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Case Report

A rare cause of incarcerated inguinal hernia content: Ruptured hemorrhagic ovarian cyst

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Abstract

The hernia is called the protrusion of the intra-abdominal organs out of a defect in the abdominal wall. Although the contents of the hernial sac generally form the omentum and small intestines, it can be found in organs such as appendix, fallopian tubes, ovary, bladder, Meckel diverticulum in the hernial sac. Although ultrasonographic imaging is helpful in determining the contents of the hernia sac, surprise sac contents may still be encountered during surgery. In this case report, a 38-year-old female patient with a ruptured ovarian cyst in the incarcerated hernia sac is discussed with the literature.

Keywords: Incarcerated hernia; inguinal hernia; ruptured ovarian cyst

INTRODUCTION

The hernia is called outward protrusion of the omentum or intra-abdominal organs through a defect in the abdominal wall. Inguinal hernias are the most common adbominal wall hernias, and usually presented with swelling that occurs in the hernia region and becomes pronounced by standing, straining and coughing. The incidence of inguinal hernias in women is 1.9% and the male / female ratio is 6/1. Although the contents of the hernia sac generally form the omentum and small intestines, it can be found in organs such as appendix, fallopian tubes, ovary, bladder, meckel diverticulum in the hernia sac (1,2). The incidence of fallopian tube and ovary in the hernia sac is 2.9% and is generally seen in the pediatric population (3). The diagnosis of hernia is usually made by physical examination. Although ultrasonographic imaging is helpful in determining hernia content, diagnosis of incarceration and strangulation, surprise hernia sac contents may still be encountered during surgery (4). In this case report, a case with a ruptured ovarian cyst in the incised hernia sac is presented.

CASE REPORT

A 38-year-old female patient was seen in the emergency room with swelling and pain that persisted for 2 days in the left groin area and did not pass. From the patient's story, it was learned that his complaints had been for a long time, but the complaint of swelling had passed from time to time, he had pain during swelling, and his swelling and pain did not go away for 2 days and gradually increased. In the physical examination of the patient who did not have any systemic disease and history of trauma, a 4x3 cm irreductable mass was detected in the left inguinal region. In the ultrasound imaging of the patient, it was stated that a differential diagnosis of 4 × 3 cm could not be made in the inguinal canal and there was an incarcerated structure with a fluid collection around it.

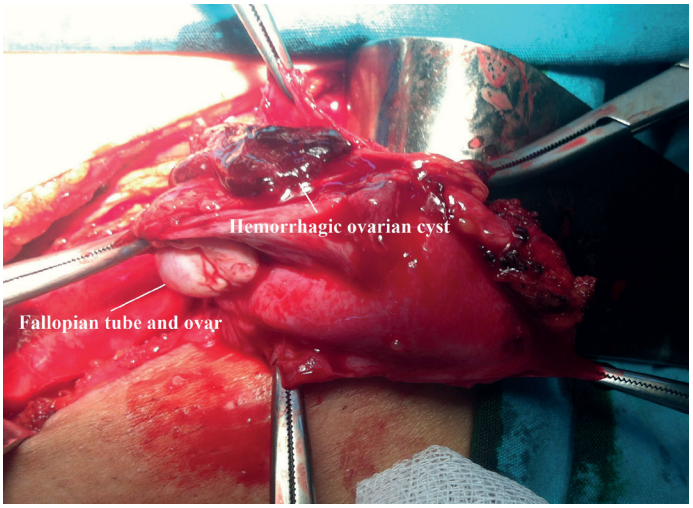

Figure 1. Hemorrhagic ovarian cyst rupture imaging in hernia sac

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The patient was taken to emergency surgery with the diagnosis of incarcerated inguinal hernia. In surgery, incarcerated hernia sac was found. The hernia sac was opened. Meanwhile, hemorrhagic ovarian cyst and associated hemorrhagic fluid were detected inside the sac. (Figure 1). Ipsilateral Fallopian tube was also among the contents of the sac (Figure 2). After ovarian cyst excision was made, ovary with normal blood supply was sent to the abdomen. Then hernia repair was done. There was no patch for infection development due to hemorrhagic materials and incarceration. The patient who had normal recovery in the postoperative period was discharged on the 2nd day. Histopathological diagnosis was reported in accordance with hemorrhage ovarian cyst.

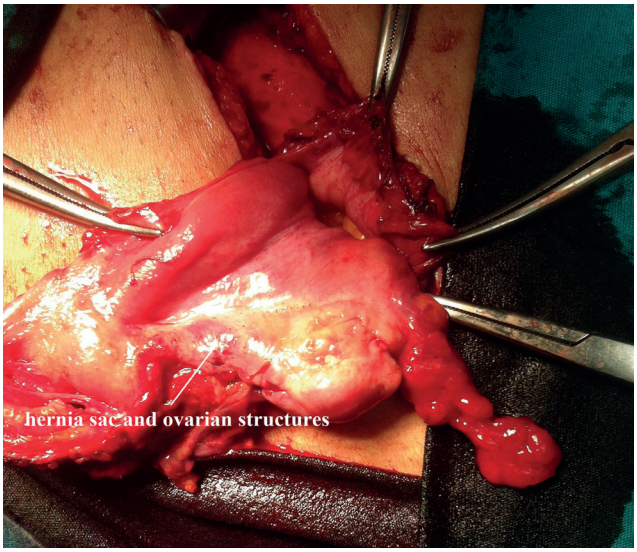

Figure 2. Fallopian tube and ovarian view in hernia sac

DISCUSSION

In this case report, hemorrhagic ovarian cyst rupture in the incarcerated hernia sac, which is seen rarely, is presented.

It is reported in the literature that ovarian hernias are very rare in premenopausal women. In contrast, most cases of gonadal hernia have been reported in the pediatric age group in relation to other genital system anomalies (5). Okada et al. (6) proposed several hypotheses regarding the mechanism by which such a hernia can occur. The most important of these hypotheses is that the weakness of broad or ovarian susceptible elevator ligaments can contribute to hernia. This can occur as a result of carrying heavy things or due to factors that cause high intra-abdominal pressure. Although very rare, there are case reports of different unusual contents found in inguinal hernia sacs, including parts of the genitourinary system. McMillan (7) reported a primitive uterus case in a 30-year-old woman who presented as an eight-year-old right groin mass. Our case was a 38-year-old female patient.

Despite intense efforts to diagnose the content of inguinal hernias prior to surgery, the diagnosis is made intraoperatively in most patients, as in this case. Yao et al. (8) suggested that the morphological features of the ovary in the hernia sac can be evaluated in premenopausal women by ultrasonographic examinations that provide information about ovarian function that cannot be obtained in young women. In our case, only the presence of an incarcerated hernia was mentioned in the preoperative ultrasonography. However, detailed information about hernia content was not obtained. In accordance with the literature, the diagnosis was made when the hernia sac was opened during surgery.

Treatment of hernias is surgery. While surgery can be planned electively in incarcerated or non-strangulated hernias, urgent surgery can be required, especially in strangulated hernias. If there is an ovarian structure in the hernia sac, even if they are asymptomatic, it is imperative that they have surgery at an early stage, since gangrene can easily develop due to strangulation (8). Especially in these patients, erroneous results are often obtained in ultrasonographic evaluation. In addition, in cases where the hemorrhagic cyst is ruptured, as in our patient, ultrasonographic images may mimic strangulation and mislead the surgeon. Organ-preserving surgery is always a better option, unless there is gangrene in the ovarian structure in the hernia sac. In addition, anatomical hernia repair should be preferred instead of using patches to prevent infection in such cases (9).

CONCLUSION

In conclusion, ovarian structure should be considered in the differential diagnosis of incarcerated groin hernias especially in young female patients and treatment plan should be prepared accordingly. Ultrasonographic findings occasionally mislead surgeons, especially in cases of hemorrhagic ovarian cysts. These patients should be operated as soon as possible to prevent strangulation and gangrene-related ovarian loss.

Conflict of interest: The authors declare that they have no competing interest.

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REFERENCES

1. Gupta S, Sharma R, Kaushik R. Left-sided Amyand's hernia. Singapore Med J 2005;46:424-5.
2. Malik KA, Al Shehhi RM, Al Qadhi H, et al. Ovarian Hernia: A rarity. Sultan Qaboos Univ Med J 2012;12:225-7.
3. Basrur GB. Bilateral inguinal hernias containing ovaries. Clin Pract 2015;5:708.
4. Jategaonkar PA, Yadav SP. Ruptured hemorrhagic ovarian cyst presenting as an incarcerated inguinal hernia in an adult female: a rare clinical scenario of a common surgical emergency. Case Rep Emerg Med 2013; 013:925694.
5. Golash V, Cummins RS. Ovulating ovary in an inguinal hernia. Surgeon 2005;3:48.
6. Okad T, Sasaki S, Honda S, et al. Irreducible indirect inguinal hernia containing uterus, ovaries, and fallopian tubes. Hernia 2011;1:1-3.
7. McMillan WM. Unusual viscera in indirect inguinal hernia. Ann Surg 1942;116:266-70.

8. Yao L, MouY, Wang HX. Sonographic diagnosis of an ovary-containing inguinal hernia with the formation of a corpus luteum in an adult female. Ultrasound Obstet Gynecol 2009;34:359-60.

9. Machado NO, Machado LS, Al Ghafri W. "Laparoscopic excision of a large ovarian cyst herniating into the inguinal canal: a rare presentation". Surg Laparosc Endosc Percutan Tech 2011;21:215-8.