

Content available at: <https://www.ipinnovative.com/open-access-journals>

IP International Journal of Medical Paediatrics and Oncology

Journal homepage: <https://www.ijmpo.com/>

## Case Report

# A case of ovarian torsion in pregnancy

Saba Ahsan<sup>1\*</sup>, Somya Singh<sup>1</sup>, Priya Sharma<sup>1</sup>, Bhavana Gupta<sup>1</sup>

<sup>1</sup>Dept. of Obstetrics and Gynecology, KNS Memorial Institute of Medical Sciences, Barabanki, Uttar Pradesh, India



### ARTICLE INFO

#### Article history:

Received 19-07-2024

Accepted 12-08-2024

Available online 29-08-2024

#### Keywords:

Ovarian torsion

Pregnancy

Adnexal torsion

Serous cystadenoma

Cysts

### ABSTRACT

Ovarian cysts are fluid-filled sacs commonly found in women of reproductive age and can present as acute abdominal pain, making them a significant gynecological emergency. These cysts are observed in approximately 5 out of every 10,000 pregnancies and are often detected early due to routine antenatal ultrasounds performed at various stages of gestation. It is important to note that these cysts can recur later in the pregnancy. In this report, we discuss a case of ovarian torsion occurring during pregnancy, emphasizing the importance of considering conservative surgical options. Our findings suggest that efforts should always be made to salvage the affected ovaries whenever possible to preserve ovarian function and overall reproductive health.

This is an Open Access (OA) journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License](#), which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: [reprint@ipinnovative.com](mailto:reprint@ipinnovative.com)

## 1. Introduction

Ovarian cysts are fluid-filled sacs that occur more frequently in women of reproductive age. The risk of ovarian torsion increases fivefold during pregnancy, occurring in 1 out of every 2000 pregnancies.<sup>1</sup> About 22.7% of ovarian torsion cases are seen in pregnant women, compared to 6% in non-pregnant women.<sup>2</sup> Often, asymptomatic ovarian cysts go unnoticed, leading to inaccurate epidemiological data. During pregnancy, the increased use of early obstetric sonography allows for the detection of these cysts, most commonly in the first trimester. Recurrence can occur later in pregnancy, including in the third trimester.<sup>3</sup> Ovarian torsion is defined as the total or partial rotation of the adnexa around its vascular axis or pedicle. Other risk factors include dermoid cysts, history of abdominal surgery, high mobility cysts, longer pedicles, and tubal ligation, all of which can initiate axial rotation, causing vascular compression, tissue necrosis, and presenting as acute abdominal pain with nausea and vomiting.<sup>4</sup>

\* Corresponding author.

E-mail address: [sabajss@gmail.com](mailto:sabajss@gmail.com) (S. Ahsan).

## 2. Case Report

A 29-year-old primigravida presented to the Emergency Room at 11 weeks gestation with acute pain in the left lower abdomen for 6-8 hours, accompanied by two episodes of vomiting. The pain was acute, colicky, progressive, of moderate to severe intensity, non-radiating, and initially partially relieved by medication. There was no history of vaginal bleeding, discharge, diarrhea, constipation, or fever. The patient had a spontaneous conception with regular previous menstrual cycles. Her last menstrual period (LMP) was on 06/05/23, with an estimated delivery date (EDD) of 13/02/24. She had an initial antenatal visit at a local district hospital 20 days prior, where an ovarian cyst and a live intrauterine fetus were detected. She was counseled about the risks, but no active intervention was undertaken.

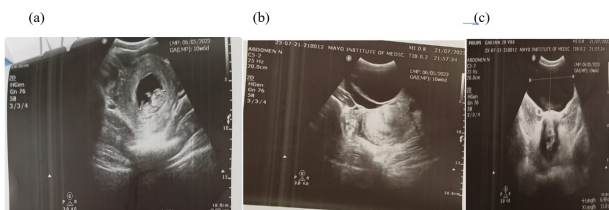
On admission, all observations were normal except for tachycardia at 106 bpm. Systemic examinations, including cardiovascular and respiratory systems, were normal. Abdominal examination revealed tenderness in the hypogastric and left iliac regions. A lump corresponding to a 20-week-sized gravid uterus, approximately 12x10 cm,

spherical, with a smooth surface, regular margins, and firm consistency, was palpated. Guarding was present without rigidity, rebound tenderness, free fluid, or organomegaly.

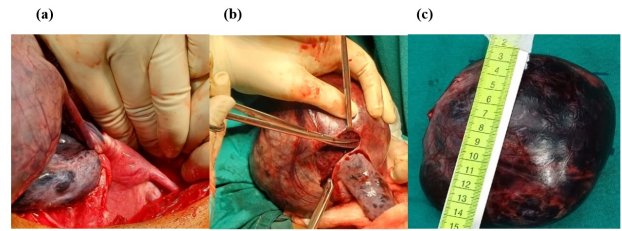
Routine investigations were normal. Pelvic ultrasound showed a large anechoic cyst with internal septations measuring approximately 11x7 cm<sup>2</sup> on the left side, extending to the midline, with the left ovary not separately visualized. Doppler ultrasound showed no blood flow in the left ovary, and mild pelvic fluid was present. The right ovary was normal (around 6 cc). Obstetric ultrasound showed a single live intrauterine embryo of 10 weeks 5 days with a crown-rump length (CRL) of 3.83 cm. Whole abdominal ultrasound was normal. Ultrasound findings indicated a single live intrauterine fetus with left ovarian torsion.

Given the clinical picture, examination findings, and ultrasound report, an emergency laparotomy under spinal anesthesia was planned. The patient was informed about the prognosis, and written consent was obtained. Intraoperatively, a large left ovarian cyst approximately 12x15x12 cm in size with two rounds of torsion was found. The left ovary was enlarged with ischemic changes. Detorsion was performed, achieving reperfusion of the ovary, thus salvaging it. No adhesions or free fluid were present. Cystectomy was performed by carefully enucleating the cyst and separating it from the capsule. The sample was sent for histopathological evaluation. The postoperative period was uneventful. An obstetric ultrasound at discharge showed a single live intrauterine fetus of 11 weeks 5 days. The patient was discharged with progesterone support and had regular follow-ups. The histopathological examination revealed a serous cystadenoma. NT NB and TIFFA scan at 12 weeks and 20 weeks, respectively, were normal. Regular antenatal care was maintained, with corticosteroid coverage given at 32 weeks.

The patient was readmitted with decreased fetal movement at 38 weeks 2 days and underwent an emergency LSCS in view of non-reassuring NST on 01/02/24, delivering a healthy male baby weighing 3 kg at 12:06 pm. The umbilical cord was found looped once around the neck, and both ovaries were healthy.



**Figure 1:** (a) USG showing SLIUE of 10 weeks 5 days, (b) and (c) USG showing anechoic large cyst 11x7 cm<sup>2</sup>



**Figure 2:** (a) Two rounds of torsion of left adnexa (b) Separation of capsule (c) 12x15x12 cu.cm left ovarian cyst specimen after cystectomy



**Figure 3:** Intraoperative view of both ovaries during LSCS of the patient

### 3. Discussion

Adnexal torsion is a common gynecologic surgical emergency with a prevalence of 2.7%.<sup>5</sup> It is treated as an emergency due to the risk of peritonitis and death. Any portion of the adnexa (tube or ovary) may undergo torsion, which can occur in neoplastic ovaries or as a consequence of hyperstimulation. Torsion presents nonspecifically, leading to delays in diagnosis and surgical intervention. The classic presentation includes acute abdominal pain with peritonitis and an adnexal mass.<sup>6</sup> Historically, adnexa were often removed due to concerns that untwisting could increase thromboembolism risk. However, studies indicate that detorsion does not increase thromboembolic complications, with only a 0.2% incidence of pulmonary embolism.<sup>7</sup> The color observed during surgery can be misleading, and 90-100% of ovarian tissue can be salvaged with restored function postoperatively.<sup>8</sup> Evidence supports unwinding the adnexa to observe for tissue reperfusion and viability, as a delay can result in irreversible necrosis, necessitating removal of the tube, ovary, or both. Conservative management of the adnexa is recommended if reperfusion is evident and significant delay has not caused irreversible necrosis.

#### 4. Conclusion

Ovarian torsion in pregnancy is rare and difficult to diagnose due to vague symptoms and no specific diagnostic criteria. The primary goal is to salvage ovarian tissue whenever possible. Decision-making should be prompt, with management choices balancing risks based on mass characterization and gestational age.

#### 5. Source of Funding

None.


#### 6. Conflict of Interest

None.


#### References

1. Lee CH, Raman S, Sivanesaratnam V. Torsion of ovarian tumors: A clinicopathological study. *Int J Gynaecol Obstet.* 1989;28(1):21–5.
2. Ventolini G, Hunter L, Drollinger D, Hurd WW. Ovarian torsion during pregnancy. 2007; Available from: [https://www.hcplive.com/view/2005-09\\_04](https://www.hcplive.com/view/2005-09_04).
3. Pansky M, Feingold M, Maymon R, Ami IB, Halperin R, Smorgick N. Maternal adnexal torsion in pregnancy is associated with significant risk of recurrence. *J Minim Invasive Gynecol.* 2009;16(5):551–3.
4. Nasiri A, Rahimi S, Tomlinson E. Ovarian torsion in pregnancy: A case report. *Gynecol Obstet Case Rep.* 2017;3(2):51. Available from: [https://www.primescholars.com/articles/ovarian-torsion-in-pregnancy-](https://www.primescholars.com/articles/ovarian-torsion-in-pregnancy-a-case-report.pdf)
5. Chang SD, Yen CF, Lo LM, Lee CL, Liang CC. Surgical intervention for maternal ovarian torsion in pregnancy. *Taiwan J Obstet Gynecol.* 2011;50(4):458–62.
6. Bingöl B, Güneç MZ. Adneksiyal Torsiyonda Laparoskopik Yaklaşım. *Türkiye Klinikleri J Gynecol Obst.* 2005;15:108–12.
7. Hongju H. A giant ovarian cyst torsion: Case report. *Med (Baltimore).* 2024;103(15):e33283.
8. Mandelbaum RS, Smith MB, Violette CJ, Matsuzaki S, Matsushima K, Klar M, et al. Conservative surgery for ovarian torsion in young women: Perioperative complications and national trends. *BJOG.* 2020;127(8):957–65.

#### Author biography

**Saba Ahsan**, Junior Resident  <https://orcid.org/0009-0004-3760-7778>

**Somya Singh**, Associate Professor  <https://orcid.org/0000-0002-1228-2047>

**Priya Sharma**, Professor  <https://orcid.org/0009-0008-9195-2141>

**Bhavana Gupta**, Professor and HOD  <https://orcid.org/0009-0003-7535-7493>

**Cite this article:** Ahsan S, Singh S, Sharma P, Gupta B. A case of ovarian torsion in pregnancy. *IP Int J Med Paediatr Oncol* 2024;10(2):45-47.