



STUDY ON CLINICAL PROFILE AND OUTCOMES OF OVARIAN TORSION: A RETROSPECTIVE ANALYSIS

Obstetrics & Gynaecology

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ABSTRACT

Introduction: Ovarian torsion, which affects females of all ages, is a Gynaecological emergency, ovary can twist over its own pedicle leading to obstruction of its blood supply causing ischemic necrosis. Early diagnosis is necessary to preserve the function of the ovaries and tubes and prevent severe morbidity. Imaging can give a clue to diagnosis; however, definite diagnosis is intraoperative and the definite management is of surgical. **Aims And Objectives:** The aim of the study was to analyse risk factors, surgical findings, ovarian salvage rate and histology of ovarian mass, use of ultrasound in diagnosis. **Materials And Methods:** The present study was carried out in Department of Obstetrics And Gynaecology, Kamineni Institute of Medical Sciences, Narketpally. The study includes 10 patients with ovarian torsion, who were diagnosed and operated, were retrospectively analysed according to demographical, clinicopathological, surgical and sonographic findings. **Results:** Mean age group was 28 years. 60% underwent emergency exploratory laparotomy and 40% underwent laparoscopic resection. 40% underwent detorsion with cystectomy, 10% underwent oophorectomy and 50% underwent oophorectomy. Ultrasound was suggestive of ovarian torsion in only 50% of cases with ovarian torsion. **Conclusion:** Abdominal or pelvic pain was the main symptom in all patients with ovarian torsion in our study. Most common risk factor for torsion was a pre-existing ovarian mass. The most common histological finding was serous cystadenoma. Ultrasound is helpful but cannot reliably exclude ovarian torsion.

KEYWORDS

Acute pelvic pain, ovarian torsion, Gynaecological emergency

INTRODUCTION

Ovarian torsion, which affects females of all ages, is a gynaecological emergency.¹ Ovary can twist over its own pedicle leading to obstruction of its blood supply causing ischaemic necrosis.² The varied imaging features and nonspecific symptoms of ovarian torsion can lead to a delay in identification, with misdiagnosis being common. Early diagnosis is necessary to preserve the function of the ovaries and tubes and prevent severe morbidity.³ Imaging can give a clue to diagnosis; however, definite diagnosis is intraoperative.⁴ The gold standard to confirm and treat ovarian torsion is surgery. There are two surgical methods, laparoscopy and laparotomy.⁵ Ovarian torsion is mostly seen in reproductive age periods, but it can be seen in all ages. Torsion of ovarian pedicle induce the blockage of venous drainage and arterial blood flow, and these events result in edema, inflammatory reaction, ischemia, and eventually necrosis.² Patient's first complaint is sudden abdominal pain, which can be accompanied by nausea, vomiting, peritoneal irritation findings, and leukocytosis.⁶ In these patients, doppler and grayscale sonography are the first and base imaging methods to be performed.⁴

Aims And Objectives:

- The aim of the study was to analyse risk factors, surgical findings, ovarian salvage rate, histology of ovarian mass and the use of ultrasound in diagnosis.
- The objective of this study was to draw attention to the clinical, sonographic, intraoperative, and pathological signs and symptoms of histopathologically confirmed ovarian torsion cases and their relationship with each other.

MATERIALS AND METHODS:

The present study was carried out in the Department of Obstetrics And Gynaecology, Kamineni Institute of Medical Sciences, Narketpally from September 2022 to January 2025. The study includes 10 patients with ovarian torsion who were diagnosed and operated were retrospectively analysed according to demographical, clinicopathological, surgical and sonographic findings. All cases presenting with complaints of abdominal pain which was acute and sudden in onset were evaluated clinically and radiologically. Once the diagnosis was made, an emergency surgery was performed.

RESULTS:

A total of 10 patients diagnosed with ovarian torsion between September 2022 and January 2025 were included in the study. The **Figure 1** depicts that the mean age of ovarian torsion was 28 years and multiparous was the majority among them

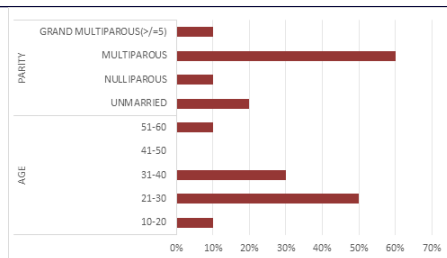


Figure 1: Demographic profile of patients presenting with ovarian torsion

Abdominal or pelvic pain was the main symptoms in all patients with ovarian torsion in our study, which is clearly shown in the **Figure 2**. Most common risk factors for torsion of ovary was pre-existing ovarian mass.

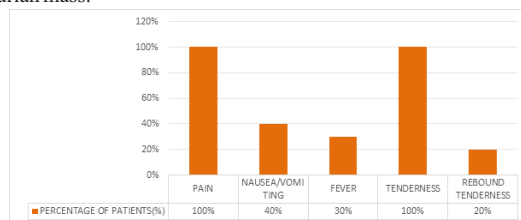


Figure 2: Clinical profile of patients presenting with ovarian torsion

In our study, it was found that in 20 % cases there was no evidence of torsion in ultrasound but intraoperatively torsion was evident, as described in the **Figure 3**. It also suggests that ovarian torsion most commonly occurs with cysts measuring between 5 and 10 cm, followed by those larger than 10 cm, with the least occurrences in cysts up to 5 cm.

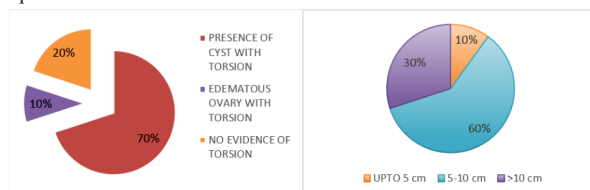


Figure 3: Radiological characteristics and cyst size in patients with ovarian torsion

Figure 4 shows that 60 % of patients have underwent emergency exploratory laparotomy and 40 % underwent laparoscopy surgery. Among them, 40 % underwent cystectomy and 60 % underwent oophorectomy.

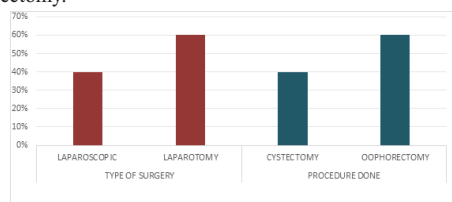


Figure 4: Characteristics of surgery and procedure done in ovarian torsion

The Figure 5 denotes that the most common histological findings in patients with ovarian torsion was serous cystadenoma.

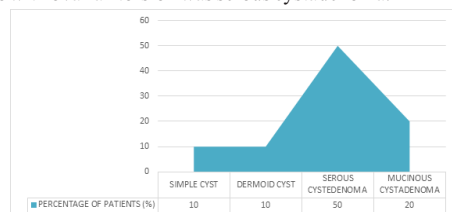


Figure 5: Histopathological characteristics in patients with ovarian torsion

DISCUSSION:

Ovarian torsion is mostly seen in reproductive ages but it can also be seen in all age groups. Many symptoms and signs of ovarian cyst torsion are also associated with other conditions including pelvic inflammatory disease, tubal ovarian abscess, ovarian cyst rupture, acute appendicitis and ectopic pregnancy. The diagnosis of ovarian cyst torsion tends to be difficult because of clinical parameters with low sensitivity and specificity. Although there are no sufficient clinical or imaging criteria to confirm the preoperative diagnosis of adnexal torsion, patients commonly presenting with pain and the presence of a pelvic mass measuring 5cm or larger on imaging have an 83% sensitivity for ovarian torsion. CT is not indicated for patients with suspected torsion. The imaging features of CT often demonstrate an asymmetrically enlarged ovary. MRI is reserved for indeterminate cases but results in delayed treatment and is therefore rarely used. Imaging features on MRI are best visualized on T2-weighted sequences without fat saturation. T1-weighted sequences with fat saturation can be useful for identifying hemorrhage. Intervention time is very important for the preservation of ovarian function.

CONCLUSION:

Abdominal or pelvic pain was the presenting symptom in all patients with ovarian torsion in our study. The most common risk factor identified was the presence of a pre-existing ovarian mass. Serous cystadenoma emerged as the most frequent histopathological finding. While ultrasound imaging proved to be a useful diagnostic tool, it was not consistently reliable in ruling out ovarian torsion.

REFERENCES:

- Houry D, Abbott JT. Ovarian torsion: a fifteen-year review. *Ann Emerg Med.* 2001 Aug;38(2):156–9. doi:10.1067/mem.2001.114203
- Chang, H. C., Bhatt, S., & Dogra, V. S. (2008). Pearls and pitfalls in diagnosis of ovarian torsion. *Radiographics*, 28(5), 1355-1368.
- Sintim-Damoa, A., Majmudar, A. S., Cohen, H. L., & Parvey, L. S. (2017). Pediatric ovarian torsion: spectrum of imaging findings. *Radiographics*, 37(6), 1892-1908.
- Pena JE, Urberg D, Cooney N, Denis AL. Usefulness of Doppler sonography in the diagnosis of ovarian torsion. *Fertil Steril.* 2000 Mar;73(3):1047–50. doi:10.1016/S0015-0282(99)00617-6
- Hasson J, Tsafirir Z, Azem F, Bar-On S, Almog B, Mashiach R, Seidman D, Lessing JB, Grisaru D. Comparison of adnexal torsion between pregnant and nonpregnant women. *Am J Obstet Gynecol.* 2010 Jun;202(6):536.e1-6. doi: 10.1016/j.ajog.2009.11.028. Epub 2010 Jan 8. PMID: 20060090.
- Nguyen, K. P., Valentino, W. L., Bui, D., & Milestone, H. (2022). Ovarian torsion: Presentation and management in a pediatric patient. *Case Reports in Obstetrics and Gynecology*, 2022(1), 9419963.