

Recurrent Ipsilateral Ovarian Torsion: Case Report and Literature Review



Mirko Bertozzi MD^{1,*}, Elisa Magrini MD¹, Cristina Bellucci MD², Sara Riccioni MD², Antonino Appignani MD¹

¹S.C. di Clinica Chirurgica Pediatrica, Università degli Studi di Perugia, Ospedale S. Maria della Misericordia, Perugia, Italy

²Sezione di Radiologia, Dipartimento di Scienze Chirurgiche, Radiologiche ed Odontostomatologiche, Università degli Studi di Perugia, Ospedale S. Maria della Misericordia, Perugia, Italy

ABSTRACT

Background: Recurrent ipsilateral ovarian torsion at pediatric age is a rare event. Different surgical techniques for its prevention are available. We present a case of recurrent ipsilateral ovarian torsion in a prepubertal girl and we reviewed the literature about the management of this condition.

Case: A 6-year-old girl presented with right ovarian torsion and underwent a laparoscopic untwisting. Nine months later an ipsilateral recurrence occurred. Laparoscopic untwisting and right-sided oophoropexy with plication to the round ligament was performed.

Summary and Conclusion: In addition to our presented case, four cases of recurrent ipsilateral ovarian torsion in pediatric patients were identified in the literature. The few available reports in the pediatric literature show different management techniques. A long-term study is necessary to define the most effective treatment.

Key Words: Ovarian torsion, Recurrence, Oophoropexy, Children

Introduction

Ovarian torsion most commonly occurs in women of reproductive age and pediatric patients with normal ovaries make up from 16% to 49% of cases. Approximately one-half of torsions in children are associated with masses preventing return to natural position after adnexal twisting.^{1–4} The etiology of torsion in the absence of cysts or masses is more obscure. Hypermobility because of an elongated ovarian ligament might be a contributing factor. Hyperlax mesosalpinx or meso-ovarium (possibly associated with connective tissue disorders) has also been reported as a possible mechanism.⁵ Adnexectomy, which was commonly performed in cases of seemingly necrotic ovary, has been largely abandoned for a conservative management approach.⁶ Nowadays the standard care for ovarian torsion is untwisting without removal of the fallopian tube and/or ovary and excision or aspiration of the cause of the torsion.⁷

Prophylactic measures for recurrence prevention are reserved for unusual situations. Recurrence of ovarian torsion is rare; it is easier to diagnose⁸ and ipsilateral adnexal torsion after untwisting is reported to be 4.9% in a large reported series.⁹ The choice of a surgical approach might be more complex, however, different surgical techniques aimed to limit ovarian mobility have been described.^{10–14} We present an interesting case of a 6-year-old female

patient who presented with recurrent right ovarian torsion and its laparoscopic management to preserve fertility.

Case

A 6-year-old girl referred for consultation at our institution presented with lower abdominal pain.

Seven days before she had been admitted to her hometown local hospital where an appendectomy had been performed because of intermittent right iliac fossa pain. The little girl was then taken back to the same hospital after 2 days from discharge for a new episode of lower abdominal pain. An ultrasonography examination was performed and it showed an increasing diameter of the right ovary (5.5 cm). She was then referred to our institution.

On admission a magnetic resonance imaging scan was performed and confirmed the increased size of the right ovary (55 × 28 × 30 mm) (Figure 1) placed transversally with parenchymal edema. Multiple follicular formations were arranged peripherally. This image was associated with a striated appearance of the parametrium and its meso. The left ovary also appeared increased in size (48 × 16 × 17 mm) with multiple follicular formations. Complementary color Doppler ultrasound examination was used to detect diffuse parenchyma hypervascularity (presence of arterial and venous signal). The picture was suspected to indicate intermittent right ovarian torsion in multicystic ovaries. Because of the concern for intermittent torsion, after counseling the girl's parents, a diagnostic laparoscopy was performed. A right ovarian torsion was diagnosed, with the ovary twisted upon itself twice (720°; Figure 2). This event was conservatively treated with untwisting with return of

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* Address correspondence to: Mirko Bertozzi, MD, S.C. di Clinica Chirurgica Pediatrica, Università degli Studi di Perugia, Ospedale S. Maria della Misericordia, Loc. S. Andrea delle Fratte, 06100 Perugia, Italy; Phone: +39-075-5786451

E-mail address: mirkobertozzi@hotmail.com (M. Bertozzi).

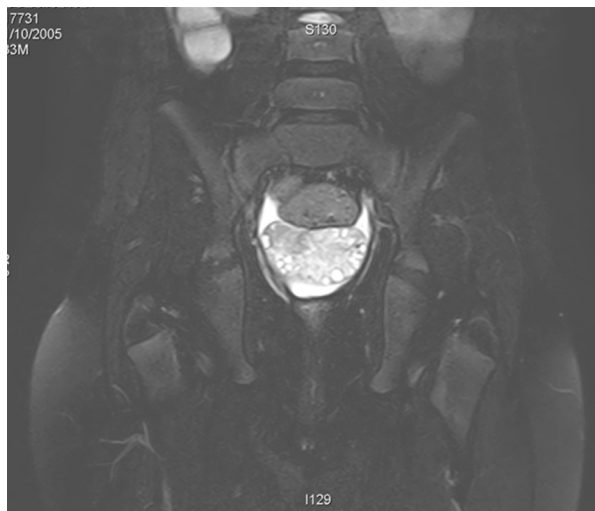


Figure 1. Magnetic resonance image showing the increased size of the right ovary placed transversally with parenchymal edema.

normal color and restoration of the anatomic relationship. The postoperative course was uneventful.

Nine months later, the patient complained of acute right lower quadrant pain. Taking into account the patient's past history, the parents brought the child to our attention. A transabdominal sonogram was performed. The girl was afebrile, her abdomen was soft and tender, with guarding and rebound tenderness in the right lower quadrant. The ultrasound examination revealed an increased volume of the right ovary (59×36 mm) with an inhomogeneous echo-structure because of the presence of coarse internal echoes and some roundish, follicular-like anisonic formations with a maximum diameter of 8 mm. Color Doppler did not allow appreciation of the vascular signal. For this reason the patient underwent an emergency laparoscopy. A 1080° right-twisted ovary was found (Figure 3). Laparoscopic ovarian untwisting, and right-sided oophoropexy with plication to the round ligament with nonabsorbable 2.0 suture was performed (Figure 4).

The girl was discharged after 2 days. One year later, she was well without recurrence and a color Doppler ultrasound examination revealed a regular distribution of the color signal of the right ovary (Figure 5).

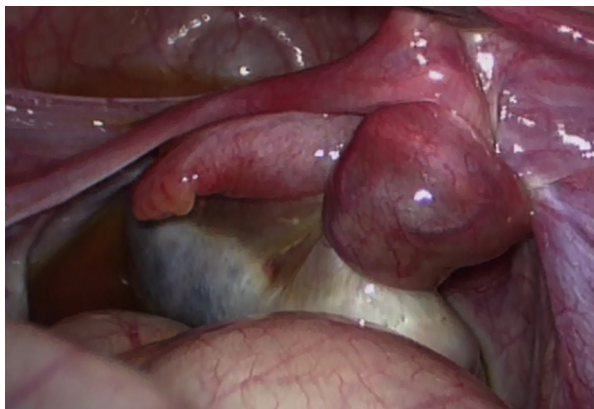


Figure 2. Laparoscopic image showing the first episode of torsion. The annex was twisted twice (720°).

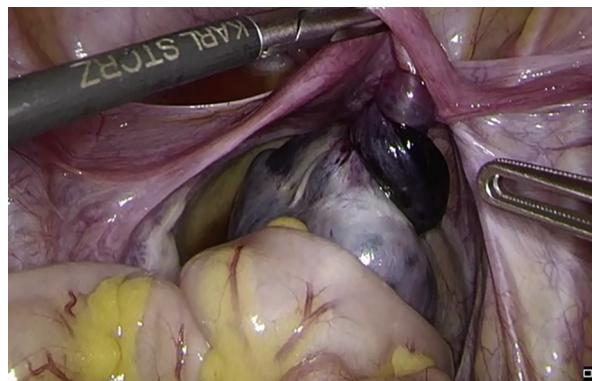


Figure 3. Laparoscopic image of the recurrent right ovarian torsion after 9 months from the first episode: a 1080° right-twisted ovary was found.

Summary and Conclusion

A literature review was performed to identify additional cases of recurrent ipsilateral ovarian torsion to provide a comprehensive review to analyze technical details. Cases were included if written in English and if concerning girls younger than 14 years of age. The following information was analyzed: (1) involved annex; (2) treatment at first episode of torsion; (3) treatment at first episode of recurrence; (4) treatment at second episode of recurrence; and (5) types of oophoropexy performed.

In the recent pediatric literature we found only another four cases regarding ipsilateral recurrence of ovarian torsion in a normal ovary. All of these cases were treated with oophoropexy. The median age at first episode of torsion was eight years and four months (the youngest age was six years and oldest age was 10 years) with one report that did not specify the age at first episode. Median time from the first episode of torsion and recurrence was 12.2 months (the shortest time was six months and the longest was 24 months).

The adnexa involved was the right one in three cases and in one case, the left one. One report did not include the site of torsion. Recurrences occurred once in three cases and twice in two patients. The first approach to a first episode of ovarian torsion, including our case, was only untwisting with or without biopsy in all cases except for one case regarding a patient with a history of previous contralateral torsion already treated with untwisting. In this last case a

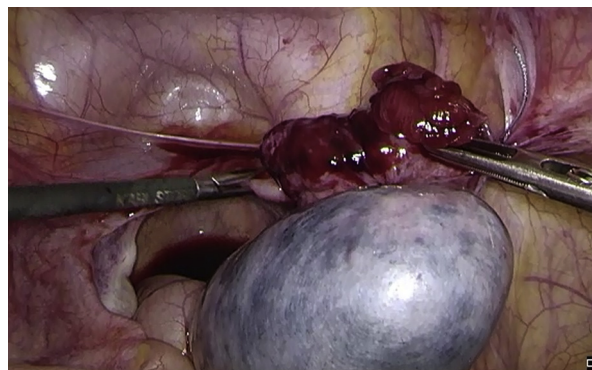


Figure 4. Right oophoropexy to the right round ligament of the uterus.

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