

# Tubal Leiomyoma with Torsion: A Rare Cause of Acute Abdomen

TORSİYONE OLMUŞ TUBAL LEIOMYOM: ENDER BİR AKUT KARIN NEDENİ

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## SUMMARY

*A case with torsion of a left tubal leiomyoma which presented with acute abdomen is reported. The left ovary and torsioned left fallopian tube were found in the right iliac fossa at laparotomy, and haemorrhagic infarction of the leiomyoma was present requiring surgical excision of the tumor together with left fallopian tube. Left ovary was intact and therefore preserved.*

Key Words: Tube, Adnexa, Torsion, Tubal leiomyoma

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## ÖZET

*Sol tubal leiomyom torsiyonu nedeniyle akut karın tablosu ile başvuran bir olgu sunulmuştur. Laparotomide sol över ve leiomyomla birlikte torsiyone olmuş sol fallopiyan tüp sağ iliak fossada bulunmuş ve leiomyomun hemorajik infarktu nedeniyle sol fallopiyan tüp tümörle birlikte eksize edilmiştir. Ender görülen akut karın nedenlerinden biri olması dolayısıyla bu torsiyone tubal leiomyom olgusu bildirilmiş ve literatür incelemesi yapılmıştır.*

Anahtar Kelimeler: Tüp, Adneksler, Torsiyon, Tübal leiomyom

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Paraovarian or paratubal cysts, solid benign tumors such as adenoma, fibroma, thecoma, struma ovarii and malignant tumors of the fallopian tube or ovary have been reported to cause adnexial torsion (1), however, to our knowledge, being a rare tumor of the fallopian tube, leiomyoma with tubal torsion presenting as acute abdomen has not been reported before. Although adnexal leiomyomas are extremely rare, they may cause tubal torsion, and should be considered in differential diagnosis of acute abdomen - especially acute appendicitis - in women and all the necessary diagnostic procedures should be used and prompt surgery to salvage the tube and ovary has to be done.

When torsion of an adnexal mass or adnexa itself occurs on the right side, which is more common (2), it is nearly impossible clinically to differentiate from acute appendicitis or tuboovarian abscess. If such a condition occurs on the left side, it may mimic pelvic inflammatory disease, colonic or ureteral disease, which may cause delay in accurate diagnosis and treatment.

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## CASE REPORT

A 24 year - old single female presented to Hacettepe University Hospital Emergency Room on 5.2.1991 with complaint of bilateral lower quadrant pain, which began on the left lower quadrant three days ago. Her pain increased in intensity during the two days, and became severe the night before admission, and spread over both lower quadrants and suprapubic region. During this period she had dysuria and used antispasmodic tablets to which the pain hadn't responded. She had loss of appetite, mild nausea, but no vomiting, however, she could pass gas and feces. There was no recent history consistent with ectopic pregnancy.

On physical examination, there was obvious tenderness on both lower quadrants, more prominent on the right side. Rigidity and rebound tenderness were also present. On rectal examination right iliac fossa was extremely tender and a mass was palpable. Gynecologic examination was unremarkable.

The workup included upright plain X-ray of the abdomen that revealed a small air-fluid level at right lower quadrant. Hemoglobine, hematocrit and white blood cell counts were in the normal ranges with a normal differential. Electrolytes and other laboratory determinations were all normal. Urinalysis did not contribute to the diagnosis.

Abdominopelvic ultrasonography (US) revealed a 87 mm mass of mixed echo pattern with hyperechogenicity. The mass was shown to displace the uterus to the left side. Urinary bladder and left adnexal region were thought to be normal by US. With these findings, the preliminary diagnosis was right tuboovarian abscess or perforated appendicitis.

The patient was operated on within two hours of admission with possible preoperative diagnosis of perforated and walled-off appendicitis or tuboovarian abscess. On exploration appendix, right ovary, right tube and uterus were normal but there was a 8 x 12 x 15 cm purplish - brown coloured mass in the right iliac fossa, taking its origin from the left tube that caused clockwise rotation of the tube (Fig. 1). It was impossible to define the border of the tube and the tumor. Strangulation and necrosis had occurred since the tube along with the tumor was torsed around its long axis for several times. The mass had solid and cystic components and had smooth margins suggesting a benign condition. It was excised together with the left tube preserving the ovary after excision, on gross examination of the specimen in the operating room, it was seen that the mass was torsed for more than 1080°. The patients had an uneventful postoperative course.

On gross pathological examination, the specimen was a gray-purplish tissue with a fibrillary surface including a 6x0.8 cm piece of haemorrhagic uterine tube at one side. The histologic section revealed that the mass was a leiomyoma with haemorrhagic infarction due to torsion (Fig. 2).

## DISCUSSION

This patient represents an uncommon cause, namely adnexal mass torsion, due to an extremely rare cause, tubal leiomyoma, presenting as acute abdomen.

Acute appendicitis is the most common acute surgical condition of the abdomen. The differential diagnosis of acute appendicitis necessitates the compound knowledge of the causes resulting in acute abdominal conditions. Although differential diagnosis depends upon the anatomic location of the inflamed appendix, the stage of the process and the age and sex of the patient, in general, acute appendicitis is mostly confused with - In descending order of frequency - acute mesenteric lymphadenitis, no organic pathologic condition, acute pelvic inflammatory disease, twisted ovarian cyst or ruptured Graaffian follicle, and acute gastroenteritis. When considered for adult females, probably gynecologic conditions rank first before mesenteric lymphadenitis. The rate of erroneous diagnosis of acute appendicitis is highest in young adult females (3).

The incidence of adnexal tumors increase with age and a potential complication of this condition is adnexal torsion. Also cases of torsion of normal uterine adnexa before menarche were reported in the literature.

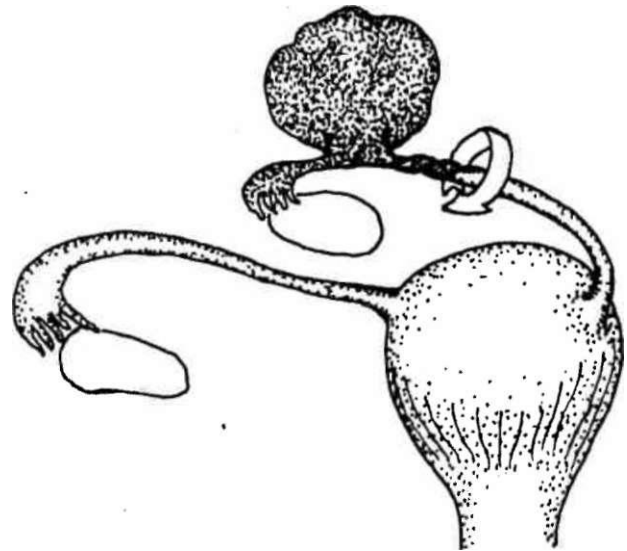


Figure 1. The schematic representation of the clockwise rotation of the left tube with leiomyoma found in the right iliac fossa.



Figure 2. The leiomyoma originating from the left fallopian tube with no mitosis is seen (x 115).

rate, however, it is a rare condition (2,4,5). Torsion of uterine adnexa may even occur during pregnancy and can be treated successfully by detorsion of twisted ischemic - haemorrhagic adnexa leading to normal deliveries (6).

Adnexal torsion is usually secondary to a tubal or ovarian neoplasm. Among causes of adnexal torsion, Hibbard reported a 48% incidence of neoplasms, followed by 31% cysts. In the series of Hibbard with 128 cases, there were 62 benign tumors which were dermoid cysts, serous adenoma, mucinous adenoma, fibroma/thecoma, struma ovarii, and hemangioma. There were only two serous carcinomas as malignant tumors among 128 patients (1). The other reports support this observation of the rarity of malignant tumors as a cause of adnexal torsion with the exception of the report from Mayo Clinic reporting an incidence of 15% for ovarian malignancy among causes of this condition

(7). Although over age of 50, 50% of diagnosed adnexal tumors are malignant, In torsioned adnexal tumors of this population, the risk of malignancy is very low, since the malignant tumors tend to attach surrounding tissues firmly (8).

Adnexal torsion accounts for 3% of gynecologic surgical emergencies (1). According to Hibbard the preoperative diagnosis could be made in 37.8% of the patients. For the rest, adnexal mass, appendicitis, pelvic mass, myoma, ectopic pregnancy, abscess, and ruptured viscus were the preoperative diagnosis. Hibbard also reported that in another 97 patients, the preoperative diagnosis was incorrectly adnexal torsion (1).

In diagnosis of adnexal torsion, US still remains to be the primary imaging modality (9), though many new diagnostic techniques are developed. However, the sonographic features are at times nonspecific (10) and may consist only of a solid pelvic mass with or without free pelvic fluid (5). In some cases where conventional techniques are not diagnostic, contrast enhanced computed tomography examination of pelvis may provide clues for correct diagnosis (5). Magnetic resonance imaging (MRI) of the female pelvis in multiple imaging planes may also be more yielding than US in the evaluation of pelvic masses (9). However, It is ill advised to waste too much time with diagnostic modalities resulting in irreversible damage of the adnexa.

Preservation of tubes and ovary is an important objective in patients with adnexal torsion as most patients are relatively young as our case. With prompt diagnosis and early surgery, it can be possible to salvage the adnexa by detorsion, unfortunately this is not the case in the majority of the reports in the literature (1). Surgeons hesitate to do detorsion of the involved adnexa considering the potential risk of releasing an embolus from a thrombotic vein.

It is difficult to establish an accurate diagnosis of adnexal mass torsion since it may mimic a wide variety of clinical entities among which acute appendicitis is the leading erroneous diagnosis. Therefore, in females

presenting with lower abdominal pain, whether premenarchial, reproductive, or postmenopausal, every effort should be tried in correct sequence and quickly to differentiate intraperitoneal and gynecologic problems.

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