

# A Rare Case: Isolated Tubal Torsion In Pregnancy

## Nadir Bir Vaka: Gebelikte İzole Tubal Torsiyon

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### ABSTRACT

Case presentation of an isolated tubal torsion in the 1. trimester of pregnancy. A 33-year-old, G3P1A1 women at 11 weeks of gestation referred to our hospital because of acute right abdominal pain. She had rebound hassasiyeti vardı. Doppler ultrasonographic examination revealed normal blood circulation in both ovaries. but an anechoic mass unrelated to the ovaries and uterus and torsion should be excluded by clinical evaluation. MRI of the lower abdomen was requested. We performed percutaneous ultrasound-guided needle aspiration from the hypoechoic cystic mass. There was no reduction in pain, at the 48th hour of his application. Exploratory laparotomy was performed. Right tubal torsion was observed and right salpingectomy performed due to the eudematöz, necrotic image of the right tuba. Tubal torsion can be misdiagnosed and diagnosis requires clinical experience. It should be considered for acute abdomen patients whose doppler usg of the ovaries is normal.

**Keywords:** Tubal torsion; tubal torsion in pregnancy; pregnancy; 1<sup>th</sup> trimester pregnancy

### ÖZET

Gebeliğin 1.trimesterinde izole tubal torsiyon vaka sunumu. 33 yaşında, 11 haftalık G3P1A1 kadın hasta, akut sağ karın ağrısı nedeniyle hastanemize başvurdu. Rebound hassasiyeti vardı. Doppler ultrasonografik incelemede her iki overde normal kan dolaşımı görüldü, ancak overler ve uterus ile ilişkili olmayan bir kitle saptandı ve torsiyon klinik değerlendirme ile ekarte edilmelidir şeklinde raporlandı. Alt karın MR istendi. Hipoeoik kistik kitleden perkütan ultrason eşliğinde iğne aspirasyonu gerçekleştirildi. Başvurusunun 48. saatinde ağrılarında azalma olmadı. Eksp-loratuvar laparotomi uygulandı. Sağ tubada torsiyon hali izlendi, tubanın ödematoz ve nekrotik görüntüsü nedeniyle sağ salpenjektomi uygulandı. Tubal torsiyon yanlış teşhis edilebilir ve teşhis klinik deneyim gerektirir. Overlerin doppler ultrasonografisi normal olan akut karın hastalarında düşünülmelidir.

**Anahtar Kelimeler:** Tüp torsiyonu; gebelikte tubal torsiyon; gebelik; 1. trimester gebelik

Isolated fallopian tube [ITT] torsion without involvement of the ovary is an extremely rare condition, observed in 1 in 1.5 million women of reproductive age. Most of the cases occur in non-pregnant women but approximately 12% of isolated tubal torsion were diagnosed during pregnancy.<sup>1</sup> Even it can be seen in premenarchal girls and post-menopausal women can also be affected.<sup>2-4</sup> ITT was first described in 1890 by Bland-Sutton. The predisposing factors are either extrinsic abnormalities, including paratubal mass, peritubal adhesions, and uterine enlargement during pregnancy compressing

the fallopian tubes, or intrinsic tubal abnormalities, including hydrosalpinx, pyosalpinx, adhesions, previous pelvic surgery, ovarian cysts, neoplasms, tubal ligation, or endometriosis.<sup>5,6</sup> We present a case of isolated fallopian tube torsion in first trimester pregnancy and try to depict a clinical picture of the condition in order to obtain clinical differentiation from other reasons of acute abdomen. It is a challenging preoperative differential diagnosis because of its non-specific clinical findings and is often diagnosed during surgery. Informed consent was obtained from the patient.

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## CASE

A 33-year-old, gravida 3, para 1, abortus 1 with a previous cesarean section patient at 11 weeks of gestation was referred to our hospital because of acute right abdominal pain that began 2 days prior to visit. However, she had no vomiting, diarrhea, constipation, or fever. In the right lower quadrant, direct tenderness without rebound tenderness was the only abnormal finding in her physical examination. She had no medical history. Tenderness was usually present but peritoneal irritation with guarding or rebound was exceptional. Her vital signs at the time of admission were normal and the laboratory tests showed the following results: hemoglobin 10.1g/dL range, [12-15.9 g/dL], white blood cells [WBC] 11.9/ $\mu$ L [range, 4,000-10,000/ $\mu$ L], and platelets 281,000/ $\mu$ L [range, 140,000-400,000/ $\mu$ L], with C-reactive protein level 4.9mg/L [range, 0-5mg/L]. Ultrasonography performed in our hospital revealed a single live fetus at 11 weeks of gestation with normal amniotic fluid and placenta as well as a 7cm sized hypoechoic cystic mass in the right lower quadrant. Doppler ultrasonographic examination revealed normal blood circulation in both ovaries. However, radiological report revealed an anechoic mass unrelated to the ovaries and uterus in the pelvis and torsion should be excluded by clinical evaluation. MRI of the lower abdomen was requested for differential diagnosis. But it didn't enlighten us enough either about the pathology. The pain of the patient did not go away with painkillers in her right lower abdomen, did not subside and tended toward exacerbation within 24 hours of admission, we performed percutaneous ultrasound-guided needle aspiration from the hypoechoic cystic mass. As there was no reduction in pain despite all these attempts, at the 48<sup>th</sup> hour of his application with a preliminary diagnosis of right adnexal torsion, appendicitis, or rupture of right ovarian cyst exploratory laparotomy was performed to prevent complications such as tissue necrosis caused by adnexal torsion or panperitonitis caused by appendicitis. Preop measured WBC value had increased to 12, C-reactive protein value increased to 62mg/L. During laparotomy exploration we see the uterus was 3 months old, the left fallopian tube both ovaries and the appear-



FIGURE 1: Tubal torsion intraoperative.

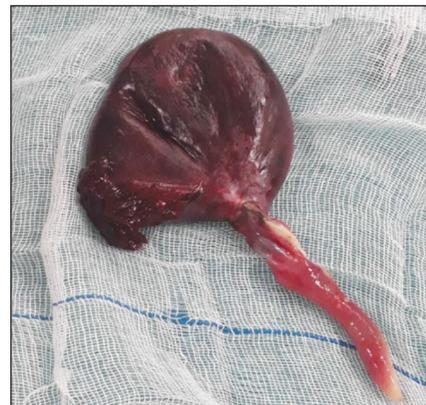


FIGURE 2: Salpingectomy material.

ance and size of the appendix were normal. Right tubal torsion was observed in the pelvis (Figure 1). The tube had rotated six times around its axis and right salpingectomy performed due to the edematous, necrotic image of the right tuba (Figure 2). The surgery was completed without any complication (Figure 3). The postoperative recovery of the patient and follow-up of her baby were uneventful. The patient was discharged on the 2<sup>nd</sup> post op day. Polyclinic control is recommended for pregnancy follow-up. A histological examination revealed that the wall of the fallopian tube was severely edematous and congested. A live 3200 gr APGAR 8/9 baby male is delivered by caserean section at 38 week 5 days pregnancy.

## DISCUSSION

Isolated tubal torsion is a difficult case to diagnose and requires clinical experience. We in our case could

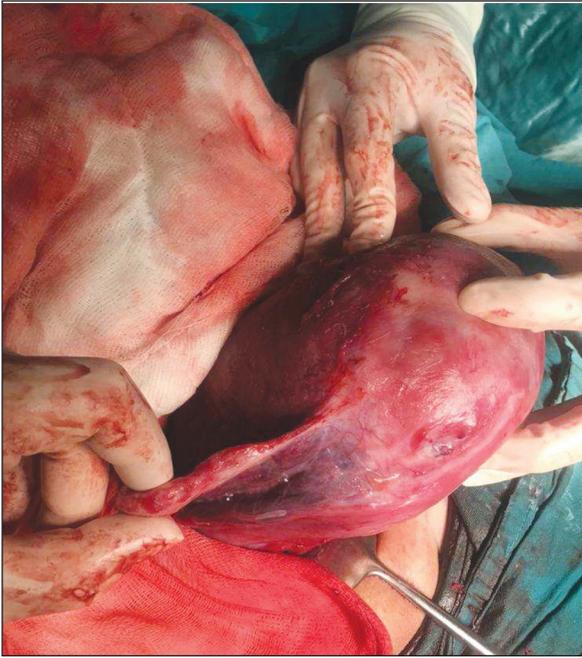


FIGURE 3: During cesarean section of the patient without right tuba.

not make the correct diagnosis preoperatively. We delayed surgical intervention in an attempt to find a source of pain. In cases of acute abdomen in pregnancy, with detailed doppler flow ultrasound evidence of normal ovaries and of a pelvic cyst, an isolated tubal-paratubal cyst torsion should be considered and surgical intervention should be done without waiting. Late diagnosis of tubal torsion will end complete blood stasis and ischemic necrosis. At this stage cellular damage is usually irreversible so that salpingectomy will be inevitable instead of tubal detorsion. Given the non-specific presentation of tubal torsion, it provides a rather difficult medico-legal challenge.

Torsion generally occurs in abnormal fallopian tubes; however it might also develop in normal ones. In this case, the only obvious etiological factor for the development of the twisted fallopian tube was assumed to be pregnancy which can play a role as a rotational force resulting from changes in the abdominal cavity and uterine size. Tubal torsion occurs more commonly on the right side than on the left as we see in our case.<sup>7,8</sup> Presumably, the possibility of developing torsion on the right side is higher because of the movement of the appendix and small bowel on the right side while the mesentery of the sigmoid colon is attached to the left side.

Most of the time patients describe an acute abdominal/pelvic pain, often localized on the same side of the torsion. Several non-specific symptoms can be associated: nausea, vomiting, pain on urination, uterine pain, digestive problems, spotting.<sup>9</sup> But we just see right lower abdominal pain in our case. Like other cases in the literature, we did not detect any laboratory finding in our patient except mild white blood cell and C-reactive protein elevation.

Although the laparoscopic approach appears more indicated and useful during the first and second trimester of pregnancy. We chose to perform laparotomy because of misdiagnose and to explore the batın. In view of technical difficulties of the laparoscopic access to the adnexa, laparotomy is generally preferred in advanced gestation too.<sup>10</sup> In addition, most surgeons consider laparotomy appropriate in the advanced third trimester of pregnancy in view of the possible option of delivering the foetus, particularly when the surgical indication is acute abdomen.

In conclusion; tubal torsion should be considered for acute abdomen patients whose doppler usg of the ovaries is normal. It has non specific clinical symptoms. It is an extremely rare case. It can be misdiagnosed easily and its diagnosis requires clinical experience.

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#### **Conflict of Interest**

*No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.*

#### **Authorship Contributions**

*All authors contributed equally while this study preparing.*

## REFERENCES

1. Gaied F, Emil S, Lo A, Baird R, Laberge JM. Laparoscopic treatment of isolated salpingeal torsion in children: case series and a 20-year review of the literature. *J Laparoendosc Adv Surg Tech A*. 2012;22(9):941-7. [[Crossref](#)] [[PubMed](#)]
2. van der Zanden M, Nap A, van Kints M. Isolated torsion of the fallopian tube: a case report and review of the literature. *Eur J Pediatr*. 2011;170(10):1329-32. [[Crossref](#)] [[PubMed](#)]
3. Krissi H, Shalev J, Bar-Hava I, Langer R, Herman A, Kaplan B. Fallopian tube torsion: laparoscopic evaluation and treatment of a rare gynecological entity. *J Am Board Fam Pract*. 2001;14(4):274-7.
4. Comerci G, Colombo FM, Stefanetti M, Grazia G. Isolated fallopian tube torsion: a rare but important event for women of reproductive age. *Fertil Steril*. 2008;90(4):1198.e23-5. [[Crossref](#)] [[PubMed](#)]
5. Provost MW. Torsion of the normal fallopian tube. *Obstet Gynecol*. 1972;39(1):80-2.
6. Milki A, Jacobson DH. Isolated torsion of the fallopian tube. A case report. *J Reprod Med*. 1998;43(9):836-8.
7. Sharp HT. The acute abdomen during pregnancy. *Clin Obstet Gynecol*. 2002;45(2):405-13. [[Crossref](#)] [[PubMed](#)]
8. Isager-Sally L, Weber T. Torsion of the fallopian tube during pregnancy. *Acta Obstet Gynecol Scand*. 1985;64(4):349-51. [[Crossref](#)] [[PubMed](#)]
9. Webster KW, Scott SM, Huguélet PS. Clinical Predictors of Isolated Tubal Torsion: A Case Series. *J Pediatr Adolesc Gynecol*. 2017;30(5):578-81. [[Crossref](#)] [[PubMed](#)]
10. Soriano D, Yefet Y, Seidman DS, Goldenberg M, Mashiach S, Oelsner G. Laparoscopy versus laparotomy in the management of adnexal masses during pregnancy. *Fertil Steril*. 1999;71(5):955-60. [[Crossref](#)] [[PubMed](#)]