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Isolated fallopian tube torsion – case reports of one symptomatic and one asymptomatic patient

Izolovaná torze vejcovodu – případové zprávy jednoho symptomatického a jednoho asymptomatického pacienta

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Summary: **Objective:** We present two cases of isolated tubal torsion, one was asymptomatic in the postmenopausal period and the other was symptomatic in the reproductive period. **Case reports:** Case 1: A 66-year-old asymptomatic postmenopausal woman underwent laparoscopic hysterectomy and bilateral salpingo-oophorectomy for atypical endometrial hyperplasia. Intraoperatively, the left fallopian tube was found to have isolated torsion. **Case 2:** A 36-year-old female presented to the emergency department with acute abdominal symptoms. Diagnostic laparoscopy revealed isolated torsion of the left fallopian tube. **Conclusion:** Isolated tubal torsion, a rare condition in both reproductive and postmenopausal periods, may be asymptomatic or present with acute abdominal symptoms.

Key words: fallopian tube – isolated tubal torsion – laparoscopy

Souhrn: **Cíl:** Prezentujeme dva případy izolované torze vejcovodů, jeden asymptomatický v postmenopauzálním období a druhý symptomatický v reprodukčním období. **Kazuistiky:** Případ 1: asymptomatická žena, 66 let, v postmenopauze podstoupila laparoskopickou hysterektomii a bilaterální salpingo-ooforektomii pro atypickou hyperplazii endometria. Intraoperačně byla zjištěna izolovaná torze levého vejcovodu. Případ 2: žena, 36 let, se dostavila na pohotovost s akutními břišními příznaky. Diagnostická laparoskopie odhalila izolovanou torzi levého vejcovodu. **Závěr:** Izolovaná torze vejcovodů, vzácný stav v reprodukčním i postmenopauzálním období, může být asymptomatická, nebo se projevovat akutními břišními příznaky.

Klíčová slova: vejcovod – izolovaná torze vejcovodů – laparoskopie

Introduction

Isolated fallopian tube torsion refers to the torsion of the fallopian tube without concurrent torsion of the ipsilateral ovary. First described by Bland Sutton in 1890, isolated fallopian tube torsion incidence has been reported as 1 in 1,500,000 [1,2]. Isolated fallopian tube torsion can occur in both women of reproductive age and adolescent girls [3]. Although rare, cases of isolated fallopian tube torsion have also been reported during pregnancy and in the postmenopausal period [4,5]. While some cases remain asymptomatic, most present with lower abdominal or pelvic pain, nausea, vomiting, fever, or tachycardia. Laboratory findings are usually nonspecific; however, leukocytosis may be observed where torsion leads to tissue necrosis [6,7]. Here, we report two cases of isolated fallopian tube torsion: one asymptomatic case in a postmenopausal woman and another symptomatic case in a woman of reproductive age.

Own observation

Case 1

A 66-year-old woman, gravida 12, parity 9, abortion 3, who had been in natural menopause for 15 years and had no complaints, presented for routine gynecological examination. The patient had no history of abdominal surgery other than an appendectomy performed 38 years ago. Transvaginal ultrasonography revealed an anteverted uterus with an endometrial thickness of 17 mm and bilaterally postmenopausal-appearing ovaries. Due to postmenopausal endometrial thickening, an endometrial biopsy was performed, revealing atypical endometrial hyperplasia. Consequently, laparoscopic hysterectomy and bilateral salpingo-oophorectomy were planned. Intraoperative examination showed a normal uterus, normal

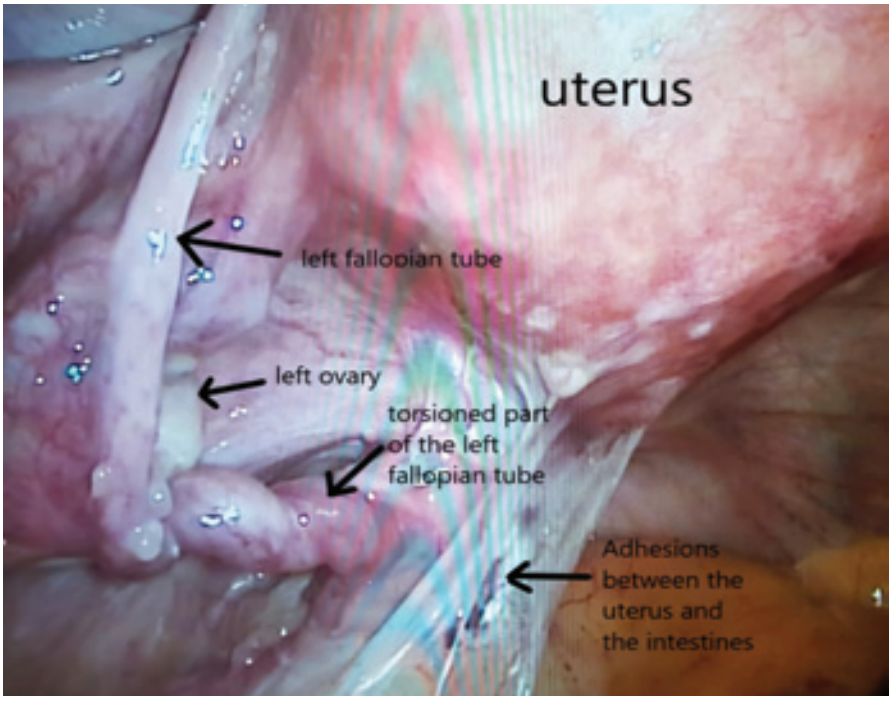

Fig. 1. Isolated left fallopian tube torsion in the postmenopausal period.
Obr. 1. Izolovaná torze levého vejcovodu v postmenopauzálním období.

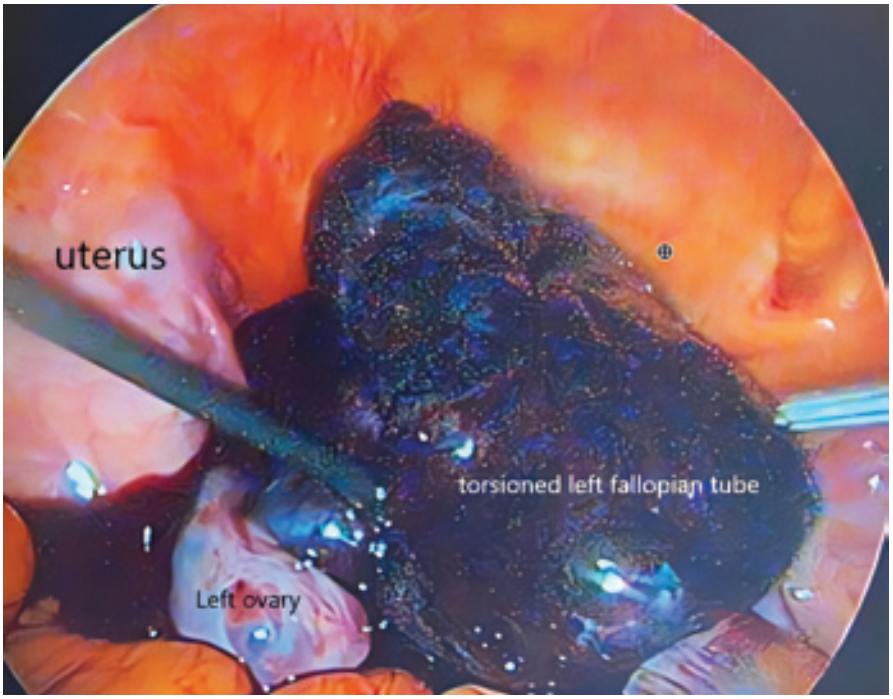

Fig. 2. Isolated left fallopian tube torsion in the reproductive period.
Obr. 2. Izolovaná torze levého vejcovodu v reprodukčním období.

bilateral ovaries, and a normal right fallopian tube, while the left fallopian tube was torsioned and adherent to the posterior uterine wall (Fig. 1). The surgery was completed without complications, and the patient was discharged on postoperative day 2. Pathological examination of the laparoscopic hysterectomy and bilateral salpingo-oophorectomy specimen revealed benign findings.

Case 2

A 36-year-old woman, gravida 3, parity 2, abortion 1, presented to the emergency department with abdominal pain. Physical examination revealed generalized and rebound tenderness, as well as guarding in the left lower quadrant of the abdomen. Transvaginal ultrasonography showed an anteverted uterus with an endometrial thickness of 7 mm. The right ovary appeared normal, while two anechoic cysts measuring 87 mm and 57 mm were observed in the left adnexal region. Additionally, free fluid measuring 66 mm was detected in the left adnexal region. Pelvic color Doppler ultrasonography revealed a 113 × 77 mm heterogeneous mass with solid and cystic components, thought to originate from the left ovary, with no vascular flow detected within the mass. Laboratory tests showed a negative beta-hCG level, hemoglobin of 12.7 g/dL, hematocrit of 38.3%, leukocyte count of 9,900 and CRP of 4.74. Based on clinical, laboratory, and imaging findings, the patient was prepared for laparoscopic surgery with a preliminary diagnosis of left ovarian torsion. Intraoperative findings revealed a normal uterus, right ovary, left ovary, and right fallopian tube. A 15 cm cyst originating from the left fallopian tube was observed to have caused torsion of the left fallopian tube (Fig. 2). A left salpingectomy was performed. The patient was discharged on postoperative day 2. Pathological examination was consistent with a paratubal cyst.

Discussion

Intrinsic factors such as hydrosalpinx or hematosalpinx and extrinsic factors such as paraovarian cysts, adhesions secondary to pelvic inflammatory disease, and intestinal peristalsis have been identified as potential causes of isolated fallopian tube torsion [8]. In cases without predisposing factors, tubal torsion has been associated with elongated ovarian ligaments [9]. The literature suggests that isolated fallopian tube torsion is

more commonly observed on the right side, possibly due to the sigmoid colon's immobilization of the left fallopian tube and relatively slower venous drainage on the right side than the left [10]. However, in contrast to these findings, both cases reported here involved isolated torsion of the left fallopian tube. In the first case, the likely cause was adhesions secondary to a previous pelvic inflammatory disease, whereas in the second case, the reason was paratubal cysts.

The clinical presentation of isolated fallopian tube torsion is nonspecific. The most common symptom at onset is pain, which can manifest as unilateral lower abdominal or pelvic pain and may radiate to the flanks and thighs [9]. Accompanying symptoms may include nausea, vomiting, and fever. Torsion-induced tissue necrosis over time has been implicated in leukocytosis; however, no correlation has been found between the degree of necrosis and leukocyte count [11]. Despite intraoperative findings of a necrotic torsioned fallopian tube, the leukocyte count was normal in our second symptomatic case just before surgery.

Surgical intervention is considered the gold standard for both the diagnosis and treatment of isolated fallopian tube torsion. Laparoscopic surgery is considered the best approach for preserving fertility [12]. In young patients, detorsion may be performed to preserve fertility, while in cases where torsion has led to necrosis or in patients who have completed childbearing, salpingectomy is generally preferred [12].

Conclusion

Due to its rarity and nonspecific clinical presentation, isolated fallopian tube torsion is often overlooked or diagnosed late. Laparoscopic surgery is frequently preferred for both diagnosis and treatment. In young patients, if the fallopian tube has not undergone necrosis, an attempt should always be made to preserve the tube by performing detorsion.

References

1. Bland Sutton J. Remarks ON SALPINGITIS AND SOME OF ITS EFFECTS. Lancet 1890; 136(3510): 1206–1209. doi: 10.1016/S0140-6736(01)86101-8.

2. Hansen OH. Isolated torsion of the fallopian tube. Acta Obstet Gynecol Scand 1970; 49(1): 3–6. doi: 10.3109/00016347009157506.

3. Casey RK, Damle LF, Gomez-Lobo V. Isolated fallopian tube torsion in pediatric and adolescent females: a retrospective review of 15 cases at a single institution. J Pediatr Adolesc Gynecol 2013; 26(3): 189–192. doi: 10.1016/j.jpag.2013.02.010.

4. Origoni M, Cavoretto P, Conti E et al. Isolated tubal torsion in pregnancy. Eur J Obstet Gynecol Reprod Biol 2009; 146(2): 116–120. doi: 10.1016/j.ejogrb.2009.05.002.

5. Ding DC, Hsu S, Kao SP. Isolated torsion of the hydrosalpinx in a postmenopausal woman. JSLS 2007; 11(2): 252–254.

6. Wong SW, Suen SH, Lao T et al. Isolated fallopian tube torsion: a series of six cases. Acta Obstet Gynecol Scand 2010; 89(10): 1354–1356. doi: 10.3109/00016349.2010.503870.

7. Elçi E, Sayan S, Elçi G et al. Isolated fallopian tubal torsion: reproductive age case series. J Obstet Gynaecol Res 2021; 47(7): 2515–2520. doi: 10.1111/jog.14810.

8. Comerci G, Colombo FM, Stefanetti M et al. Isolated fallopian tube torsion: a rare but important event for women of reproductive age. Fertil Steril 2008; 90(4): 1198.e23–1198.e25. doi: 10.1016/j.fertnstert.2007.08.057.

9. Melcer Y, Sarig-Meth T, Maymon R et al. Similar but different: a comparison of adnexal torsion in pediatric, adolescent, and pregnant and reproductive-age women. J Womens Health (Larchmt) 2016; 25(4): 391–396. doi: 10.1089/jwh.2015.5490.

10. Gross M, Blumstein SL, Chow LC. Isolated fallopian tube torsion: a rare twist on a common theme. AJR Am J Roentgenol 2005; 185(6): 1590–1592. doi: 10.2214/AJR.04.1646.

11. Huchon C, Fauconnier A. Adnexal torsion: a literature review. Eur J Obstet Gynecol Reprod Biol 2010; 150(1): 8–12. doi: 10.1016/j.ejogrb.2010.02.006.

12. Gaied F, Emil S, Lo A et al. 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): 941–947. doi: 10.1089/lap.2011.0530.

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