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Clinical Presentation and Surgical Outcome of Benign and Malignant Ovarian Tumors in a Tertiary Care Hospital

Dr. Deepanjali Saini[1], Dr. Ashok Verma[2], Dr. Kamal Singh[3]

[1]Junior Resident, Dr Rajendra Prasad Govt Medical College, Kangra at Tanda

[2]Professor and Head, Dr Rajendra Prasad Govt Medical College, Kangra at Tanda

[3]Assistant Professor, Dr Rajendra Prasad Govt Medical College, Kangra at Tanda

Abstract: ***Background: Ovarian tumors show wide variation in age of occurrence, clinical presentation, operative findings, histopathological pattern and treatment requirement. Their symptoms are often nonspecific, and many patients present only after the tumor has attained a clinically detectable size. Objective: To study the clinical presentation and surgical outcome of benign and malignant ovarian tumors in women attending a tertiary care hospital. Methods: This prospective observational study included 82 women with clinically, radiologically and histopathologically proven ovarian tumors. Detailed history, clinical examination, imaging, tumor markers, operative findings, surgical procedure and histopathology reports were recorded. Data were expressed as frequency, percentage and mean +/- SD. Results: The mean age was 43.32 +/- 15.73 years, with maximum patients in the 31-50 years age group (46.34%). Pain abdomen was the most common symptom (93.90%), followed by abdominal distension (35.37%) and menstrual irregularities (20.73%). Serous cystadenoma (23.75%), mucinous cystadenoma (20.00%) and mature cystic teratoma (16.25%) were common benign tumors, while serous cystadenocarcinoma was the most frequent malignant tumor. Exploratory laparotomy was performed in 72 (87.80%) patients, minimal invasive surgery in 7 (8.54%), interval cytoreduction in 2 (2.44%) and chemotherapy alone in 1 (1.22%). Conclusion: Most ovarian tumors presented with abdominal pain and were managed surgically. Histopathology remains essential for final diagnosis and planning further treatment.***

Keywords: Ovarian tumor; Clinical presentation; Surgical outcome; Histopathology; Tertiary care hospital.

1. Introduction

Ovarian tumors represent a heterogeneous group of lesions arising from epithelial, germ cell, sex cord-stromal and metastatic origins. The ovary is unique because it contains cells of different embryological origins and therefore produces a broad spectrum of benign, borderline and malignant tumors. Ovarian tumors may occur at any age, but their clinical significance increases in peri-menopausal and post-menopausal women because malignant lesions are more common in older age groups [1,2].

The clinical presentation of ovarian tumors is often vague. Patients commonly report pain abdomen, abdominal distension, menstrual irregularity, gastrointestinal discomfort or an incidentally detected pelvic mass. Early malignant tumors may remain silent, and advanced disease may present with ascites, bilateral masses, cachexia or pressure symptoms. Because clinical features alone cannot reliably differentiate benign from malignant tumors, diagnosis requires a combined approach using clinical examination, ultrasonography, tumor markers and final histopathological examination [3,4].

Surgery is the mainstay of management for most ovarian tumors. Benign tumors are commonly treated with cystectomy, oophorectomy or minimally invasive procedures when feasible, while suspected malignant tumors require exploratory laparotomy, staging procedure, cytoreduction or referral for chemotherapy depending on operability and disease extent. Operative findings such as laterality, ascites, cystic or solid consistency, capsular rupture and papillary excrescences provide important clues regarding malignant potential [5,6]. The present article focuses on the clinical presentation and surgical outcome of women with benign and malignant ovarian tumors managed in a tertiary care hospital.

2. Aim and Objectives

Aim: To study the clinical presentation and surgical outcome of benign and malignant ovarian tumors in a tertiary care hospital.

Objectives: (1) To assess the demographic profile and presenting symptoms of women with ovarian tumors. (2) To evaluate operative findings and surgical procedures performed. (3) To correlate clinical and surgical findings with histopathological diagnosis.

3. Material and Methods

This prospective observational study was conducted for one year in the Department of Obstetrics and Gynecology at a tertiary care hospital after approval from the institutional ethical and protocol review committee. Women admitted with clinically, radiologically and histopathologically proven benign or malignant ovarian tumors were included after obtaining informed consent. Cases of suspected para-ovarian cysts, fimbrial cysts and other abdominopelvic masses not arising from the ovary were excluded.

A detailed history was recorded for each patient, including age, parity, address, socioeconomic status, menstrual history, age at menarche, age at menopause, use of contraception, use of hormone replacement therapy, fertility drug use, history of

tubal ligation, personal history and family history of ovarian, breast or other cancers. General physical examination, systemic examination, per abdominal examination and gynecological examination were performed. Ultrasonography of the abdomen and pelvis was used to confirm ovarian origin and to evaluate tumor morphology. Routine laboratory investigations and tumor markers such as CA-125, beta-hCG, alpha-fetoprotein, LDH, CEA, CA 19-9 and inhibin were performed whenever clinically indicated.

After complete evaluation, patients were assessed for operability. Benign tumors requiring conservative treatment were managed by cystectomy or oophorectomy through laparoscopic or open surgery depending on feasibility. Suspected malignant tumors were managed by exploratory laparotomy with surgical staging, peritoneal washings, omentectomy, hysterectomy with bilateral salpingo-oophorectomy or cytoreduction as per disease stage and fertility requirements. Inoperable cases were advised neoadjuvant or palliative therapy after oncology consultation. Operative findings, intraoperative complications, postoperative course and histopathological reports were recorded. Data were analyzed using frequency, percentage and mean +/- SD.

4. Results

The study included 82 women with benign and malignant ovarian tumors. The mean age was 43.32 +/- 15.73 years, with a range of 14-80 years. The largest age group was 31-50 years, comprising 38 (46.34%) patients, followed by 51-70 years with 24 (29.27%) patients. Pain abdomen was the most common presenting symptom and was reported by 77 (93.90%) patients. Abdominal distension was present in 29 (35.37%) and menstrual irregularities in 17 (20.73%) patients. Infertility was uncommon and was reported by only 1 (1.22%) patient.

Serous cystadenoma was the most common histopathological diagnosis, observed in 19 (23.75%) patients, followed by mucinous cystadenoma in 16 (20.00%) and mature cystic teratoma in 13 (16.25%). Among malignant lesions, serous cystadenocarcinoma was the leading diagnosis. Operative findings showed ascites in 12 (14.63%) patients. Tumors were unilateral in 49 (59.76%) and bilateral in 33 (40.24%) patients. Cystic consistency was found in 67 (81.71%), while solid consistency was seen in 15 (18.29%). The capsule was intact in 79 (96.34%) and ruptured in 3 (3.66%) patients. Papillary excrescences were present in 16 (19.51%) cases. Exploratory laparotomy was the most common treatment and was performed in 72 (87.80%) patients, followed by minimal invasive surgery in 7 (8.54%), interval cytoreduction in 2 (2.44%) and chemotherapy in 1 (1.22%).

Table 1: Age distribution of patients with ovarian tumors

Age group (years)	Frequency	Percentage
11-30	18	21.95
31-50	38	46.34
51-70	24	29.27
71-90	2	2.44
Mean +/- SD	43.32 +/- 15.73	-
Range	14-80	-

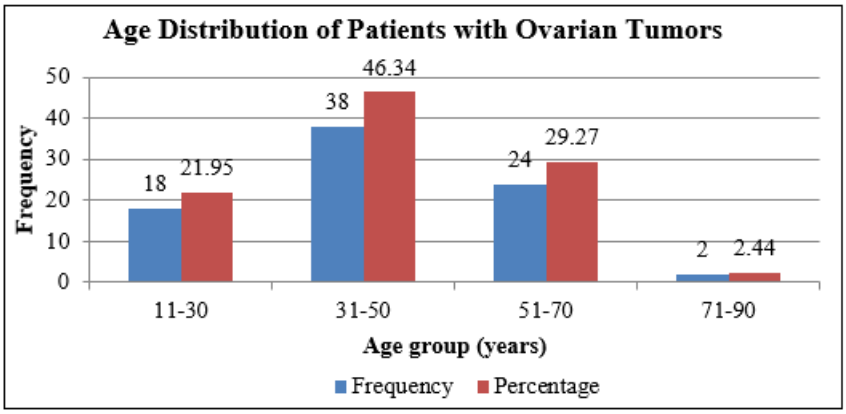


Table 2: Presenting symptoms of patients

Symptom	Frequency	Percentage
Pain abdomen	77	93.90
Abdominal distension	29	35.37
Menstrual irregularities	17	20.73
Infertility	1	1.22

Multiple responses were recorded.

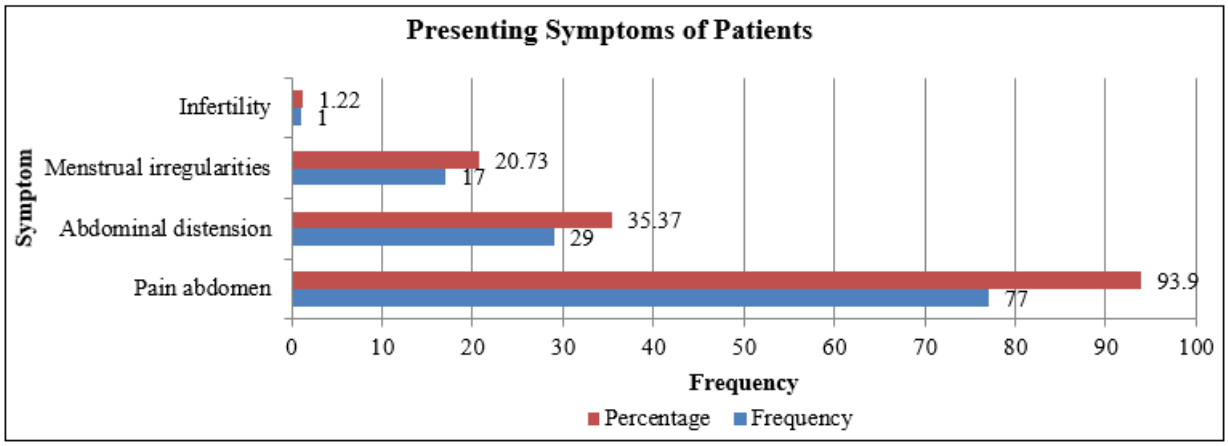


Table 3: Common histopathological types of ovarian tumors

Histopathological report	Frequency	Percentage
Serous cystadenoma	19	23.75
Mucinous cystadenoma	16	20.00
Mature cystic teratoma	13	16.25
Serous cystadenocarcinoma	11	13.75
Serous carcinoma	5	6.25
Other tumors	16	19.51

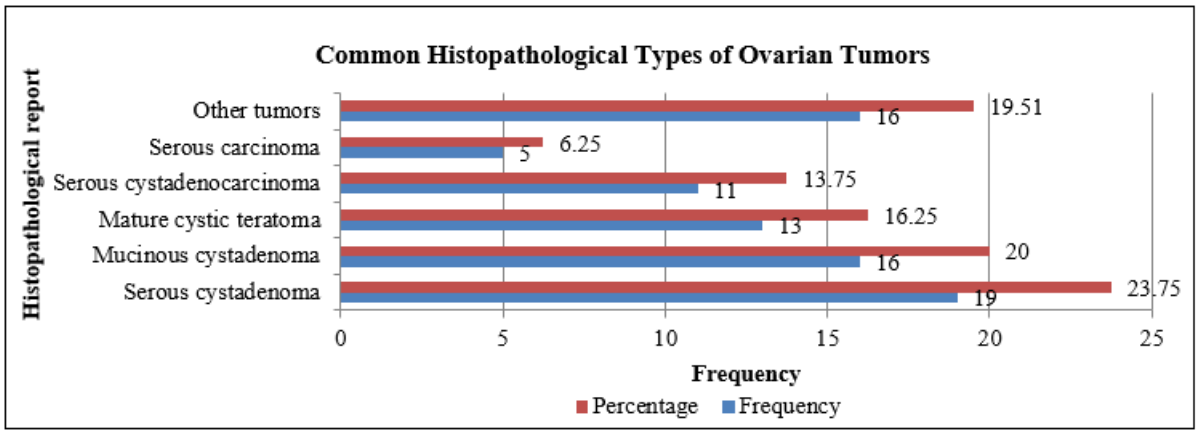


Table 4: Operative findings in patients

Operative finding	Frequency	Percentage
Ascites present	12	14.63
Unilateral tumor	49	59.76
Bilateral tumor	33	40.24
Cystic consistency	67	81.71
Solid consistency	15	18.29
Capsule ruptured	3	3.66
Papillary excrescences present	16	19.51

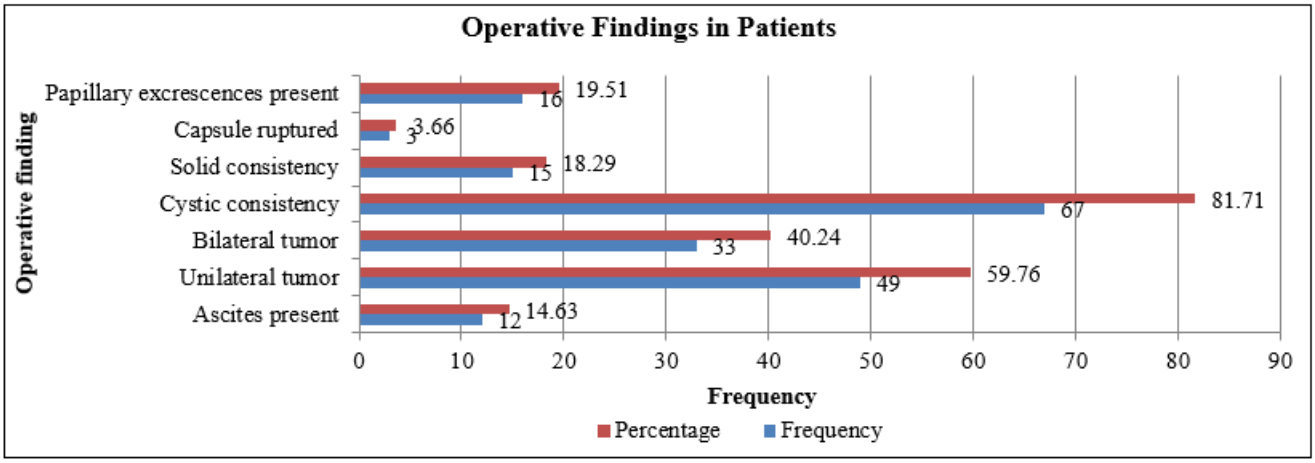
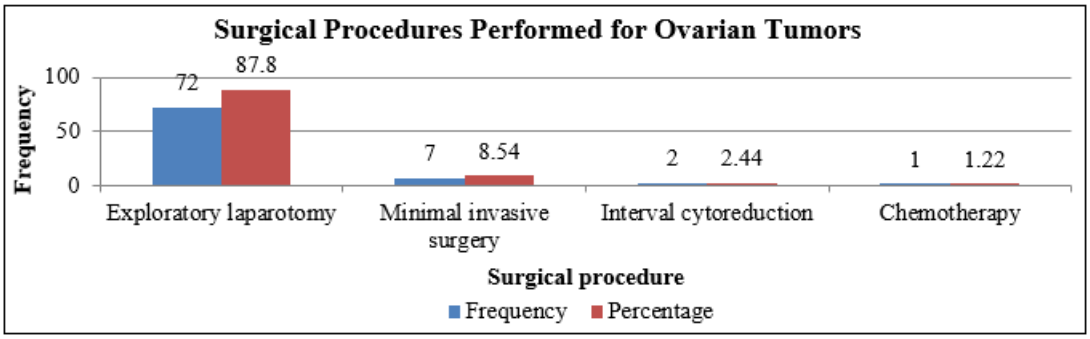


Table 5: Surgical procedures performed for ovarian tumors

Surgical procedure	Frequency	Percentage
Exploratory laparotomy	72	87.80
Minimal invasive surgery	7	8.54
Interval cytoreduction	2	2.44
Chemotherapy	1	1.22



5. Discussion

The present study demonstrates that ovarian tumors were most commonly seen in middle-aged women, with a mean age of 43.32 +/- 15.73 years and maximum cases in the 31-50 year age group. This finding supports the observation that ovarian tumors may occur throughout reproductive and post-reproductive life, but the burden increases in the peri-menopausal period. The wide age range of 14-80 years also emphasizes that ovarian tumors should be considered in both adolescent and elderly women presenting with pelvic or abdominal symptoms [7,8].

Pain abdomen was the dominant clinical complaint in this study, followed by abdominal distension and menstrual irregularities. These symptoms are common but nonspecific, which may delay diagnosis. Similar patterns have been described in other hospital-based studies where abdominal pain, abdominal lump, abdominal distension and menstrual complaints were frequent modes of presentation [9,10]. Therefore, persistent lower abdominal pain or distension in women should be evaluated carefully with pelvic examination and imaging.

Histopathologically, benign epithelial tumors were common, with serous cystadenoma and mucinous cystadenoma forming the largest groups. Mature cystic teratoma was also a frequent tumor, reflecting the contribution of germ cell tumors among ovarian neoplasms. Surgical management was guided by clinical suspicion, age, fertility desire, imaging findings and intraoperative assessment. Most patients underwent exploratory laparotomy, which was expected because many cases required definitive diagnosis, staging or removal of large tumors. Minimal invasive surgery was used in selected cases, while interval cytoreduction or chemotherapy was reserved for advanced or inoperable disease. Operative findings such as bilateral tumor, ascites, solid areas and papillary excrescences were clinically important because they may suggest malignant potential [11,12].

6. Conclusion

Ovarian tumors in this tertiary care hospital showed variable clinical presentation, histopathological pattern and surgical requirement. The majority of patients were middle-aged women, and pain abdomen was the most common presenting symptom. Abdominal distension and menstrual irregularities were also important complaints. Benign tumors, particularly serous cystadenoma, mucinous cystadenoma and mature cystic teratoma, were common, while serous cystadenocarcinoma was the leading malignant tumor.

Exploratory laparotomy remained the most common surgical procedure because many tumors required open removal, staging or cytoreduction. Minimal invasive surgery was useful in selected benign cases. Operative findings such as ascites, bilaterality, solid consistency, capsular rupture and papillary excrescences helped in intraoperative assessment but final diagnosis depended on histopathology. Early clinical suspicion, appropriate imaging, tumor marker evaluation and planned surgical management can improve diagnosis and outcome in women with ovarian tumors.

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