

AMYAND'S HERNIA WITH ILEOILEAL AND ILEOCAECAL ADHESION: A CASE REPORT

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Abstract

Amyand's hernia is a type of hernia which determined by the presence of appendix in hernia sac. This type of hernia is rare, with the incidence about 1%. To diagnose this type of hernia is quite challenging, especially when there's no complication such as adhesions, incarceration, strangulation or perforation. Thus incidental finding of Amyand's hernia during operation is common¹. Adhesions of bowel are band of scar tissue of bowel serosa which formed secondary to surgery, infection, trauma or radiation. Adhesion can be said as a normal healing process but it can lead to abdominal pain or even total bowel obstruction called Adhesive Small Bowel Obstruction (ASBO)².

We report a 72 years old male Amyand's hernia with ileoileal dan ileocaecal adhesion. The patient then treated with open inguinal approach surgery. Although the adhesion didn't lead to complication of the hernia sac content, but it became quite challenging when we try to reduce caecum and ileum through inner inguinal ring.

Keywords: Amyand's hernia, appendix, hernia

Background

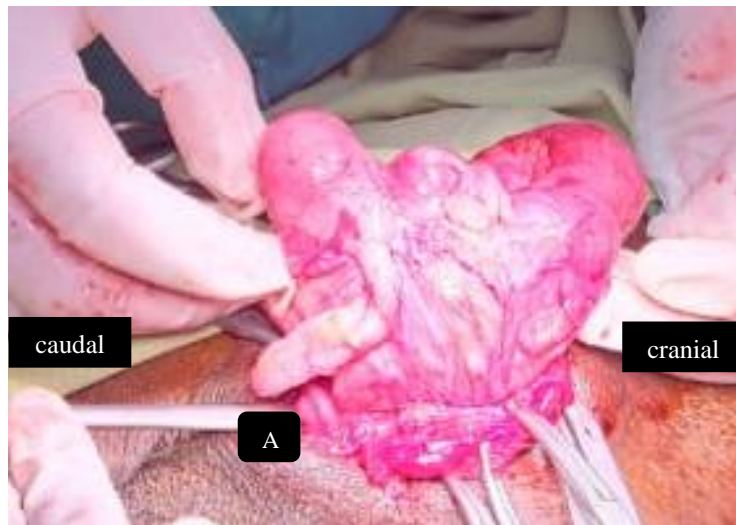
Lateral inguinal hernia is a protrusion of intra-abdominal organs or peritoneal fat into the inguinal canal through the internal inguinal ring. The cause can be congenital or acquired. In adult patients, lateral inguinal hernias generally occur due to weakness of the abdominal wall³. When a part or full part of appendix become the content, thus we called it Amyand's hernia. The appendix could become inflamed and leads to perforations. This condition make hernia more complicated to treat. When there's no complication, it is quite challenging to diagnose this type of hernia. Thus we often find it incidentally during operation of inguinal hernia¹.

Adhesions normally formed secondary to surgery, infection, trauma or radiation. But this physiology healing process can lead to chronic abdominal pain or even total obstruction of bowel². Adhesions of the contents in hernia sac can lead to incarceration, strangulation or even perforation¹. Surgery is main choice of treatment for both hernia and bowel adhesion.

Case Presentation

A 72 year old male came to surgical clinic with painless mass in the right inguinal region that didn't disappear for several days. Previously, the mass had been known for the 8 years but the mass appeared only when patient was in standing position or strained, so the patient didn't seek for medical advice before. There was no sign of bowel obstruction and no abdominal pain. In the past, patient worked as a laborer for more than 10 years, but is now retired. Physical examination was shown stable vital sign, normal abdominal examination, and there was a reducible mass in the right inguinal region. The mass was tender, painless, and 5 cm in diameter. There were bowel peristaltic sounds from auscultation examination of the mass. There were no abnormalities in the laboratory studies.

A preoperative diagnosis of irreponible right lateral inguinal hernia was made and the patient was scheduled to an elective herniorrhaphy with mesh repair surgery. The surgery was done under spinal anesthesia the next day. We got some issue to find the fascia because there were some structural changes. After we opened the externus abdominis muscle fascia, we got another difficulty because the adhesions of inguinal canal with the fascia. When we open the sac, we found the appendix caecum and terminal ileum were in the hernia sac. There were no signs of inflammation and strangulation in the intestines.



**Fig 1. Amyand's Hernia
Lateral inguinal hernia with the presence of appendix (A) in hernia sac**

We explored the caecum to the terminal ileum to look for the cause of irreducible hernia sac. There were ileo-ileal and ileo-caecal grade II intestinal adhesions. We decided to cut the adhesion sharply with Metzenbaum scissor and leave the appendix then reduced the bowel back to abdominal cavity. The caecum, appendix and terminal ileum could be reduced smoothly into abdominal cavity without issue. We measured the inguinal internal ring opening with finger and found it was about 1,5 cm. Lichtenstein hernioplasty procedure was done. One day after the surgery, the patient had no complaint and get discharged. We gave mefenamic acids for painkiller. No antibiotic. The patient showed up a week later at the clinic without complication.



Fig 2. Ileocaecal adhesions

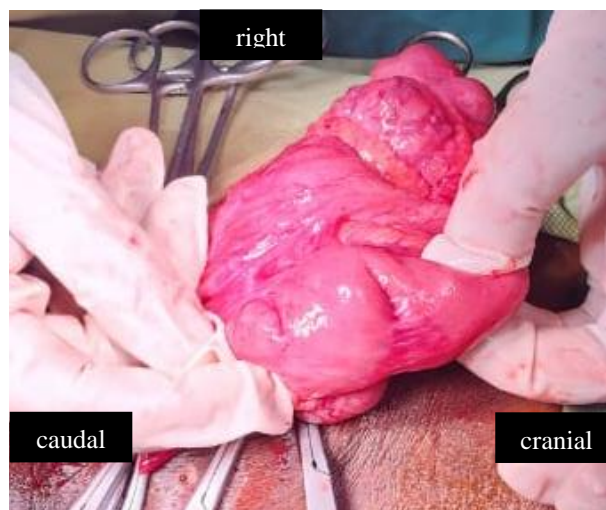


Fig 3. Ileoileal adhesions

Discussion

Amyand's hernia is a rare condition of inguinal hernia where the appendix is present. This type of hernia has been defined by Claudius Amyand on December 6, 1735.^{1,4} Lossanof and Basson then classified it and gave recommendation for treatment for each type of this hernia. Type one describes the hernia with normal appendix, type two describes hernia with acute appendicitis without abdominal sepsis, whereas type three describes abdominal or peritoneal sepsis. Type four describes the hernia with appendicitis and abdominal pathology.¹ From the intraoperative finding, we knew that this case was classified as type 1 where appendix appeared to be in the hernia sac without any inflammation sign. We did adhesiolysis to release the adhesions band between ileum and ileum (ileoileal adhesions) and ileum and colon (ileocolica adhesions). The adhesiolysis was done by cutting across and releasing the band. In accordance with Amyand Lossanof and Basson classification for Amyand's hernia type, after adhesiolysis was carried out, we reduced the visceral organ in the hernia sac to the abdominal cavities, then we did hernia repair with Lichtenstein hernioplasty.

We didn't do appendectomy as recommended, because our patient was old and there was no sign of inflammation.⁵ The appendix inflammation signs are very important signs for surgical decision making. In the normal appendix, appendectomy increases the risk of postsurgical infection due to risk of spillage of infectious intralumen material from the appendix. This can cause change in operating conditions from clean surgery to contaminated surgery. In the other hand, the presence of inflammation signs increases the risk of postsurgical infection along with local inflammation from the appendix.

We didn't do any imaging, because it wasn't needed. There was no sign of obstruction, no abdominal pain and no groin pain so we can excluded incarceration, strangulation or peritonitis from this patient. With the presence of bowel sound at the groin and negative translumination test, we are sure that this is inguinal hernia. Routine imaging evaluation on apparent case of hernia should be limited to lessen the healthcare costs⁵. Although it may helpful in vague groin hernia or recurrent hernia, but not in this case.

The presence of ileoileal and ileocaecal adhesions, found during surgery, is still confusing. Formation of adhesion is normal in wound healing process². Adhesion formation are common after surgery in any kind of procedure⁶. There was a case when an inguinal hernia experiencing a blunt trauma that resulted in intestinal perforation but no adhesion was found⁷. Our patient had no history

of surgery before, and he never experienced any trauma to the abdomen before. Given the local structural changes that was found during surgery with grade 3 ileoileal and ileocaecal adhesions, we concluded that the trauma must be in a gentler manner and happening for a long time. From further anamnesis, we found that he always massaged his groin whenever it swelled. But we couldn't concluded it as the primary caused for the adhesion due to the lack of evidence of the impact from massaging to the formation of adhesion. Adhesiolysis was performed with sharp dissections using a scissors. Then we pressed the area using moist gauze to control the bleeding⁸.

We didn't perform appendectomy in this patient. Inguinal hernia operation is a clean operation, whereas appendectomy is a clean contaminated operation⁹. In clean contaminated operation, the use of MESH could become the source of infection in later days. We chose to use mesh to prevent postoperative pain that occur commonly after bassini's abdominoplasty surgery¹⁰.

Conclusion

Amyand's hernia is a type of hernia that is rarely found. Characterized by the presence of an appendix in the hernia sac. Diagnosis of Amyand's hernia is a challenge in itself. Often Amyand's hernia is accidentally discovered during hernia surgery. The management of appendectomy for Amyand's hernia without appendicitis is still a matter of debate.

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