



A CASE SERIES OF OVARIAN TORSION

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ABSTRACT Ovarian torsion, which affects females of all ages, in gynaecological emergency, ovary can twist over its own pedicle leading to obstruction of its blood supply causing ischaemic 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. The definite management of ovarian torsion is surgical

KEYWORDS : Ovarian Torsion, Ischemic Necrosis, Severe Morbidity

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 ischaemic necrosis.
- 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 to prevent severe morbidity.
- Imaging can give a clue to diagnosis; however, definite diagnosis is intraoperative.
- The gold standard to confirm and treat ovary torsion is surgery. There are two surgical methods, laparoscopy and laparotomy.
- Ovarian torsion is mostly seen in reproductive age females, 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.
- Patient's first complaint is sudden abdominal pain, which can be accompanied by nausea, vomiting, peritoneal irritation findings, and leukocytosis. In these patients, doppler and grayscale sonography are the first and base imaging methods to be performed.



Figure 1: Ovarian Torsion

AIMS AND OBJECTIVES:

The aim of the study was to analyse risk factors, surgical findings, ovarian salvage rate, histology of ovarian mass and 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 histopathological 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 July 2024 to June 2025.

The study includes 20 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.

Table-1 Distribution of Patient According to the Age(n=20)

AGE (in years)	NUMBER OF PATIENTS (n=20)	PERCENTAGE OF PATIENTS (%)
10-20	3	15
21-30	10	50
31-40	6	30
41-50	0	0
51-60	1	5

Table-2 Distribution of Patient According to the Parity(n=20)

PARITY	NUMBER OF PATIENTS (n=20)	PERCENTAGE OF PATIENTS (%)
UNMARRIED	4	20
NULLIPAROUS	2	10
MULTIPAROUS	13	65
GRAND MULTIPAROUS (>=5)	1	5

Table-3 Distribution of Patients According to Clinical Features

CLINICAL FEATURES	NUMBER OF PTIENTS (n=20)	PERCENTAGE OF PATIENTS (%)
PAIN	20	100
NAUSEA/VOMITINGS	8	40
FEVER	6	30
TENDERNESS	20	100
REBOUND TENDERNESS	4	20

Table-4 Distribution of Patients According to Radiological Finding

RADIOLOGICAL FINDINGS	NUMBER OF PATIENTS (n=20)	PERCENTAGE OF PATIENTS (%)
PRESENCE OF CYST WITH TORSION	15	75
EDEMATOUS OVARY WITH TORSION	2	10
NO EVIDENCE OF TORSION	3	15

Table-5 Distribution of Patients According to Cyst Size

CYST SIZE (IN CM)	NUMBER OF PATIENTS (n=20)	PERCENTAGE OF PATIENTS (%)
UPTO 5	2	10
5-10	12	60
> 10	6	30

Table-6 Distribution of Patients According to Type of Surgery

TYPE OF SURGERY	NUMBER OF PATIENTS (n=20)	PERCENTG OF PATIENTS (%)
LAPAROSCOPIC	8	40
LAPAROTOMY	12	60

Table-7 Distribution of Patients According to Procedure Done

PROCEDURE DONE	NUMBER OF PATIENTS (n=20)	PERCENTAGE OF PATIENTS (%)
OOPHORECTOMY	13	65
CYSTECTOMY	7	35

Table-8 Distribution of Patients According to Histopathological Report

HISTOPATHOLOGICAL REPORT	NUMBER OF PATIENTS (n=20)	PERCENTAGE OF PATINTS (%)
SIMPLE CYST	3	15
DERMOID CYST	2	10
SEROUS CYSTADENOMA	10	50
MUCINOUS CYSTADENOMA	5	25

CASE STUDY

- In the present study,
- Mean age group is 28 years
- Abdominal or pelvic pain is a main symptom in all patients with ovarian torsion in our study
- Most common risk factor for torsion is a pre existing ovaian mass
- 60% underwent emergency exploratory laparotomy and 40% underwent laproscopic surgery
- 35% underwent cystectomy and 65 % underwent oophorectomy
- In 15% of cases there is no evidence of torsion in ultrasound but intraoperatively torsion is seen.
- The most common histological finding is serous cystadenoma.

CONCLUSIONS

- 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 5 cm 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.

REFERENCES

1. S. C. Oltmann, A. Fischer, R. Barber, R. Huang, B. Hicks, and N. Garcia, "Cannot exclude torsion—a 15-year review," *Journal of Pediatric Surgery*, vol. 44, no. 6, pp. 1212–1217, 2009.
2. H. C. Chang, S. Bhatt, and V. S. Dogra, "Pearls and pitfalls in diagnosis of ovarian torsion," *Radiographics*, vol. 28, no. 5, pp. 1355–1368, 2008.
3. A. Sintim-Damoa, A. S. Majmudar, H. L. Cohen, and L. S. Parvey, "Pediatric ovarian torsion: spectrum of imaging findings," *Radiographics*, vol. 37, no. 6, pp. 1892–1908, 2017.
4. Nguyen KP, Valentino WL, Bui D, Milestone H. Ovarian Torsion: Presentation and Management in a Pediatric Patient. *Case Rep Obstet Gynecol*. 2022 Feb 22;2022:9419963.
5. Bacanakgil BH, Kaban I, Deveci M, Hasanova M. Ovarian Torsion: 10 Years' Experience of a Tertiary Medical Center. *İstanbul Med J* 2018; 19 (3): 258-62.