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Case Report

Unusual Presentation of Isolated Fallopian Tube Torsion

Myriam Jerbaka* MD[1], Wissam Arab. MD [2], Prof. Assaad Kesrouani [3]

1,2,3. Obstetrics and gynecology department at Saint-Joseph university, Lebanon.

***Correspondence to:** Myriam Jerbaka. MD. Obstetrics and gynecology department at Saint-Joseph university, Lebanon.

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Abstract

Isolated torsion of the fallopian tube is an unusual finding in a female patient presenting with acute lower abdominal pain radiating to the leg. Right tubal torsion is considered to be a particularly rare condition. We present a case of a lady admitted to the emergency department for lower abdominal pain. The patient underwent laparoscopy and a right salpingectomy was done for torsion of the right ischemic hydrosalpinx with no ipsilateral ovarian involvement. The follow-up was uneventful.

Keywords: *Isolated tubal torsion, Right tubal torsion, Hydrosalpinx*

Introduction

Isolated fallopian tube torsion was first reported by Bland-Sutton in 1890. (1, 2) It is a rare gynaecological cause of acute lower abdominal pain, with an incidence of one in 1,500,000. It is thought that this condition occurs more often with the right tube and there are several theories that have been advanced to explain this.(3) Cases of left fallopian tube torsion were reported also, even though the left side is considered less frequent a series of six cases reported five at the left side fallopian tube.(4,5) The diagnosis of this condition is a challenge because of the lack of specific clinical characteristics.(6) To facilitate both the diagnosis and the treatment, the procedure of choice is definitely laparoscopy. Laparoscopy is a minimal invasive surgery that permits the exploration of the pelvis and abdomen and set a definitive diagnosis when the imaging failed to diagnose and when the clinical suspicion is highly in favour of torsion. Here, however, we present a case of isolated right tubal torsion that was suspected clinically as right adnexal torsion and treated with laparoscopic salpingectomy. The laparoscopy was decided when there was an imprecision in the radiologic diagnosis and high suspicion of adnexal torsion clinically without any signs of appendicitis which is the main differential diagnosis of right lower quadrant acute pain.

Case Report

A 39-year-old woman (multiparous, gravida 5, para 5) presented to the emergency department with severe abdominal pain that had lasted for some hours, the pain has been present for three days with intermittent

exacerbations and has been radiating to the right leg with back pain also intermittently. The patient had regular menstruation and her last period was 14 days prior to presentation. She reported nausea and one episode of vomiting. She denied any other gastroenterological and urinary symptoms.

Physical examination identified severe rebound tenderness in the right iliac fossa. Her temperature was normal. At first, the patient had localized pain at the right lower quadrant and was thought to have appendicitis. A CT scan was done and showed a right oedematous and enlarged adnexa and fluid in the peritoneum (Fig. 1). A suprapubic and transvaginal ultrasound were done and revealed a right oedematous adnexa as well as fluid in the cul-de-sac of Douglas. A colour Doppler sonogram showed decreased blood flow in the right adnexa (Fig. 2). No other abnormalities were identified. Blood biochemistry results revealed no leukocytosis, WBC 5 × 103/ml, NEUT 48.6% and a normal CRP. A urine test was normal. The pregnancy test was not ordered because pregnancy was not suspected based on the patient's history.

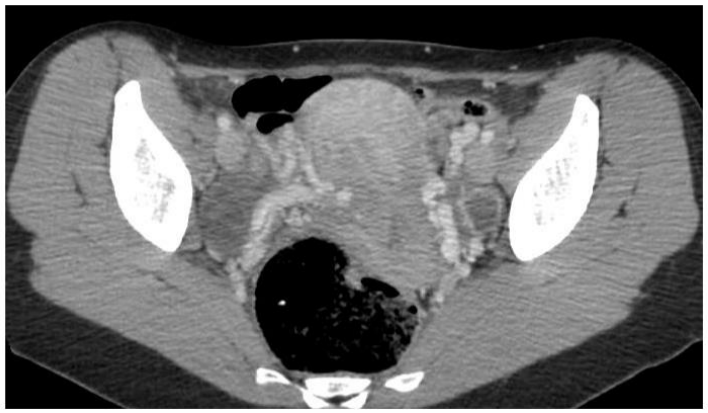

Figure 1- CT Scan

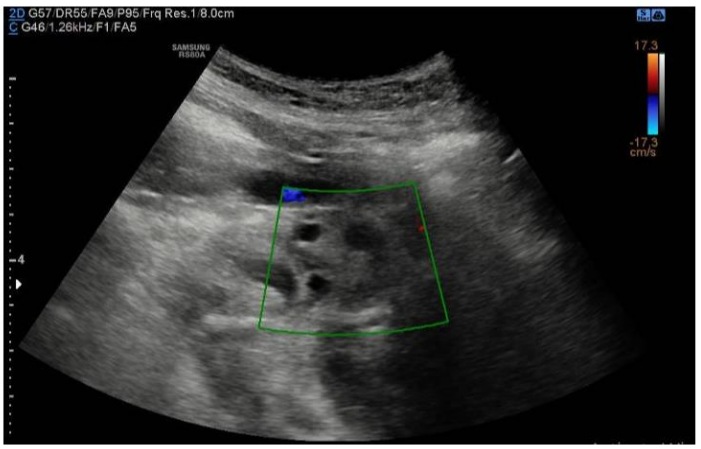

Figure 2- Ultrasound

The patient was admitted for diagnostic laparoscopy. Laparoscopic examination revealed a large necrotic dark-red right tube which appeared twisted at all the levels. There was no ipsilateral ovarian involvement which looked very well vascularised (Fig. 3). There was fluid in the cul-de-sac of Douglas. The uterus, left adnexa and rest of the peritoneal cavity were explored and no abnormalities were detected. Hence a right salpingectomy was performed. The specimen was sent for histological examination. The postoperative course was uneventful and the follow-up was normal. The histopathology report confirmed the peroperative diagnosis of isolated right tubal torsion without any sign of neoplasia. (Fig. 4)

Figure 3- Laparoscopic findings showing tubal torsion with very well vascularised ipsilateral ovary.

Discussion

Isolated fallopian tube torsion is a rare condition and a rare cause of abdominal pain. It occurs most often in reproductive-age women with predisposing factors. It has been reported in females of all ages. However, it is more frequent in ovulating women, because almost all of the risk factors are rare before menarche or during menopause. There were cases reported as well in pregnancy and in postmenopausal women.(5, 6)

The etiologic factors are numerous and they can be classified as either internal (within the tube) or external. Internal factors include hydrosalpinx, hematosalpinx, fallopian tube tumours, tubal ligation, pelvic inflammatory disease, neoplasia and other tubal abnormalities. The abnormalities include adhesions, pelvic masses, pregnancy, venous congestion, and medication.

Although the clinical characteristics are pathognomonic to fallopian tube torsion, the most common presenting symptom is lower abdominal pain, most frequently of sudden onset and accompanied by nausea, vomiting or urinary urgency. Laboratory values are not diagnostic. Bimanual pelvic examination can reveal cervical motion tenderness or even a tender adnexal mass. However, the patient declined that option and during the transvaginal ultrasound the cervical motion was tested and was positive. In general, the symptoms are non-specific and differential diagnosis includes appendicitis, rupture of ovarian cyst, ovarian torsion, endometriosis, ectopic pregnancy and pelvic inflammatory disease and urinary conditions.

Harmon et al. observed that isolated torsion of the fallopian tube predominantly appears on the right side, suggesting that it is possibly due because of partial immobilization of the left tube by its proximity to the sigmoid mesentery, as well as the lesser venous flow on the right side.(9) Many authors also suggest that there is a greater tendency for patients with right-sided lower abdominal pain to be operated upon to exclude appendicitis. Meanwhile, Wong et al. reported series of six cases in which isolated tubal torsion occurred on the left side in five of the patients.(5)

Imaging signs are not specific, nor pathognomonic and vary significantly.(3) Usually a normal salpinx is not visible on ultrasonography, tubal abnormalities can be detected. In isolated torsion of the fallopian tube, transvaginal ultrasonography scan can reveal a dilated salpinx, an echogenic mass, thickened tubal walls, and free fluid in the Douglas space or around the tube. Color Doppler ultrasonography can show disrupted or absent blood flow. On the other hand, Doppler cannot diagnose or exclude the presence of torsion. Magnetic Resonance Imaging (MRI) can be useful for diagnosis, especially to exclude other abnormalities and to confirm an ipsilateral normal ovary.(9) Nevertheless MRI is not an imaging modality for emergency and is not always available, this is why laparoscopy is the most preferred procedure when a torsion is highly suspected clinically.

Fertility preservation can be a key issue.(10) However, conservation of the tube requires timely intervention and laparoscopic surgery. Many authors suggest untwisting of the tube as long as there are no signs of irreversible damage. In the present case, the patient was multiparous with no desire of any future pregnancy and the tube was found to be twisted, distorted and ischemic with a knot during laparoscopic. There is no doubt that laparoscopy is currently the most specific diagnostic tool for evaluating torsion, and laparoscopic adnexal detorsion is the treatment of choice. At this moment, salpingectomy should be performed when detorsion seems impossible and when the tube is already ischemic.

Conclusion

In conclusion, isolated torsion of the fallopian tube remains a tricky challenging diagnosis. Laparoscopy is the gold standard for diagnosis and management. Preservation of the tube is generally desirable if possible. Here we present a case in which diagnosis of torsion was made correctly with surprising isolated tube torsion and completely intact ipsilateral ovary. Appropriate treatment of right isolated tubal torsion was achieved with laparoscopy and salpingectomy.

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