**ISOLATED TORSION OF THE FALLOPIAN TUBE IN A 14-YEAR-OLD ADOLESCENT**

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**SUMMARY**

**Objective:** Torsion of adnexa is relatively common, but isolated torsion of the fallopian tube is rare. It should be considered in all adolescents who present with acute pelvic pain. Laparoscopy or laparotomy is often necessary to establish the diagnosis. This report focuses on a 14-year-old girl with isolated tubal torsion who presented with acute pelvic pain.

**Case Report:** A 14-year-old adolescent was admitted to our hospital because of acute right-sided abdominal pain without vomiting and diarrhea. Pelvic ultrasound showed an adnexal mass. Conservative treatment was given but did not improve her condition. Emergent laparoscopy was performed due to persistent symptoms, which later confirmed the diagnosis of isolated torsion of the fallopian tube. Pathology showed hemosalpinx with necrosis.

**Conclusion:** Isolated torsion of the fallopian tube is an uncommon event, especially in adolescents. It must be kept in mind whenever a young girl presents with low abdominal pain and pelvic mass on ultrasound. Prompt laparoscopic intervention may allow for early diagnosis, treatment and preservation of the tube if possible.

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**Key Words:** fallopian tube, hemosalpinx, laparoscopy, torsion

**Introduction**

Isolated torsion of the fallopian tube in adolescent females not yet sexually active is infrequent but could be a significant cause of acute lower abdominal pain. Although prompt diagnosis and timely surgical treatment are vital to salvage the oviduct, it is difficult to detect until the occurrence of tubal destruction.

**Case Report**

A 14-year-old virgin, previously healthy, with regular menstruation and menarche at 11 years old, presented to our emergency room due to sudden and severe right-sided lower abdominal pain with muscle guarding and tenderness. She did not complain of nausea or vomiting, and there was no fever. Ultrasound showed a right ovarian cyst measuring 4.1 × 4.2 cm in diameter without ascites (Figure 1). There was no leukocytosis. Conservative treatment was given but her symptoms

![Figure 1. Sonography shows a right adnexal cystic tumor measuring about 4.1 × 4.2 cm in size, without ascites.](image-url)

did not resolve, so laparoscopy was performed and showed that the right fallopian tube was excessively lengthy, twisted completely, and distended with blood and necrotic tissue (Figure 2). The left fallopian tube, bilateral ovaries, appendix, and uterus were grossly normal. Total salpingectomy was performed under laparoscopy and she was discharged the following day. Pathology showed hemosalpinx with hemorrhagic necrosis. She had recovered well by the follow-up visit in the outpatient department.

Discussion

Adnexal torsion is a true gynecologic emergency with a prevalence of approximately 3% [1]. However, isolated torsion of the fallopian tubes in childhood and early puberty is rare [2]. In this case, the diagnosis of tubal torsion was unlikely preoperatively because the patient was a virgin without any previous particular gynecologic history.

The most common symptom of fallopian tube torsion is convulsive pain at the waist or pelvis, radiating to the same side. It tends to increase in strength with time and to radiate to the thigh with rebound tenderness. It is often accompanied by nausea, vomiting, urinary frequency and urgency with voiding difficulties [3]. The available laboratory or imaging studies cannot confirm fallopian tube torsion. On Doppler ultrasound, the finding of high impedance or absence of flow in a tubular structure can be indicative of the diagnosis; however, detection of positive blood flow does not exclude the presence of torsion [1,3].

The real cause of fallopian tube torsion is unknown. It may be associated with intrinsic and extrinsic tubal factors. Intrinsic causes include congenital anomalies, excessive tube length or spiral course, acquired pathology, hydrosalpinx, hematosalpinx, neoplasm, previous surgery, autonomic dysfunction and abnormal peristalsis. Extrinsic causes include changes in the neighboring organs, neoplasm, adhesions, pregnancy, mechanical factors, movement or trauma to the pelvic organs, and pelvic congestion [3,4]. In this patient, excessive tube length was the most likely factor because no other specific pathologic finding was noted.

Many reports indicated that twisted fallopian tube is more common on the right side than on the left side [5–7]. This may be due to the presence of the sigmoid colon on the left side [5], or to slow venous flow on the right side, which may result in congestion. The other reason could be that more cases of right-sided pain are operated on because of the suspicion of appendicitis.

At the present time, laparoscopic adnexal detorsion is the procedure of choice [1,8–10]. As most patients are in their reproductive years, efforts should be made

Figure 2. The right fallopian tube is twisted completely, and distended with blood and necrotic tissue; the right ovary seems grossly normal.
to preserve fertility if the ischemic damage appears to be reversible; however, tissue with signs of necrosis should be removed because detwisting the tube may cause thrombosis [1,9,10]. In our case, conservative treatment was adopted at the onset of abdominal pain until the right tube was found to be necrotic at the time of laparoscopy; although this did not last more than 12 hours, it made salvaging the tube very difficult.

Because fallopian tube torsion has no pathognomonic clinical symptoms or findings on imaging or laboratory studies, a history of current or past pelvic pathologic conditions or surgery should draw attention to its occurrence. Nonetheless, torsion of the fallopian tube should be considered in all adolescent presents with unilateral pelvic pain, together with early intervention aimed at saving the tube. Laparoscopy can play an important role in making an accurate diagnosis and avoiding unnecessary delays in treatment to preserve fertility in young females [11–14]. 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