

Ovarian Torsion in the Pediatric Population: Oophoropexy or No?

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1. Abstract

Ovarian torsion [OT] is a rare but serious condition in pediatric patients, with an incidence of 4.9–20/100,000. It may arise due to ovarian masses, elongated ligaments, or structural hypermobility, potentially leading to the loss of reproductive potential if not managed effectively.

1.1. Study Highlights: Retrospective review of 9 pediatric OT cases [ages 9–16] treated from 2022–2024 in Bizerte, Tunisia. All patients presented with sudden pelvic pain and were diagnosed with OT via ultrasound. Laparoscopic, ovarian-sparing surgery was performed in all cases, with one case requiring a cystectomy for teratoma. Oophoropexy [stabilization of the ovary] was performed in one case but led to two recurrences of OT.

1.2. Key Findings: Conservative management, focusing on detorsion and ovary preservation, is recommended to maintain fertility potential, even for severely discolored ovaries. Oophoropexy may reduce torsion risk in specific scenarios [e.g., recurrent torsion, congenital long ligaments] but can increase recurrence likelihood.

1.3. Conclusion: Conservative surgical management is the primary approach for pediatric OT, with oophoropexy reserved for high-risk cases.

2. Introduction

The incidence of ovarian torsion in the pediatric population is 4.9–20/100,000. Ovarian torsion may be caused by the presence of mass, or in the absence of a mass, an elongated ovarian ligament or fallopian tube, or a hypermobile mesosalpinx or meso-ovarium. Effective management is critical as ovarian torsion can result in

loss of reproductive potential.

3. Materials and Methods

Retrospective study included all pediatric [0–18 years old] cases with a diagnosis of OT confirmed intraoperatively, surgically treated from January 2022 to July 2024 at the department of general surgery in Bizerte hospital.

4. Results

9 cases were identified; the average age was 13.8 years with a range from 9 to 16 years. All the girls consulted the emergency room for sudden pelvic pain. Only one girl had previously been treated with substitution treatment for precocious puberty. Abdominal ultrasound was performed for all girls and was suspected ovarian torsion. The surgical procedure was laparoscopic for all girls and were treated with conservative ovarian-sparing surgery. The side of the affected ovary showed an involvement of the right ovary in 7 cases. All girls presented an enlarged ovary with a diameter >5 cm. Only one girl had a cystectomy for suspected ovary teratoma on ultrasound and which was confirmed by the histopathological examination. Oophoropexy was performed in only one case by the procedure: Plication of adnexal ligaments.

5. Discussion

Recent SOGC guidelines have recommended conservative management, specifically, detorsion and preservation of the ovary despite a blue-black appearance, rather than performing an oophorectomy. As a result of conservative management, there is potential for rate of recurrent ovarian torsion to increase.[1], [2]. In our study, the girl who had Oophoropexy, had two recurrences of ovarian

torsion [Figure 1, 2, 3]. Oophoropexy can be used to prevent ovarian torsion in patients with congenitally long utero-ovarian ligaments, recurrent ovarian torsion, and idiopathic ovarian torsion.[3]

There are two types of Oophoropexy procedures:

*Plication of adnexal ligaments

*Fixation of the adnexa to the pelvic sidewall or the ipsilateral uterosacral ligament.



Figure 1: Intraoperative Aspect

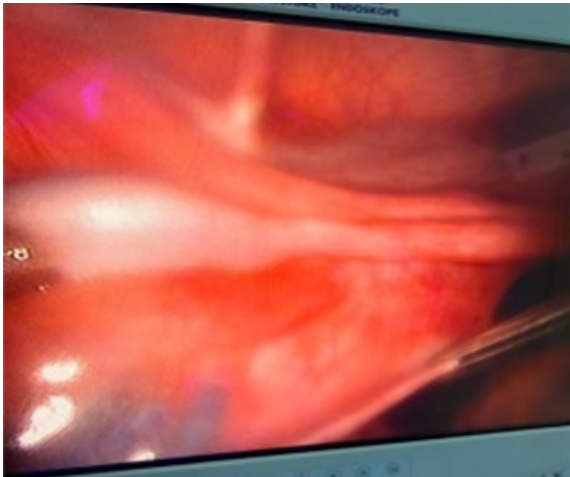


Figure 2: Adnexal ligaments

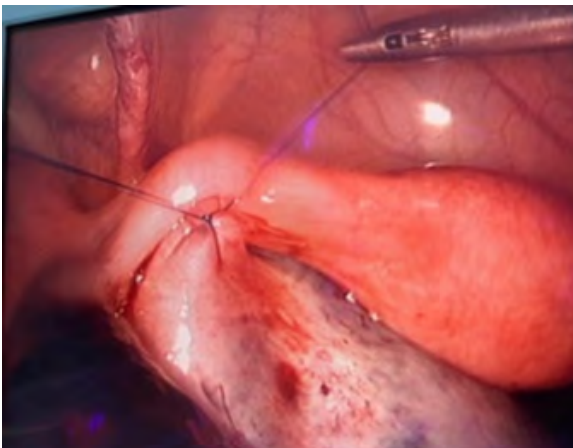


Figure 3: Plication of adnexal ligaments

6. Conclusion

Conservative approaches, including ovarian-sparing surgeries, remain the preferred treatment for OT in pediatric patients. Oophoropexy may be reserved for cases with congenital or recurrent torsion risk.

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