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Case Report; Laparoscopy in the Management of Internal Herniation of Adnexa

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ABSTRACT

Broad ligament herniation is defined as protrusion of viscera through the pelvic peritoneum. It accounts 5% of internal hernias. We report, a 17 year-old woman presenting with a 5cm adnexal anechoic cyst and episodic pelvic pain who has no remarkable medical history. After 8 hours of follow-up, clinical picture persisted and evaluation with laparoscopy. It was noted that right adnexa with 5cm cyst was herniated through broad ligament intraoperatively. Ovarian cyst was excised and hernia was repaired laparoscopically. Clinical findings were resolved after surgery and patient discharged the day after surgery. In conclusion, adnexal hernia through broad ligament should be thought in differential diagnosis of female acute pelvic pain. Laparoscopy is an effective procedure for the diagnosis and treatment of adnexal hernia.

Keywords: ovarian hernia, broad ligament hernia, adnexial hernia, female acute abdominal pain, laparoscopy

ADNEKSIYAL HERNI YÖNETIMINDE LAPAROSKOPI; VAKA SUNUMU

ÖZET

Broad ligaman hernisi iç organların pelvik peritondan fıtıklaşmasıdır. İnternal fıtıkların %5'ini oluşturmaktadır. Bu olgu sunumunda, epizodik karin ağrısı şikâyetiyle başvuran, daha önce medikal öyküsü bulunmayan ve değerlendirmesinde 5 cm'lik adneksiyal anekoik kist şaptanmış olan hastayı sunmaktayız. 8 saatlik takip sonrasında klinik şikâyetlerin gerilememesi üzerine hastanın laparoskopi ile değerlendirilmesine karar verildi. Ameliyat bulgusu olarak sağ adneks ve 5 cm'lik kistin broad ligamandan herniye oldugu saptandı. Laparoskopik olarak over kisti eksize edilip, fıtıklaşma onarıldı. Klinik bulgular ameliyat sonrasi geriledi ve hasta bir gün sonra taburcu edildi. Sonuç olarak, kadınlarda akut batin tablosunda adnekslerin broad ligamandan fıtıklaşması akılda bulunması gereken ayırıcı tanılardan biridir. Adneksiyal herninin tanı ve tedavisinde laparoskopi etkin bir prosedürdür.

Anahtar sözcükler: Over hernisi, broad ligaman hernisi, adneksiyal herni, kadın akut batını, laparoskopi

The herniation of internal organs through defect of the broad ligament is an uncommon clinical diagnosis in women with chronic pelvic pain, even in women with acute onset of abdominal pain (1, 2). It accounts for 5% of internal hernias (3). The herniation of small intestine, colon, and ovary into the broad ligament defect has been described in the literature (2). Laparotomy was primary diagnostic and therapeutic option in its management in the past. Recently, minimally invasive approaches have been prominent in the diagnosis and treatment of broad ligament defect. We described laparoscopic management of a case diagnosed with internal herniation of the adnexa into the broad ligament defect, who had presented with abdominal pain.

A 17-year-old girl with abdominal pain was admitted to our emergency unit. The pain was located in the right lower quadrant, and occurring episodically. It was not intensifying with bowel movements. On physical examination, she had moderate right abdominal tenderness with mild guarding, and no rebound, rigidity or costovertebral angle tenderness. Vaginal examination and transvaginal ultrasonography (USG) could not be used for diagnostic work-up because she has never had sexual intercourse. White blood cell count was 10.700/µL. Her medical and surgical history were unremarkable. She has never had any problem related to menstruation. Transabdominal USG showed an anechoic cyst located at the right ovary in size of 37 x 55 mm, which was surrounded with minimal free fluid content. The other ovary, tube, and uterus were normally viewed with USG. The presence of the ovarian cyst was confirmed by an abdominopelvic computed tomography (CT) (Figure 1).

Conservative management was considered because the clinical and radiological findings did not provide enough evidence for an emergent surgical condition. The patient's clinical findings did not resolve with 8-hour conservative management, and a diagnostic laparoscopy was planned for differential diagnosis. Laparoscopy revealed a 5 cm of hemorrhagic ovarian cyst herniating through a broad ligament defect in posterior leaf, together with right ovary and one third of right tube (Figure 2 A, B). Broad ligament defect, 4-5 cm in diameter was viewed intraoperatively (Figure 3). The left ovary, tube, uterus, and other abdominal organs appeared normal on laparoscopic examination. Following cystectomy, herniorraphy was performed with absorbable polyflament material via intracorpereal method (Figure 4). The pain resolved postoperatively, and the patient was discharged home following day after the surgery. The patient was completely pain-free in the second week after the surgery. Histopathology review reported it as a corpus luteum cyst.

Figure 1. Abdominopelvic Computed Tomography of ovarian cyst

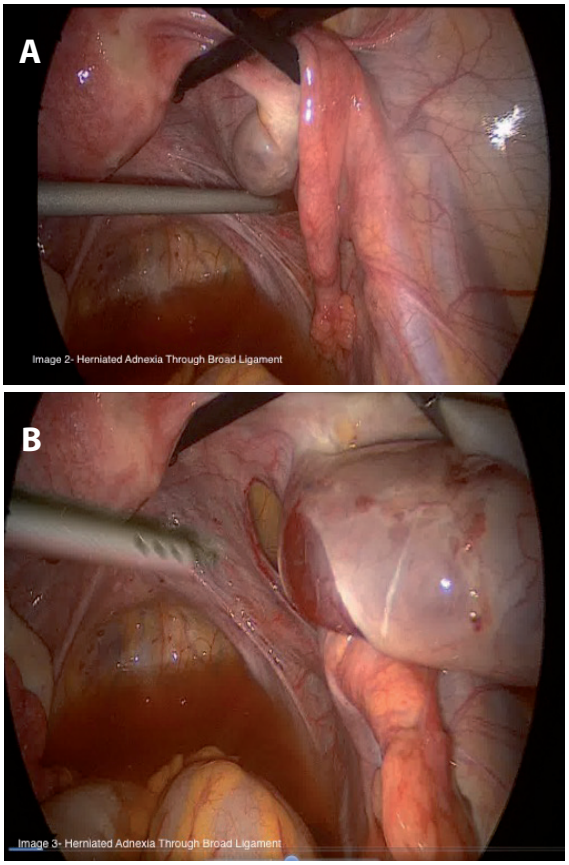

Figure 2. A,B. Herniated adenexia through broad ligament

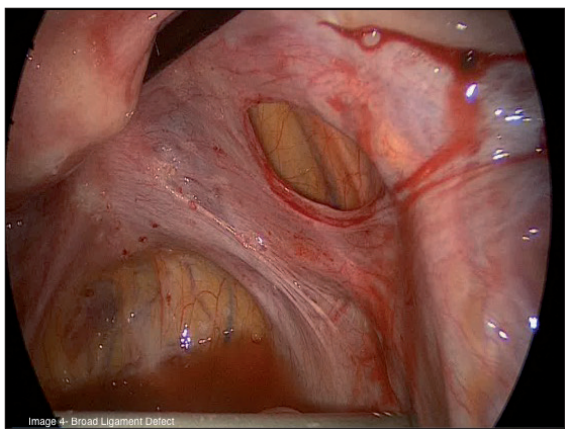

Figure 3. Broad ligament defect

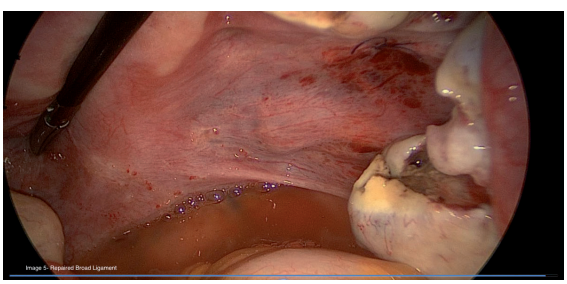

Figure 4. Repaired broad ligament

Discussion

Broad ligament defects result from congenital or acquired causes (4). While congenital etiologies are considered in the absence of an underlying cause, acquired etiologies are a result of previously undergoing surgery, trauma, pregnancy, endometriosis, or inflammatory disease (5, 6). Even though organs herniating into broad ligament defects are frequently small intestine and colon, ovary has been also described as an extremely rare reason among the herniating organs into broad ligament defect. We identified few cases with internal herniation of the adnexa through the broad ligament defect, who were treated with a laparoscopic approach, in recent literature. Hassadia and et al described a 41-year-old woman complaining of a 6-month history of pelvic pain and heavy periods, who was diagnosed with bilateral herniation of the adnexa into the broad ligament defect (7). They performed a laparoscopy with salpingo-oophorectomy of right adnexa and ovarian cystectomy for left ovarian cysyt in the management of the patient. Histologic examination revealed endometriotic cyst in the right ovary and hemorrhagic corpus luteum in the left ovary in their case. Demir and colleagues evaluated a 42 year-old multiparous woman with history of previous appendectomy and endometriosis diagnosed at laparoscopy before. They treated the patient with laparoscopy approach, which revealed a broad ligament peritoneal defect measuring 5 cm in diameter and a hemorrhagic right ovarian about 3 cm in diameter (2). Described cases had a diagnosis of endometriosis, which are supportive clues for acquired broad ligament defect. These cases were also much older than our case. Our case appeared to have congenital broad ligament defect because she had no prior medical or surgical history, and operative findings did not show any acquired abnormality except ovarian cyst. However, definitive etiologic factor that caused broad ligament rupture in our case could not be revealed because whether or not an ovarian cyst may lead to broad ligament defect is unknown.

The most frequently herniated organs are small intestine and colon in the presence of the broad ligament defect, which is a rare cause of mechanical occlusion of the small intestine. CT has preoperative diagnostic value by showing the exact location of the obstruction when the herniation of small intestinal through broad ligament defect leads to intestinal obstruction (8). CT did not show any clue that could provide the diagnosis of broad ligament defect in our case. We consider that CT may not provide accurate diagnosis in absence of bowel obstruction. Our case had no bowel obstruction, and laparoscopy could correctly identify broad ligament hernia.

In conclusion, the differential diagnosis of women with acute or chronic pelvic pain is still a challenge because of similarities of symptoms and signs. The herniation of adnexa through broad ligament defect should be kept in mind regardless of patient's past medical history, age, and history of undergoing surgery even though it is known as an extremely rare cause of pelvic pain. CT has a diagnostic role in the presence of bowel obstruction caused by broad ligament defect; howver, determining ovarian herniation into a broad ligament defect seems to be possible intraoperative only. Laparoscopic procedure is sufficient or reliable tool for appropriate triage of the patients with acute or chronic pelvic pain when needed a differential diagnosis.

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