. In type 1, as in our case, appendix is not inflamed. In type 2, it is inflamed but inflammation is localized in the sac. In type 3, patients present with appendicitis and peritonitis and in type 4, there is some other associated abdominal pathology as well.¹⁰ Type 2 Amyand's hernia is managed by appendectomy and type 3 and 4 by percutaneous CT guided drainage, open drainage through the groin or laparotomy.^{9,10} The controversy exists about the management of type 1 Amyand's hernia where appendix is not inflamed.⁹ Some studies suggest that appendectomy can lead to wound infection and chances of hernia recurrence while others suggest that incidental appendectomy can theoretically decrease the chances of future morbidity if appendicitis occurs and there is also a fear that manipulating appendix may lead to secondary appendicitis.⁷ These concerns are not scientifically proven and long term follow up in few cases suggest that simple reduction of non-inflamed appendix is usually preferred.

Another controversy regarding management of Amyand's hernia is whether to do hernioplasty or not. In adults, mesh repair is reserved only for type 1 Amyand's hernia and rest of the types are repaired with traditional non-meshed techniques such as Bassini's repair or Shouldice technique because it is feared that inflammation of the appendix may lead to mesh infection and hernia recurrence but some authors still prefer to do hernioplasty.^{4,7} Mortality is noted in only type 3 and 4 and varies between 14-30%.⁴ Laparoscopy is preferred only in cases where preoperative diagnosis is determined and patient is not septic.

We presented this case report to increase awareness of this unusual condition and to prevent unnecessary incidental appendectomy in type 1.

Conclusion

Amyand's hernia is an atypical hernia and is mostly found incidentally. Its diagnosis pre-operatively is only possible if we use the services of a good ultrasonologist or/and get a CT scan done. In type 1 variant, we suggest that prophylactic appendectomy is not required.

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