

# Incidence and Management of Ovarian Tumours

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## Abstract

**Objectives :** To find out the incidence of and suitable treatment of ovarian tumours across all age groups.

**Methods :** A retrospective study of 75 cases of ovarian tumours during a period of 3 years from July 2003 to June 2006.

**Results :** Most of the malignant tumours occurred above 40 years of age. Benign tumours were common in the age 21-40 years. The commonest tumour was epithelial in origin. Most of the patients presented with late stage disease when survival is limited.

**Conclusion :** Early detection, prompt treatment of tumour can reduce mortality.

## Introduction

Of all gynaecological cancers, ovarian malignancies represent the greatest clinical challenge. Ovarian cancer is the second most common malignancy of the female reproductive system and one of the leading causes of death among gynaecologic malignancies.<sup>1</sup> Because early ovarian cancer produces few specific symptoms, most women present with advanced disease where the prognosis is poor. Ovarian cancer represents a major surgical challenge requiring intensive and often complex therapies. It has the highest fatality-to-case ratio of all the gynaecological malignancies. A woman's risk at birth of having ovarian cancer sometime in her life is nearly 1.5% and that of dying from ovarian cancer is almost 1%.<sup>2</sup>

## Aims and Objectives

In this retrospective study, we wanted to find out the incidence of ovarian tumours to know the magnitude of the problem and to

study the clinical presentation, histological type and the result of treatment so that these relatively uncommon but lethal tumours can be treated in a better way in the future.

## Material and Method

A total of 75 cases of ovarian tumours managed at Department of Obstetrics and Gynaecology, Cama and Alless Hospital, Mumbai from July 2003-June 2006 are analyzed as regards the incidence, types, clinical picture, their diagnosis and management.

Careful history taking and physical examination were done. The routine investigations, tumour markers and USG were done and if required CT-scan. Depending on provisional diagnosis, surgical staging was done. Half the patients presenting in late stages were subjected directly to chemotherapy. In rest of the cases cystectomy, ovariectomy or TAH+BSO ± omentectomy or lymph node dissection etc was decided depending on age, family completion and suspicion of malignancy. Post-operative chemotherapy for 4-6 cycles was given depending on histopathology report.

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## Results

As shown in Table 1, out of the total of 75 women admitted with ovarian tumours, 40 (53.33%) were malignant across all age groups. Ovarian cancer is unusual before age 40, increases steadily thereafter and incidence is maximum after 40 years (72.5%). Of all the benign tumours, 28 (80%) were in the age group of 21-40 years. The youngest patient was 14 years and oldest was 73 years.

In our study, ovarian tumours were more common in multiparous patients (Table 2). Only 18.6% of patients were nulligravida and 4% patients had tumour associated with pregnancy.

\*Of the 75 ovarian tumours, 5 patients had terminal stage 4 disease, hence started on chemotherapy without any histologic diagnosis. Out of 35 benign tumours, if 8 cases (11.4%) of simple cyst were excluded, the commonest histopathological type was epithelial in origin (85.5%) of which the serous type is the commonest (Table 3).

Table 4 gives the signs and symptoms of the patients. The most common presentation was pain in abdomen in 100% patients, and

**Table 1 : Age**

	Malignant (n=40)		Benign (n=35)	
< 20	2	5%	1	3%
21 – 40	9	22.50%	28	80%
41 – 60	19	47.50%	6	17%
61 -80	10	25%	0	0

**Table 2 : Parity**

	Malignant (n=40)		Benign (n=35)	
Nulligravida	8	20%	6	17%
Para 1	1	2.5%	8	23%
Multipara	30	75%	19	54%
Pregnancy	1	2.5%	2	6%

abdominal masses in 66% patients. 8.6% patients were infertile. 14% patients had recurrence.

Table 5 depicts the results of investigations. 19 (25.3%) patients had bilateral tumours, 14 out of 19 were malignant. The most common bilateral tumour was papillary serous type. 27 patients (77%) had a cystic consistency and were benign tumours whereas 75% of malignant ovarian tumours had solid and cystic consistency. USG shows huge lump (more than 15 cms) in 13 cases (17%). Majority of malignant tumours were more than 10 cms in diameter. A good no. of benign tumours 51% were also more than 10 cms. CA-125 was raised in 23 patients of whom 22 patients had

**Table 3 : Type**

	Malignant (n=35*)	Benign (n=35)
1.Simple cyst (11.4%)		8
2.Epithelial (85.5%)		
Serous(70%)	23	15
Mucinous(27)	5	8
Endometriod(1.5%)	1	
Brenner(1.5%)	1	
3.Germ cell (9.6%)		
Dysgerminoma		2
Dermoid		2
Yolk sac	2	
4.Sex cord (3.2%)		
Granulosa	2	
5.Sec (1.6%)	1	

**Table 4 : Presentation**

Abd mass	50	66.60%
Pain in abd	75	100%
Distention	26	31%
Wt loss, anorexia	10	14%
Fever	4	5%
Infertility	6	8.60%
Recurrence	10	14%

malignant tumour.

Table 6 depicts details of management. Conservative fertility sparing surgery was a frequent option (62.8%) in benign tumours

**Table 5 : Investigations**

	Malignant	Benign
USG/ CT Scan		
1. Unilat	26	31
Bilat	14	4
2. Solid	4	0
solid + cystic	29(75%)	8
Cystic	7	27(77%)
3. Size		
5 - 10 cms	14	17
10 - 15 cms	8	13
15 - 20 cms	10	4
20 + cms	8	0
4. CA 125	22(56.6%)	1(3%)
Alpha foetoprotein	3(10%)	0

whereas only 3 patients with malignancy tumours were treated conservatively. Of the 40 malignancies, 5 received chemo directly. Most patients underwent TAH+BSO +omentectomy. 66.66% patients presented in late stage. They were subjected to debulking surgery and given post-operative chemotherapy. 2 patients with stage 4 disease, subjected directly to chemo expired. 2 patients received chemo before surgery. 10.6% of patients never followed up post operatively.

### Discussion

Generally ovarian cancer is a disease of peri and postmenopausal women. The risk of developing ovarian cancer peaks in the fifth decade of life,<sup>3</sup> which is comparable to our study. Ovarian cancer is seen with low parity and infertility<sup>4</sup>. However, the national survey of ovarian cancer, USA (1992) showed only

**Table 6 : Management**

Benign	ovariotomy/ cystectomy	23		
	TAH+BSO	12		
Malignant	Stage	Operation	Chemotherapy	
Serous	1a- 3	TAH+BSO	E+C - 1	2- no F/U
	1c- 1	TAH+BSO		1- no F/U
	2c- 2	TAH+BSO	E+C - 1	1- no F/U
	3c- 7	Debulking	E+C - 5	
			C+C - 1	
	S 4 - 5	Debulking	E+C - 3	
			C+C - 2	
Mucinous	1a- 1	Ovariotomy		1- no F/U
	1b- 1	TAH+BSO	C+C	
	3c- 2	Debulking	E+C - 1	1- no F/U
	S 4- 1	Debulking	E+C - 1	
Endometrioid	1c- 1	TAH+BSO	E+C - 1	
Brenner	1a- 1	Ovariotomy	C+ Etoposide	
Germ cell tumour				
Yolk sac	1a- 2	Ovariotomy	BEP - 1	
Sex cord tumour				
Granulosa cell tumour	2c- 2	TAH+BSO+LN Dissection		1- no F/U
		Recurrent mass removal		C+C - 1
Secondaries	S 4 - 1	Debulking		no F/U

8.2% patients were nulliparous.<sup>5</sup>

Approximately 90% of ovarian cancers are epithelial in origin with 75% being serous type. Less common are mucinous (20%), endometrioid (2%), clear cell, Brenner and undifferentiated carcinomas<sup>2</sup> which is comparable to our study. Upto 20 – 25% of all ovarian tumours are of germ cell origin, of these less than 5% are malignant.<sup>2</sup> Sex cord tumours account for about 5 – 8% of all ovarian malignancies.<sup>2</sup>

The commonest presentation was pain in abdomen, either acute or chronic. Most tumours are asymptomatic. When symptoms do develop they are vague and non-specific. Patients with advanced disease complained of swelling, fatigue, and weight loss. This emphasizes the need for patient and physician education concerning the possible relationship of rather nonspecific abdominal symptoms to ovarian cancer.<sup>6</sup>

Tumour size is not an important criteria in predicting malignancy in a mass. Majority of malignant tumours (57%) and a good no. of benign tumours (45%) are more than 10 cms.<sup>7</sup> The lack of sensitivity of CA 125 in early stage ovarian cancer and its inability to lower stage detection has limited its value as a screening method.<sup>6</sup>

Thus, although there have been advances in the evaluation and treatment of ovarian cancer, most patients continue to present with advanced disease when survival is limited. Surgery remains the cornerstone of treatment. To preserve the reproductive potential of young women with early disease, conservative surgery with frozen section can be performed. In advanced disease,

cytoreductive surgery reduces the tumour bulk to a point where subsequent chemotherapy will exert a maximal effect. follow-up is usually ignored by the patient once operated and recurrence is common (14% in our study).

### Conclusion

Ovarian cancer is one of the most challenging disease facing the gynaecologist. Most patients still present with advanced disease and till today there is no established treatment for them. Thus our aim should be early detection, thorough treatment and regular follow up.

### References

1. Malik A. *Obstet Gynaecol Today* 1997; 11: 17.
2. Scully RE, Young RH, Clement PB. Tumours of the ovary, maldeveloped gonads, fallopian tube, and broad ligament. In: Atlas of tumour pathology. Washington: Armed Forces Institute of Pathology; 1998; Fascicle 23, 3<sup>rd</sup> series.
3. Jenson, Norris HJ. Epithelial tumours of the ovary: occurrence in children and adolescents less than 20 years of age. *Arch Pathol* 1972; 94 : 29.
4. Negri E, Franceschi S, Tronou A, *et al.* Pooled analysis of these European case control studies of epithelial ovarian cancer: I, Reproductive factors and risk of ovarian cancer. *Int J Cancer* 1991; 49 : 50-56.
5. Averette HE, Hoskins W, Nguyen HN, *et al.* National survey of ovarian carcinoma. I. A Patient care evaluation study of the American College of Surgeons. *Cancer* 1993; 71 : 1629.
6. John R, Van Nagell, Jr, David M. Gershenson: Ovarian cancer: Etiology, Screening and Surgery. Te Linde's Operative Gynecology, ninth edition.
7. Sangwan Krishna, Chauhan Meenakshi, Balkesh Kumari, Sen Jyotsna. Correlation of transvaginal sonography with surgical evaluation in ovarian tumours- A prospective study. *J Obst and Gyn of India* 2002; 52 (3) : 100- 3.