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Case Report

Amyand's Hernia: Incidental Finding of Inflamed Appendix as Hernial Sac Content and its Management

Dr. Muhammad Adil[1]*, Dr. Hafsa Umer[2], Dr. Husam Jamil[3] and Dr. Wahab Ali Zaidi[4]

[1]House Officer at Department of Surgery, POF Hospital, Pakistan

[2]House Officer at Department of Surgery, POF Hospital, Pakistan

[3]ST6 Acute Medicine at Bradford Royal Infirmary, UK

[4]Medical Officer at Noori Hospital, Pakistan

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***Corresponding author:** Dr. Muhammad Adil, House Officer at Department of Surgery , POF Hospital, Pakistan

ABSTRACT

Inguinal Hernias accounts to be one of the most indicated conditions for the surgeries of Abdomen throughout the world and the contents of the hernial sac usually are omentum and small intestine1. Now, sometimes hernial sac can also contain appendix tissue which is termed as Amyand's Hernia. It is a rare condition characterizing almost 1% of inguinal hernias2.

Amyand's Hernia is a mixture of two most commonly occurring conditions named as Inguinal hernia and appendicitis. Latest data shows its prevalence to be between 0.4-0.6% reaching to 1% in paediatric patients3. It may present with appendicitis alongside in 0.8-0.13% of the cases4. Right sided Amyand's Hernia is more common than left sided due to increased chances of Right Inguinal hernia and appendicitis and normal anatomical location of appendix.

Here we present a case of 6 months old male patient that was surprisingly diagnosed to be a case of Amyand's hernia, despite having no clinical indications of appendicitis, intra operatively and was managed by appendectomy and herniotomy alongside.

Keywords: Inguinal hernias; Appendicitis; Swelling; Tachycardia

Case Report

A 6 months old male patient presented to surgical OPD along with his mother with the complaints of cough from one week and swelling and pain in the scrotal region from two weeks. The swelling was mainly on the right side that increased on coughing leading to pain making the baby cry and further increase in the swelling. The swelling reduced in the size when aggravating factors like coughing, sneezing and crying were absent.

Patient had no associated fever, tachycardia or other usual signs and symptoms. Urinary and bowel habits were unchanged, and no discharge of any sort was present from the penis. The patient had no other comorbid or illnesses and no history of any previous illnesses or surgeries. The immunization history of patient was positive and according to the EPI guidelines. No significant family history of hernias, asthma, Tuberculosis, diabetes mellitus, hypertension, thalassemia was noted.

On examination, patient had low grade fever of 99 degrees Fahrenheit and high pulse rate of 142 beats per minute. Local genitalia examination revealed tender scrotal region with a large swelling on the right side. The swelling was tender, reducible, with normal skin colour and body temperature. The contents of the swelling had soft consistency. The baby cried during examination.

Patient was advised following stated labs and investigations and admission to the surgical ward for preparation for the elective herniotomy at the upcoming scheduled day of surgery because no urgency for surgery on the examination and investigations was indicated.

The Clinical Lab Investigations done were:

Complete Blood Count, Prothrombin time (PT), Activated partial thromboplastin time (aPTT),INR, with all of them being within normal ranges.

Radiological investigations included: Chest X Ray that was unremarkable and Ultrasound scrotum which indicated an anechoic fluid surrounding right testes suggestive of hydrocele and a loop in upper part of scrotum with intact vascularity. However, that loop had no peristalsis. Both testes were within scrotal sacs and with uniform parenchymal echotexture. Vascular flow was also intact. This Ultrasound report was one of the main causes eliminating any urgency for the surgery as no strangulation or disturbance in the blood supply was observed. During surgery, while exploring the hernial sac, an inflamed appendix of almost 2 inches wasfound (**Figure 1**).

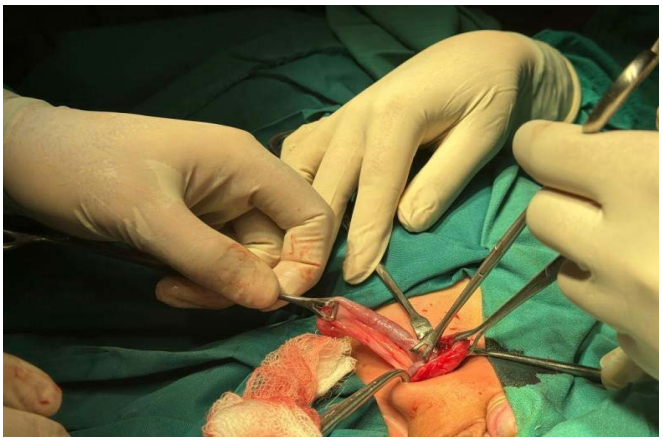

Figure 1: Picture of inflamed appendix extracted from the hernial sac.

This surprising finding was further followed by more exploration. The appendix was resected, hernial sac was excised and closed. Internal muscular layers were approximated using vicarly 2-0 suture and skin was closed using Proline 2-0 suture.

Histopathological analysis of the appendicular specimen showed appendix exhibiting congested blood vessels and confirmed the acute appendicitis.

Patient was made NPO for 6 hours pre- and post-surgery and then resumed oral feeding starting with soft diet and fluids first. Patient was discharged on third post-op day after keeping under observation in ward for two days post-op. He followed up along his mother insurgical OPD one week later and proline-suture-made-skin-stitches were removed after making sure that the surgical site was normal with no signs of surgical site infection, oozing of blood or pus.

Discussion

Amyand's hernia has been ranging in the literature from 0.19% to 1.7% and the presence of appendicitis, as it was in our case, along with it is even rarer ranging from 0.07 to 0.13%[5]. Its more common in children than in adults because of the presence of patent processus vaginalis in children.

The literature indicates that appendix moves into the hernial sac. The presence of patent processus vaginalis and an additional connection of appendix with testes favours its above stated movement and also supports the cause in our case[6]. Leafing further through literature supported that the increased amount of pressure in the abdomen caused by the abdominal muscles' contraction aids in the inflammation of the appendix by cutting its blood supply and facilitating the growth of bacteria inside it[7]. This reduction in blood supply does not mean to be completely absent and could onlybe slightly reduced initiating and propagating the process of inflammation passively as could be here in this case too because the vascularity in the ultrasonography was intact.

Usually, the patients that present with Amyand's hernia have typical signs and symptoms of appendicitis and hernia like fever, pain, nausea, chills and skin changes like erythema but here the patient just had complaints of pain and swelling and a low-grade body temperaturenot significant enough to be diagnosed as an urgency or a case of inflammation going on inthe body leading to a misleading diagnosis and ending up with a surprising finding of inflamed appendix in the hernia.

Management of the Amyand's hernia is very well documented and explained according to the type. Losanoff and Basson in 2008, classified it into four different types along with management of each type[8]. Type 1 means hernia having normal appendix, type 2 explains hernia with acute inflammation of appendix but without anycomplications, type 3 means appendicitis with complications like perforation or formation of abscess and type 4 means that there are some other disease processes that caused the inflammation and that could be malignancies or conditions like diverticulitis. The management is also different in the literature for each type of Amyand's hernia with type 1 being recommended to be treated with mesh-oriented hernia repair and appendectomy, type 2 being recommended for open appendectomy without any mesh repair, type 3 focusing on controlling the acute infection-causing sources and type 4 should be treated specific to the disease process causing inflammation. In our case it was type 2 and was managed accordingly the guidelines stated in the literature. The patient underwent open appendectomy and hernia was repaired without any mesh placement to prevent the infection that could be caused by the mesh and due to the age of patient further eliminating the need for any mesh.

Conclusion

Amyand's hernia is not a common finding and that is why it poses unique diagnostic and management challenges. The clinical presentation of this patient was very much like an inguinal hernia, but it lacked symptoms and signs any infection or any Gastrointestinal disturbance. The initial radiological investigation also suggested a hernia and hydrocele bothbeing non urgent in nature, but intraoperative finding of inflamed appendix came out to be a surprise. Its proper management included appendectomy and herniotomy followed by post operativecare. Histopathological analysis also confirmed that it was acute appendicitis, affirming thatsurgical intervention was required. This case shows that though this type of hernia is rare to find, still it should be kept in mind when diagnosing hernias especially in children even if typical presentation of appendicitis isnot there.

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