Section: Obstetrics and Gynaecology

Original Research Article

LAPAROSCOPIC OVARIAN CYSTECTOMY: A PROSPECTIVE CASE SERIES OF 25 PATIENTS

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ABSTRACT

Background: Laparoscopic ovarian cystectomy is the most preferred surgical approach for benign ovarian cysts due to decreased morbidity and better preservation of ovarian function. This study was carried out to evaluate the clinical profile, operative outcomes, and safety of laparoscopic ovarian cystectomy in women having benign ovarian cysts. **Materials and Methods:** A prospective observational study was conducted in 25 women with benign ovarian cysts undergoing laparoscopic ovarian cystectomy between December 2024 to November, 2025 at Dept. OBGY.IMS, BHU. Demographic profile, clinical presentation, cyst characteristics, operative details, complications, and histopathology were analyzed. **Result:** The mean age of the patients was 28.6 ± 6.4 years. The most common presenting symptom was abdominal pain (80%). Mean cyst size was 6.5 ± 1.8x 4.6 ± 1.2 Sq. cm. The mean operative time was 65 ± 18 minutes. The procedure was converted into laparotomy in 2 cases (8%). There was no major intra-operative complication. Mean hospital stay was 1.8 ± 0.6 days. Histopathology revealed serous cystadenoma as the most common pathology (40%). **Conclusion:** Laparoscopic ovarian cystectomy is a safe and effective modality for managing benign ovarian cysts, with least morbidity and short hospital stay.

INTRODUCTION

Ovarian cysts are frequently encountered in women of reproductive age. While some cysts resolve spontaneously, other symptomatic persistent cysts, or large cysts require surgical intervention. Laparoscopic ovarian cystectomy has largely replaced laparotomy due to its many advantages such as reduced postoperative pain, faster recovery, minimal adhesion formation, and last but not the least improved cosmetic outcome. Preservation of ovarian tissue is additional advantage particularly important in women desiring future fertility. This study presents our experience with 25 cases of laparoscopic ovarian cystectomy, focusing on operative outcomes and safety.

MATERIALS AND METHODS

Study Design: A prospective observational study conducted at the Department of Obstetrics and Gynecology, Institute of Medical Sciences, Banaras Hindu University from December 2024 to November 2025.

Inclusion Criteria
Women aged 18–45 years, Ovarian cysts >4 cm on ultrasonography, Normal CA-125 levels, No radiological suspicion of malignancy

Exclusion Criteria
Suspected ovarian malignancy, Pregnancy, Severe medical comorbidities

Preoperative Assessment: All patients were subjected to detailed clinical evaluation, pelvic ultrasonography, serum CA-125 estimation, and other routine preoperative investigations.

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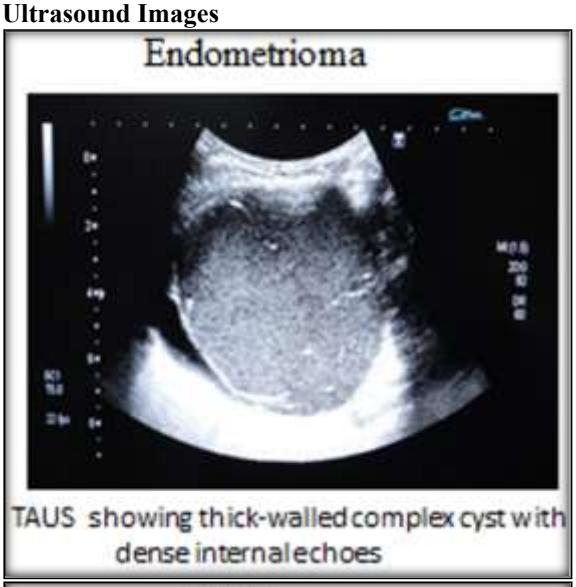
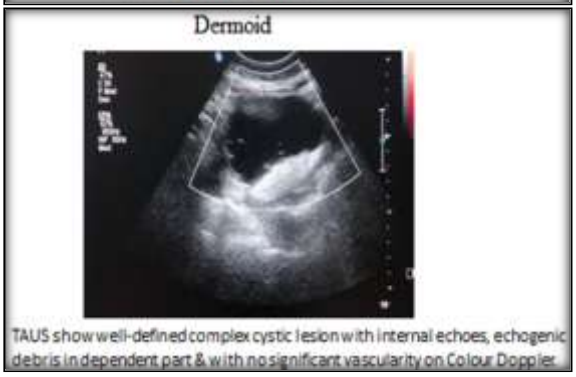
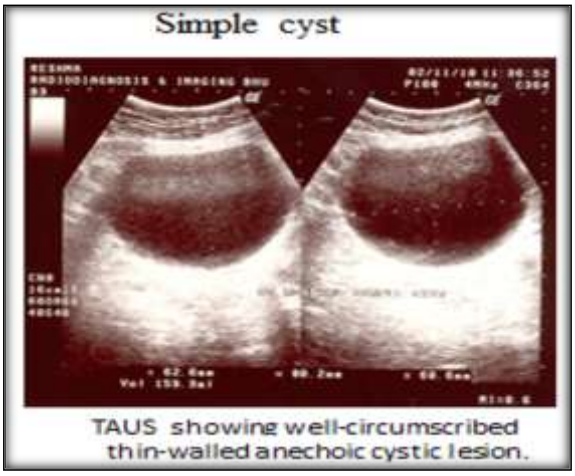
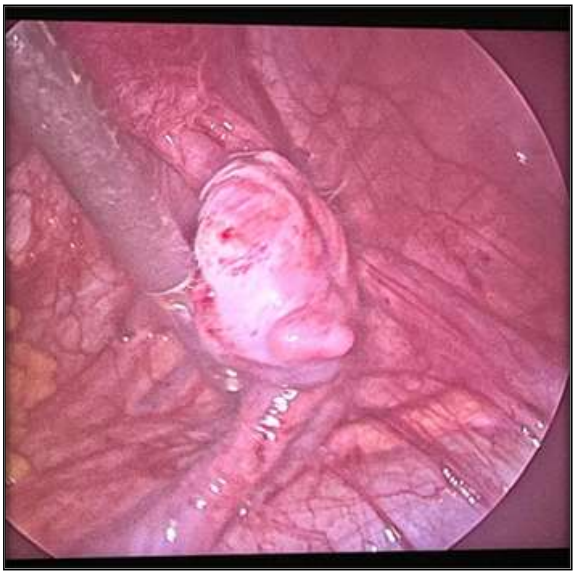
Ultrasound Images







Surgical Technique: Laparoscopic ovarian cystectomy was performed under general anaesthesia using a standard three-port technique. Cyst wall stripping was done using traction–counter traction. Bipolar coagulation was used for haemostasis. Ovarian reconstruction was performed.



Laproscopic view of ovarian cyst >> Cystectomy done>> HPE confirmed it as Dermoid Cyst ovary.

RESULTS

Table 1: Demographic Profile and Clinical Presentation (n = 25)

Parameter	Value
Mean age (years)	28.6 ± 6.4
Nulliparous	15 (60 %)
Presenting symptoms:	
Abdominal pain	20 (80 %)
Menstrual irregularities	7 (28 %)
Infertility	5 (20 %)
Incidental finding	3 (12%)
Laterality of cyst:	
Right ovary	11 (44%)
Left ovary	11 (44 %)
Bilateral	3 (12%)
Mean cyst size (cm)	6.5 ± 1.8 X 4.6 ±1.2

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Amongst 25 patients, 60% were nulliparous. Most common presenting symptom was abdominal pain,others being Menstrual irregularities and Infertility. Mean cyst size was 6.5 ± 1.8 × 4.6±.1.2 cm. Bilateral cysts were found only in 12% patients.

Table 2: Operative Details and Postoperative Outcomes

Parameter	Value
Mean operative time (minutes)	65 ± 18
Estimated blood loss (ml)	60 ± 25
Conversion to laparotomy	2 (8 %)
Intraoperative complications	Nil
Postoperative complications	Nil
Fever	1 (4%)
Mean hospital stay (days)	1.8 ± 0.6

Mean operative time (65 ± 18 min) was found lesser as compared to laprotomy. Blood loss was also less via laproscopy with no intraoperative complications. Laproscopy also significantly reduced post- op hospital stay and hastened recovery. There were no post-operative complications.

Table 3: Histopathological Diagnosis of Ovarian Cysts

Histopathology	Number (%)
Serous cystadenoma	10 (40%)
Endometriotic cyst	6 (24 %)
Dermoid cyst	5 (20%)
Functional cyst	4 (16 %)

On histopathological examination, most common finding was Serous cystadenoma, followed by Endometrioma, Dermoid and Functional cysts.

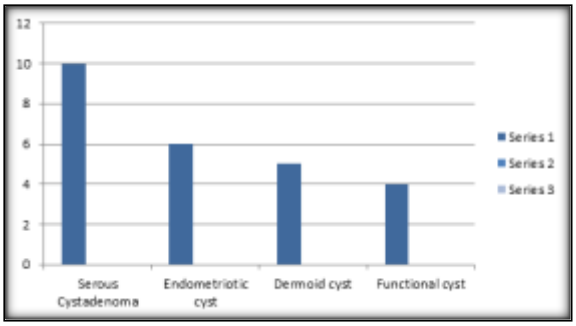

Figure 1: Histopathological Diagnosis of Ovarian Cysts

DISCUSSION

Laparoscopic cystectomy is one of the surgical modalities for benign sympyomatic ovarian cysts with symptoms like pelvic pain and dysmenorrhea and where the serious risk of malignant transformation.

In the present study, laparoscopic ovarian cystectomy highlighted excellent perioperative outcomes with minimal morbidity. The mean age of the patients was comparable to other Indian studies, reflecting the higher prevalence of benign ovarian cysts in reproductive-aged women.[1,2]

Abdominal pain was the most common presenting symptom, similar to observations by other authors.[1,2] The mean cyst size of 6.5 x 4.2 Sq. cm supports the feasibility of laparoscopy even in moderately large cysts, when malignancy is excluded preoperatively.[3,4]

The mean operative time of Laparoscopic procedure was 65 minutes and conversion into laparotomy was required only in two patients who had dense adhesions, emphasizing the importance of careful intraoperative judgment.

Serous cystadenoma was the most common histopathological finding (40%) followed by Endometriotic cyst (24%) and Dermoid cyst (20%), highlighting the need for meticulous dissection to avoid spillage.

As per Alobaid et al,[3] there is still no consensus for the size limitation of ovarian cysts decided to be a contraindication for laparoscopic management. With advancing techniques, proper patients selection, and availability of experts in gynecologic endoscopy, it is possible to remove giant cyst by laparoscopy.

In the past, laparotomy was the gold standard for gynecologic surgery. However, nowadays, the laparoscopic approach has gained popularity as the Laparoscopic cystectomy offers several advantages, including reduced hospital stay, lesser post-operative pain, faster recovery, and better ovarian tissue preservation—particularly relevant in women with infertility or in those wishing to have pregnancy in future.

Limitations

- Small sample size
- Single-centre experience
- Lack of long-term fertility follow-up

CONCLUSION

Laparoscopic ovarian cystectomy is a safe, effective, and minimally invasive approach for the management of benign ovarian cysts. Proper patient selection backed by surgical expertise results in excellent clinical outcomes and should be considered the standard of care.

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