

Isolated Tubal Torsion Associated with Paraovarian Serous Cystadenoma: A Case Report

Paraovaryan Seroz Kistadenomu ile İlişkili İsole Tubal Torsiyon: Olgu Sunumu

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ABSTRACT

Torsion of adnexa is relatively common, but isolated fallopian tube torsion is rare. It is a difficult condition to evaluate clinically and surgery is often necessary to establish the diagnosis. A 18-year-old adolescent was presented with onset of left quadrant lower abdominal pain ten hours ago. Transabdominal sonography revealed a 6 cm cystic mass in the left adnexa. She was suspected for torsion of the cyst and surgical intervention was suggested. There was a paraovarian cyst adjacent to the tube. We performed cystectomy immediately. We didn't perform salpingectomy for tubal salvage. Tubal conservation should be favored when possible.

Keywords: Isolated tubal torsion; acute pelvic pain; treatment.

ÖZET

Adneksial torsion sık görünmekle beraber isole tubal torsion nadirdir. Klinik olarak değerlendirmek zordur ve sıklıkla cerrahi esansında tanı kesinleştirilir. 18 yaşında genç hasta 10 saat önce başlayan sol alt kadran ağrısı ile başvurdu. Abdominal ultrasonografi ile solda 6 cm kist tespit edildi. Kist torsiyonu olduğundan şüphelenilen hastaya cerrahi uygulandı. Tubaya bitişik paraovarial kist tespit edildi. Hemen kistektomi yapıldı. Tubayı korumak için salpenjektomi yapılmadı. Genç hastalarda mümkünse tuba korunmalıdır.

Anahtar Kelimeler: İzole tubal torsiyon; akut pelvik ağrı; tedavi.

INTRODUCTION

Torsion of the fallopian tube not associated with an ovarian abnormality is termed isolated fallopian tubal torsion (IFTT). Isolated FTT is a rare entity. The incidence is estimated about one in 1,5 million women (1, 2). Isolated FTT is a rare and uncommon cause of lower abdominal pain and often acute, rarely chronic. Therefore, only small series and several case reports on this issue have been published in the literature.

Anatomically, fallopian tube can be divided into 2 parts. The proximal part which is close to the uterus is fixed and have little mobility. The distal part have a large mobility and closely related to ovary. fallopian tube and ovary act as a real functional and anatomical unit. So isolated torsion of one of them is rarely reported.

Adnexal torsion is considered a surgical emergency that can involve ovary and tubes but this clinic event is still poorly recognised, especially in isolated FTT (3). The lack of pathognomonic symptoms, pre-operative diagnosis is very difficult which can cause surgical intervention to be postponed. Definitive diagnosis is always made at surgical exploration performed for suspected adnexal torsion and salpingectomy is performed in the majority of cases (4).

CASE PRESENTATION

A 18-year-old adolescent, who denied any sexual experience, was presented with onset of left quadrant lower abdominal pain ten hours ago and was brought to our emergency room. The abdominal pain was sharp, colic, non-radiating and mainly in the left lower quadrant of abdomen, there was no obvious peritoneal signs. She denied having any gynecologic disease previously. Nonsteroidal antiinflammatory drug were prescribed. The

tenderness was not relieved. Symptoms and patients pain worsened gradually. Subsequently, she consulted to our gynecologic clinic. Ultrasonographic evaluation was arranged. Transabdominal sonography revealed a 6 × 5 cm pure cystic mass in the left adnexa, which reminded as an ovarian cyst. She was suspected for torsion of the cyst and referred to radiologist for further doppler evaluation. Transabdominal doppler sonography was performed again and illustrated a cystic mass with no arterial or venous flow. Hence, surgical intervention was suggested. blood cell counts were also within normal limits. Under laparotomic intervention, the left fallopian tube torsion was seen with a scanty amount of bloody fluid in the cul-de-sac. The left fallopian tube was twisted with 4 turns (over five times) at the isthmus portion. There was a paraovarial cyst adjacent to the tube. The torsion obliterated the blood supply, leading to a gangrenous change. The fimbrial end was in a congestive state. Both ovaries were grossly normal. First we performed cystectomy immediately. Pathologic examination of the cyst revealed a serous cystadenoma. We didn't perform salpingectomy. Because the colour of tube returned to its normal former state. There was no complication during the postoperative period, and the patient was discharged on the second day after surgery.

DISCUSSION

Isolated tubal torsion (ITT), is a very rare pathology of acute lower abdominal pain. Case reports of sporadic cases are reported each year as fallopian tube torsion. Although often been observed in the reproductive period, very rarely seen in the postmenopausal and premenarchial period (5- 7). Estimated incidence is one in 1.5 million women.

Tubal torsion, although the etiology is not fully understood, many risk factors have been reported (8, 9). Shukla collected the etiologic risk factors reported in the literature and has proposed a classification (10). These abnormalities are; anatomical, physiological, haemodynamic abnormalities, sellheim theory(sudden body position changes), trauma, previous surgery or disease, gravid uterus. Numerous publications are reported that tubal torsion more frequently seen on the right side (8). Presence of the sigmoid colon on the left or venous return to be slow on the right side may lead to high incidence of tubal torsion at right side. Another reason is application of

the early operations by doctors with suspected appendicitis. Thus becomes easier to diagnose. Some left fallopian tube torsion may be solved spontaneously.

Common presenting symptoms of isolated FTT is sudden onset of lower abdominal pain that may radiate to the flank or thigh and the presence of an adnexal cystic mass. Sudden onset of cramping like moderate menstrual pain or intermittent pain is possible. As in our case, in advanced condition peritoneal irritation with muscular defense, rebound tenderness may be present. Nausea and vomiting were quite common, occurring in 41 %, bladder complaints in 24 %, and cervical motion tenderness during bimanual pelvic examination in 18 % (8). Vaginal discharge and bleeding have been reported in some cases (9). Temperature, white blood cell count, and erythrocyte sedimentation rate were unremarkable in the majority of cases, may be normal or slightly elevated (10). Our patient had normal counts, compatible with data of previous studies.

Clinical differentiation between adnexal and isolated tube torsion is theoretically impossible. When evaluating a patient with acute onset of lower abdominal or pelvic pain, isolated fallopian tube torsion may not be high on the list of differential diagnoses Due to clinical, laboratory and physical examination findings are non-diagnostic, symptoms and physical findings may be associated with other common diseases. ovarian torsion, ruptured follicular cyst, ectopic pregnancy, pelvic inflammatory disease, acute appendicitis, intestinal obstruction or perforation, urinary tract disease, urolithiasis should be considered in the differential diagnosis (8). IFTT should be included in the differential, especially when risk factors such as previous tubal ligation or ovarian cyst surgery are present in these patients. In one study total 17 case, 5 women (29,4 %) had a prior tubal ligation, and previous ovarian cyst surgery (9). Sonography is usually considered the first choice imaging tool for pelvic pain of suspected adnexal mass and adnexal torsion. It is noninvasive and avoids radiation exposure. There are several radiologic findings in patients with torsion are reported in cases. Twisted configuration, thickened, oedematous component of the fallopian tube may be evident in torsion (11), appearance of elongated tubular cystic mass with echogenic wall, separate from the ovaries,

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near the uterine cornu, incomplete linear septa within the lumen of the mass (12), the mass can also be solid or complex, sonographic whirlpool sign can be seen on rocking movement of the endovaginal probe over the tubal mass (13, 14), finding of high impedance or absence of flow in a tubular structure especially in patients with a history of tubal ligation but the presence of normal flow does not exclude the diagnosis given the dual vascular supply to both the tube and ovary (8, 15). The finding of a normal ovarian flow may also be indicative of diagnosis.

Early diagnosis and treatment is recommended for suspected FTT. Delayed diagnosis of the tubal torsion may lead to irreversible necrotic change, and even damage to the ipsilateral ovary. The complicated superinfection and peritonitis can also occur after gangrenous change in the tube (16). Surgical management depends on the per-operative aspect of the fallopian tube. Conservative treatment is possible when definitive diagnosis can be reached before tissue necrosis occurs. This is important in younger women, desiring to maintain their further fertility. The standard treatment for torsion of the tubes are adnexal detorsion in the reproductive age group and complete resection when the tissue is gangrenous, there is tubal or ovarian neoplasm or the woman has completed her family (8). The surgical options of IFTT include detorsion, salpingectomy and salpingotomy, depends upon the condition of the tube at the time of surgery. If the tube is gangrenous or damaged by the hydrosalpinx and the tubal function has been compromised, salpingectomy should be performed. Some authors suggest that tissue with signs of apparent ischemic damage should be removed because untwisting the tube may cause thrombosis (17, 18). In contrast, Wang et al. reported adnexal detorsion has an extremely low risk of thromboembolic events (6). A fixation of the tube may be proposed for preventing the recurrence risk and preserving fertility (19).

CONCLUSION

Isolated fallopian tubal torsion, though extremely rare entity, should be included in the differential diagnosis of acute pelvic pain in young women especially when tubal abnormality has existed. Acute pelvic pain of the women at any age should be evaluated very carefully because they present gynecologic risks which may result in loss of fertility. The lack of data and non-specificity of imaging findings lead to a retrospective diagnosis. Surgery has

a diagnostic and therapeutic role. Prompt surgical intervention especially laparoscopy can play an important role in making an accurate diagnosis and will decrease infertility complications and unnecessary delays in treatment to preserve fertility in young females before irreversible damage. Tubal preservation should be the rule especially in nulligravids. Being aware of this complication can help clinicians to suspect it pre-operatively and to make precocious diagnosis which can allow more conservative treatment. This report presented a rare case of a virgin girl with isolated torsion of the fallopian tube; prompt intervention is recommended to preserve the tube.

REFERENCES

1. Orazi C, Inserra A, Lucchetti MC, Schingo PM. Isolated tubal torsion: a rare cause of pelvic pain at menarche. Sonographic and MR findings. *Pediatr Radiol* 2006;36(12):1316-8.
2. Gross M, Blumstein SL, Chow L. Isolated fallopian tube torsion: a rare twist on a common theme. *AJR Am J Roentgenol* 2005;185(6):1590-2.
3. Barisic D, Bagovic D. Bilateral tubal torsion treated by laparoscopy: a case report. *European Journal of Obstetrics & Gynecology and Reproductive Biology* 1999;86(1):99-100.
4. Boukaidi SA, Delotte J, Steyaert H, et al. Thirteen cases of isolated tubal torsions associated with hydrosalpinx in children and adolescents, proposal for conservative management: retrospective review and literature survey. *Journal of Pediatric Surgery* 2011;46(7):1425-31.
5. Ho P, Liang S, Su H, et al. Isolated torsion of the fallopian tube: a rare diagnosis in an adolescent without sexual experience. *Taiwan J Obstet Gynecol* 2008;47(2):235-7.
6. Wang PH, Yuan CC, Chao HT, et al. Isolated tubal torsion managed laparoscopically. *J Am Assoc Gynecol Laparosc* 2000;7(3):423-7.
7. Ullal A, Kollipara PJ. Torsion of a hydrosalpinx in an 18-year-old virgin. *J Obstet Gynaecol* 1999;193(3):331.
8. Milki A, Jacobson DH. Isolated torsion of the fallopian tube. A case report. *J Reprod Med* 1998;43(9):836-8.

9. Bernardus RE, Slikke JW, Roex AJ, et al. Torsion of the fallopian tube: some considerations on its etiology. *Obstet Gynecol* 1984;64(5):675–8.
10. Shukla R. Isolated torsion of the hydrosalpinx: a rare presentation. *Br J Radiol* 2004;77(921):784-6.
11. Benjaminov O, Atri M. Sonography of the abnormal fallopian tube. *Am J Roentgenol* 2004;183(3):737–42.
12. Timor-Tritsch IE, Lerner JP, Monteagudo A, et al. Transvaginal sonographic markers of tubal inflammatory disease. *Ultrasound Obstet Gynecol* 1998;12(1):56–66.
13. Baumgartel PB, Fleischer AC, Cullinan JA, et al. Color doppler sonography of tubal torsion. *Ultrasound Obstet Gynecol* 1996;7(5):367–70.
14. Vijayaraghavan SB, Senthil S. Isolated torsion of the fallopian tube: the sonographic whirlpool sign. *J Ultrasound Med* 2009;28(5):657–62.
15. Patel MD, Acord DL, Young SW. Likelihood ratio of sonographic findings in discriminating hydrosalpinx from other adnexal masses. *Am J Roentgenol* 2006;186(4):1033–8.
16. Ferrera PC, Kass LE, Verdile VP. Torsion of the fallopian tube. *Am J Emerg Med* 1995;13(3):312–4.
17. Logsdon VK. Common problems in pediatric and adolescent gynecologic surgery. *Curr Opin Obstet Gynecol* 2001;13(5):453–8.
18. Chen M, Chen CD, Yang YS. Torsion of the previously normal uterine adnexa. Evaluation of the correlation between the pathological changes and the clinical characteristics. *Acta Obstet Gynecol Scand* 2001;80(1):58–61.
19. Ozgum MT, Batukan C. Isolated torsion of Fallopian tube in a postmenopausal patient: a case report. *Maluritas* 2007;57(3):325-7.