Isolated Fallopian Tube Torsion: A Case Report and Review of Literature

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Abstract
Isolated fallopian tube torsion is rare and often difficult to diagnose. Definitive diagnosis is always made at laparoscopic or via laparotomy exploration performed for suspected ovarian torsion. Early diagnosis and conservative laparoscopic treatment especially in a reproductive age woman is warranted as a means of preserving fallopian tube integrity and maintaining fertility. Here, we describe a case with isolated right fallopian torsion being managed by conservative laparoscopic surgery.

Keywords: isolated tubal torsion, fallopian tube, torsion, laparoscopy, pain

Introduction
Isolated torsion of the fallopian tube (IFTT) is extremely rare and difficult to diagnose.

Differential diagnosis between adnexal and tubal torsion is very difficult. Definitive diagnosis is always made at laparoscopic or surgical exploration performed for suspected ovarian torsion. Early diagnosis and conservative treatment especially in a reproductive age woman is warranted.

Case report
A 23–year–old woman, with severe abdominal pain, was referred to Arash Hospital in February 2010. The patient was agitated and experienced sudden colicky abdominal pain in lower abdomen from early morning plus anorexia, nausea and vomiting.

She was nulligravida and had married one year ago. Her menstruation was irregular and she was taking oral contraceptive pills last three months due to a simple right ovarian cyst measuring 65×50 millimeter. The patient had experienced similar abdominal pain from three months ago, but had never complained from dysmenorrhea.

Her last menstrual period was two days before admission and her past medical history was unremarkable with no abdominal surgical history. She was oriented with stable vital signs (Temperature: 37°C, Pulse rate: 90 per minute and Blood pressure: 120/80 mmHg without orthostatic hypotension).

On examination, tenderness in right lower abdomen and suprapubic region without rebound or guarding, mild cervical motion tenderness, a slightly tender uterus of normal size, and bilateral adnexal tenderness mostly in right side were detected.

The patient’s laboratory results included a negative serum pregnancy test and hemoglobin of 12.5 mg/dL and white blood cell count of 11600 in microliter (85% polymorphonuclear, 15% lymphocyte). Erythrocyte sedimentation rate was not more than normal.
Under general anesthesia laparoscopy was performed and unexpectedly both ovaries and uterus were normal. A dark red mass measuring 60×70 millimeter was detected in the isthmic portion of right tube making the diagnosis of “isolated torsion of right fallopian”. The right tube was twisted on its middle part three times, although the tube itself appeared healthy. The twisted part of the right tube was detorted and the remaining cystic mass was evacuated via needle aspiration. Approximately 20 milliliter bloody fluid was aspirated. The postoperative course was uneventful and the woman was discharged on the following day without any medical or surgical problems. She was followed up 4 weeks later and reported her symptoms to be completely resolved.

Discussion

Although torsion of the adnexa is relatively common, isolated torsion of the fallopian tube remains a rare cause of acute pelvic pain and in the differential diagnosis of acute lower abdominal pain, isolated torsion of the fallopian tube should be considered. Isolated torsion of the fallopian tube may occur during reproductive age or rarely in the premenarchal (2, 3, 4) or perimenopausal (5) or postmenopausal period (6, 7).

Searching english references in pubmed, we found numerous predisposing factors in reported cases such as anatomic malformations in the mesosalpinx or tube (long meso – salpinx, or hydatid cysts of Morgagni), hematosalpinx or hydrosalpinx, parovarian cysts, previous operations venous congestion leading to spiraling of veins, abnormal peristalsis of the tube caused by either autonomic dysfunction or the effects of certain drugs, sudden changes in body position and abdominopelvic trauma (8). Isolated torsion of the fallopian tube has been reported in a patient with polycystic ovarian syndrome (PCOS) (9), an adolescent with a congenital mulleian duct anomaly and ipsilateral renal agenesis (10), in a woman during pregnancy (11), a chronic isolated fallopian tube torsion (12), a premenarchal 13–year–old adolescent girl (13) and an isolated torsion of the hydrosalpinx even in a postmenopausal woman (6, 14). However, in our case we believe that none of the above predisposing factors was detected and fallopian tube torsion occurred in an apparently healthy tube.

The differential diagnosis includes twisted ovarian cyst, ruptured ovarian cyst, ruptured corpus luteum cyst, pelvic inflammatory disease and ectopic pregnancy, in addition to appendicitis, cystitis, biliary or renal colic, perforated intestine, intestinal obstruction, mesenteric lymphadenitis, and strangulated hernia (15).

Ultrasound scan was not performed for our patient; however, sonographic features are usually that of an elongated, convoluted cystic mass tapering as it nears the uterine cornu, and the demonstration of the ipsilateral ovary separate from the mass. Doppler evaluation can also be indicative of diagnosis if available on presentation (16). The sonographic whirlpool sign is the reported specific sign of tubal torsion (17). This sonographic whirlpool sign is seen on rocking movement of the probe over the mass.

In conclusion, early diagnosis and conservative laparoscopic treatment especially in a reproductive age woman is warranted as a means of preserving fallopian tube integrity and maintaining fertility.

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References

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