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Manash Ranjan Sahoo, Basavaraja C., Kumar A.T., Sunil Jaiswal

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Case Report: A 40-year-old male presented to emergency department with incarcerated left inguinal hernia and pain over the hernia since two days. Abdominal examination was normal except for tenderness and increased temperature over the left inguinal hernia. Through an inguinoscrotal incision opening of sac revealed pus and flakes with perforated appendix. Lower midline laparotomy incision was given and found the tip of perforated appendix to lie at the left deep inguinal ring. Appendicectomy with pelvic toileting was done. Bassini repair was done in the inguinal region.

Conclusion: To conclude left sided Amyand's hernia is very rare. High index of suspicion is required for diagnosis and this should be kept as a differential diagnosis for such a varied presentation.

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CASE REPORT

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Keywords: Amyand's hernia, Appendicectomy, Incarcerated left inguinal hernia, Bassini technique

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INTRODUCTION

Amyand's hernia is defined as the presence of the appendix within an inguinal hernia. It was Claudius Amyand, surgeon to King George II, in 1735, the first person to describe the presence of a perforated appendix within the inguinal hernial sac of an 11-year-old boy and performed a successful transherniotomy appendicectomy [1, 2]. Hence named after him. In this rarer variety, right sided are more common than left side. The incidence of Amyand's hernia varies from 0.5–1%, whereas only 0.1% of all cases have appendicitis present in an inguinal hernia. An extensive literature search revealed five reported cases of left sided Amyand's hernia [3–7]. None have described appendicular abscess in left sided Amyand's hernia. We report a case of appendicular perforation with abscess in left sided Amyand's hernia.

CASE REPORT

A 40-year-old male presented to emergency department with incarcerated left inguinal region and pain over the hernia since two days. His vital parameters were normal. On examination abdomen was soft, non-tender, bowel sounds were normal, with an irreducible hernia on the left inguinal region, with increased pain, temperature and tenderness over the hernia. There was no history of fever. On investigating straight X-ray abdomen was normal. With diagnosis of strangulated inguinal hernia, he was planned for emergency exploration.

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Through left inguina scrotal incision cremaster box was opened. A band was seen constricting near the neck of the sac which was released which resulted in disappearance of the bowel contents into abdominal cavity. Opening of the sac at its distant point revealed pus with tip of the appendix just lying over the deep ring (Figure 1). The whole of the structure was pulled out to confirm it as appendix (Figure 2). This is not just a case of appendicitis where appendicectomy alone through inguinal incision would suffice. Since there was abscess formation, we needed thorough toileting of the pelvis, where there will be pus collection which will hamper postoperative recovery. Hence a lower midline incision was given; appendix perforated at the tip was found lying on the deep inguinal ring. Appendicectomy was done after ligating at the base (Figure 3). All other parts of bowel (ileum, cecum) were normal (Figure 4). Thorough pelvic toileting was done. Hernia repair was done with Bassini technique. Abdomen was closed placing a pelvic drain. Patient was fine postoperatively and was discharged on fifth postoperative day.

DISCUSSION

The protrusion of a viscus or part of a viscus through the walls of its containing cavity is defined as hernia. Most commonly inguinal hernia contains small bowel or omentum. It may display very unusual sac contents such as ovary, fallopian tube, urinary bladder, incarcerated bladder diverticula, large bowel diverticula with the form

Figure 2: Appendix confirmed after pulling it out.

Figure 3: Appendix ligated at the base before appendicectomy.

Figure 1: Appendix tip found at the internal ring with pus after opening the sac.

of diverticulitis or abscess, Meckel's diverticulum (Littre hernia) or foreign bodies (e.g., fish bones) [8–10]. The presence of the appendix within an inguinal hernial sac is an uncommon condition and is referred to as Amyand's hernia. Amyand's hernia is a broad term. It is used

Figure 4: All other bowels were inspected for any pathology.

variously to refer to occurrence of an inflamed appendix within an inguinal hernia, a perforated appendix within an inguinal hernia or a non-inflamed appendix within an irreducible inguinal hernia [11]. The incidence of having a normal appendix within the hernial sac varies from 0.5–1%, whereas only 0.1% of all cases of appendicitis present in an inguinal hernia [12, 13].

The pathophysiology of Amyand's hernia is unknown. It is not known whether primary visceral inflammation (appendicitis) is the initiative feature or compression of appendix may hamper blood supply and then leads to secondary inflammation. Most of the cases occur on the right side, the reasons being- (1) normal anatomical position of the appendix (2) right-sided inguinal hernias are more common than left-sided hernias. There have been five reported cases of left sided Amyand's hernia after an extensive search of literature [3–7]. None have described appendicular abscess in left sided Amyand's hernia. We report here such a rare case.

Acute appendicitis or perforation of the appendix within the sac simulates perforation of the intestine within the hernia, and does not have specific symptoms or signs. Due to these facts, it is very difficult to reach a clinical diagnosis of Amyand's hernia preoperatively. We can have such a differential diagnosis for right sided hernia but when similar thing happens on the left side it is very difficult to diagnose and a very high index of suspicion is needed for the diagnosis. Although, preoperative computed tomography (CT) scan of the abdomen may be helpful in reaching the correct diagnosis [14], however, CT scan is not routinely used in such cases.

In the absence of inflammation hernioplasty is advocated. Regarding to remove or leave behind a normal append is rather based on the patient's age, life expectancy, life-long risk of developing acute appendicitis and the size and overall anatomy of the appendix. Pediatric or adolescent patients have a significantly higher risk of developing acute appendicitis and should therefore have their appendices removed, compared to middle-aged or elderly individuals in whom the appendix should probably be left intact [15, 16].

When appendicitis is found, they should be treated with appendectomy; prosthetic materials should not be used for hernia repair. On the other hand, acute appendicitis with peritonitis or acute appendicitis with other pathology hernioplasty is contraindicated [15, 16]. The presence of pus or perforation of the organ is also an absolute contraindication to the placement of a mesh for hernia repair. Associated intra-abdominal abscesses, if present, may be dealt with either percutaneously or by open drainage. In our case since gush of pus came out of hernia sac so the abdomen was opened to drain out pus that might have trickled into pelvic cavity and appendectomy was done. Hernia repair was done without using a mesh since the environment was contaminated.

CONCLUSION

Left sided Amyand's hernia is very rare. High index of suspicion is required for diagnosis and this should be kept as a differential diagnosis for such a varied presentation so that appropriate timely treatment can be instituted.

Author Contributions

Manash Ranjan Sahoo – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Final approval of the version to be published

Basavaraja C. – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Final approval of the version to be published

Anil Kumar T. – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published

Sunil Jaiswal – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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