Amyand's hernia with mucinous cysadenoma of the appendix

Fadel Shabeeb · Hairol Azrin Othman · Razman Jarmin

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Abstract Amyand's hernia is a rare condition in which the appendix is positioned in the inguinal hernia sac. Mucinous cysadenoma of the appendix is rather extremely rare. We report a case of a mucinous cystadenoma of the appendix which presented as an incarcerated right indirect inguinal hernia (Amyand's hernia)

Keywords Amyand's hernia · Mucinous cystadenoma · Appendectomy

Introduction

Amyand's hernia is an extremely rare condition in which the inguinal hernia sac contains the appendix. It occurs in one percent of adult inguinal hernia cases [1]. Amyand's hernia is defined as an uninflamed appendix in an inguinal hernia. This rare condition was named after the first surgeon to perform appendectomy, Claudius Amyand, an English surgeon of the 18th century who first described a case of acute appendicitis in a hernial sac in an 11-year-old child.

The diagnosis of Amyand's hernia is rarely made preoperatively and is often confused clinically with an incarcerated or strangulated right inguinal hernia [2].

Appendiceal neoplasms account for >0.5% of all intestinal tumors [3]. Mucinous cystadenoma of the appendix is a rare condition and represents one of the three entities with the common name mucocoele of the appendix. It is characterized by a cystic dilatation of the lumen with stasis of mucus inside it. Focal or diffuse mucosal hyperplasia and mucinous cystadenoma are of benign nature, but could lead to complications due to rupture, invasion to adjacent organs or recurrence. In most cases, a preoperative diagnosis is rarely achieved. Once diagnosed, the traditional treatment for a mucinous cystadenocarcinoma of the appendix has been surgical in the form of a right hemicolectomy and aggressive debulking added if found associated with pseudomyxoma peritonei.

Case report

A 62-year-old male presented to out-patient clinic due to pain over the right groin for 1 week. He known to have protruding bulge around his right groin area had been presented for about 3 years. He was able to reduce the groin bulge manually but he claimed he was unable to do so for one week duration prior to presentation to our center. He denied

Shabeeb F. · Hairol O. · Jarmin R.
Department of Surgery,
University Kebangsaan Malaysia Medical Center (UKMMC),
Kuala Lumpur, Malaysia

Shabeeb F. (✉)
E-mail: dr.shabeeb@gmail.com

a history of chronic cough and constipation. He also denied having any symptoms of benign prostatic hyperplasia

Physical examination showed a bulge in right groin area. The inability to place the bulge back into the abdomen suggested that the hernia was ‘incarcerated.’ Therefore, the operation of hernioplasty was arranged. During the operation, the hernia sac was found and opened, and, surprisingly, an appendix was found in it (Figs. 1 and 2). The appendix was swollen with healthy base, caecum and the terminal ileum. Besides this, the inflammatory change around the swollen appendix was noted. Therefore, appendectomy was performed, followed by Lichtenstein’s technique repair of the posterior wall, considering no contamination by the inflamed appendix. The histologic finding of the appendix showed mucinous cystadenoma with no evidence of acute appendicitis. In addition, the size of

the tumor measured about 3 cm in length and about 1.5 cm in diameter. Also, the resection margin at the base of the appendix was not involved by the tumor.

Discussion

A hernia is a protrusion of a viscus or part of a viscus through the walls of its containing cavity. It is commonly occurred in the inguinal region, where the hernial sac may contain the omentum or small bowel. However, certain unusual contents may be encountered such as the bladder, a Meckel’s diverticulum (Littre’s hernia), or, a portion of the circumference of the intestine (Richter’s hernia). Amyand’s hernia remains relatively unknown despite having been first reported nearly 170 years ago.

The term Amyand’s hernia refers to the presence of the appendix within the hernial sac, and has been variously defined as the occurrence of either an inflamed or perforated appendix within an inguinal hernia, or simply, the presence of a non-inflamed appendix within an irreducible inguinal hernia [4].

Mucocele of the appendix is a descriptive term that implies a dilated appendiceal lumen caused by abnormal accumulation of mucus. Mucocele is found in 0.2–0.3% of all appendectomy specimens. The male: Female ratio is 1:4 and the mean age of patients is around 55 years [5, 6].

Appendiceal mucocele can be histologically divided into three groups: Focal or diffuse mucosal hyperplasia without epithelial atypia, mucinous cystadenoma with some degree of epithelial atypia and mucinous cystadenocarcinoma.

Our patient is interesting because of the two associated conditions while one of them (Amyand’s hernia) has not so far been mentioned in literature in association with mucinous cystadenoma.

Classical surgical approach is the best therapy option with. Appendectomy is advised for focal or diffuse mucosal hyperplasia and cystadenoma when the appendiceal base is intact. Cecal resection is performed for cystadenoma with a large base and right colectomy is recommended for cystadenocarcinoma [7].

Conclusion

This case with Amyand’s hernia and appendicular mucinous cystadenoma tumor was admitted due to incarcerated right inguinal hernia with pain on the patient’s right groin for 7 days. Doctors usually diagnose Amyand’s hernia with appendicitis, which is rarely observed, as strangulated inguinal hernia. Even though Amyand’s hernia with mucinous cystadenoma has never been reported, the procedure to deal with Amyand’s hernia with mucinous cystadenoma tumor is suggested to be to treat the two conditions separately as usual.

Fig. 1 Swollen appendix with healthy base was found after opening the hernia sac

Fig. 2 Appendicular mucocele

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