

## Clinical Investigation of Large Ovarian Cysts with Various Presentations

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### Abstract

**Background and Aim:** In earlier case reports, the laparoscopic therapy of large ovarian cysts was discussed. Despite this, laparotomy is the preferred treatment for most individuals with large ovarian cysts. As a result, the current study's goals were to identify the varied presentations of big ovarian tumours and to tailor surgical intervention to each appearance.

**Material and Methods:** This hospital-based prospective interventional study was conducted by the departments of general surgery and obstetrics and gynaecology at an Indian tertiary care facility. All women who visited the Obstetrics and Gynaecology Department with a history of an abdominal lump and who had an examination and an ultrasound that ruled out an ovarian cyst were included in the study population. In all, 40 participants were enrolled in the study. Surgical intervention was performed on the study subjects in accordance with the USG and histopathology reports. To check for recurrence, all of the operated study participants underwent two years of follow-up.

**Results:** About 75% of cysts were 10 to 20 cm in size, whereas 25% were 20 to 33 cm in size. 37.5% of them were simple. About 30% of cases had torsion, 7.5% had cyst rupture, and 12.5% had infection. Malignant cysts made for about 12.5%. Laparotomies were performed in all instances, and cystectomy was the procedure of choice. There was no sign of a cyst recurring.

**Conclusion:** Gynaecologists face a clinical problem when treating large ovarian cysts. All of these patients must undergo surgery because quite a few of them could result in problems. The treatment for malignant ovarian cysts must include chemotherapy.

**Keywords:** Cystectomy, Infection, Laparotomy, Ovarian Cysts.

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### Introduction

Understanding the numerous cancer forms that start in the ovary requires a thorough

understanding of the embryology and microscopic anatomy of this organ. The scope of this monograph does not allow

for a thorough explanation of the embryology and anatomy of the ovary, but for those who are interested, thorough reviews are available.[1–7]

A common gynecological issue, ovarian cysts fall into two categories: normal and pathological.[8] Follicular cysts and luteal cysts are examples of physiological cysts. Ovarian tumours are pathological cysts, which can be benign, malignant, or borderline. While malignant tumours are more common in older females, benign tumours are more common in young females.[8,9] Large ovarian cysts may make you feel sick to your stomach. Frequent urination may also result from pressure on the bladder.[10] Pelvic pain, dysmenorrhea, and dyspareunia can all be indications of ovarian cysts. Other signs include frequent and challenging bladder emptying, nausea, vomiting, or breast tenderness. There may also be fullness and heaviness in the belly.[11]

Although there are various forms of ovarian tumours, epithelial ovarian cancer is the fifth most prevalent malignancy among women. Ovarian tumours are among the most frequent gynaecological tumours seen in females.[12] It is frequently referred to as the "silent killer" because the disease is frequently not discovered until it has advanced. Such ovarian tumours may go undiscovered for a long time due to their anatomical position.[13,14]

Large ovarian cysts are not adequately defined in the literature. According to some writers, big ovarian cysts are those that have a preoperative scan-measured diameter of greater than 10 cm.[15] Others specify ovarian cysts as being huge if they extend above the umbilicus. In earlier case reports, the laparoscopic therapy of large ovarian cysts was discussed. Despite this, laparotomy is the preferred treatment for most individuals with large ovarian cysts. As a result, the current study's goals were to identify the varied presentations of big

ovarian tumours and to tailor surgical intervention to each appearance.

### Material and Methods

This hospital-based prospective interventional study was conducted by the departments of general surgery and obstetrics and gynaecology at an Indian tertiary care facility. All women who visited the Obstetrics and Gynaecology Department with a history of an abdominal lump and who had an examination and an ultrasound that ruled out an ovarian cyst were included in the study population. The study was conducted over a two-year period. There were 40 people recruited in the study in all. The institutional ethical committee provided its ethical approval, and each subject provided signed informed permission.

Participants in the study who reported having an abdominal lump in the past but who had an ovarian cyst ruled out by clinical and USG results were included. A thorough history was collected, taking into account factors including age, lump duration, and complications brought on by the lump. A thorough clinical examination was performed, along with various investigations such as an abdominal USG, a Doppler study, a lump histological analysis, etc. Surgical intervention was performed on the study subjects in accordance with the USG and histopathology reports. To check for recurrence, all of the operated study participants underwent two years of follow-up.

### Statistical analysis

The collected data was organised, inputted, and exported to the data editor page of SPSS version 15 (SPSS Inc., Chicago, Illinois, USA) after being combined and entered into a spreadsheet programme (Microsoft Excel 2007). The level of significance and confidence level for each test were set at 5% and 95%, respectively.

## Results

The majority of study participants (72.5%) were between the ages of 17 and 29 years, while 33.33% were between the ages of 30 and 41 years. (Table 1) About 75% of cysts were 10 to 20 cm in size, whereas 25% were 20 to 33 cm in size. (Table 2) 37.5% of them were simple. About 30% of cases had torsion, 7.5% had cyst rupture, and 12.5% had infection. Malignant cysts made for about 12.5%. (Table 3) CT abdominal imaging was performed in 32% of the research participants. In one of the cases where a germ cell tumour was

evident histopathologically, LDH was elevated. In one case with granulosa cell tumour as the histology, inhibin levels were elevated. In one instance of mucinous cystadenoma, CEA was elevated. The serous cystadenomas in 24 instances. Four cases, including one where a cancer was present, had mucinous cystadenomas. There were 8% of unilocular solid cysts and 93.33% of unilocular thin cysts. Laparotomies were performed in all instances, and cystectomy was the procedure of choice. There was no sign of the cyst returning.

**Table 1: Distribution of study participants according to age**

Age Group (Year)	Number	Percentage (%)
17-29	29	72.5
30-41	11	27.5
Total	40	100

**Table 2: Distribution of study participants according to size of cyst**

Size (cm)	Number	Percentage (%)
10-20	30	75
20-32	10	25
Total	40	100

**Table 3: Distribution of study participants with complication of cyst**

Complications	Number	Percentage (%)
Torsion	12	30
Rupture	3	7.5
Infection	5	12.5
Malignancy	5	12.5
Uncomplicated	15	37.5

## Discussion

Gynaecologists have a difficult time making an early diagnosis of ovarian cancer, mostly because the disease's early signs are ambiguous and non-specific. Numerous studies have demonstrated that ovarian cancer patients exhibit higher abdominal, GI, and constitutional symptoms than those with benign tumours.[16,17]

The majority of study participants (72.5%) were between the ages of 17 and 29 years, while 33.33% were between the ages of 30 and 41 years. The results of the current

study were in line with those of another study carried out by Patrick et al., in which 41% of the participants were between the ages of 21 and 30.[18]

CT abdominal imaging was performed in 32% of the research participants. In one of the cases where a germ cell tumour was evident histopathologically, LDH was elevated. In one case with granulosa cell tumour as the histology, inhibin levels were elevated. In one instance of mucinous cystadenoma, CEA was elevated. In another study, 20% of cases had serous cystadenomas, compared to 60% in this study.[19] In a different investigation,

mucinous adenomas were found in 8% of cases and serous cyst adenomas in 11%.

Laparotomies were performed in all instances, and cystectomy was the procedure of choice. One malignant case out of all the instances had never been married, the disease was in Stage I, thus only a cystectomy was performed. In a different study, 3% of cases underwent laparoscopy followed by laparotomy, while 18.7% of cases underwent cystectomy.[20] The final treatment for large ovarian cysts, according to a different study, is laparotomy and cyst removal, but authors have also said that large ovarian cysts can be treated laparoscopically. Laparotomy is the preferred operation, combined with cyst excision, in the case of complex big ovarian cysts, such as those that burst, torsion, haemorrhage, are malignant, infected, or otherwise problematic. Laparotomy, caesarean section, and cystectomy should be performed on patients who have big ovarian cysts and are pregnant. If surgery is necessary, it is best to have it done in the early second trimester when the chance of abortion is the lowest.[21]

### Conclusion

Every patient presenting with a gynaecological issue should undergo an abdominal and pelvic bimanual examination, and early postmenopausal women should undergo the proper investigations to diagnosis the condition. Gynaecologists face a clinical problem when treating large ovarian cysts. All of these patients must undergo surgery because quite a few of them could result in problems. The treatment for malignant ovarian cysts must include chemotherapy.

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