

**MALIGNANT OVARIAN TUMOURS - A PROFILE**SAJI JACOB • K. LALITHA • KAVERI GOPALAKRISHNAN • M. KRISHNAN NAIR  
R. SANKARANARAYANAN**SUMMARY**

Ninety cases of malignant ovarian tumours were treated at Sree Avittam Trirunal Hospital, Medical College, Triruvananthapuram during Jan. 1988 to Jan. 1991. The peak age frequency was seen in the age group 46-55 yrs (25.3%). 64.4% of patients presented in advanced stage of disease (III and IV), while 25.5% were in stage I and 10% in stage II. The overall two year survival was 36%. The two year survival rate of malignant epithelial tumours depend on the clinical stage of the disease (I - 86%, II - 43%, III - 21%, IV - none), and the surgical treatment given (adequate surgery - 91%, debulking - 26%, Biopsy alone, none). Adequate surgery in stage I and II resulted in acceptable survival. In stage III debulking surgery had a better 2 year survival of 28%, compared to biopsy alone (0%).

**INTRODUCTION**

Ovarian cancers account for 8% of all female cancers in Kerala. Most patients are diagnosed only at an advanced stage of the disease. Even with radical surgery and adjuvant chemotherapy and/or radiotherapy the five year survival rate has not reportedly improved from 35 to 40% (Fignon et al, 1990). We report the survival experience and the factors that influenced survival of 90 patients treated by us.

**MATERIALS AND METHODS**

Ninety patients were treated in our department during the period January 1988 to January 1991. After clinical examination and investigations the patients were subjected to laparotomy. The patients were followed up regularly at the Regional Cancer Centre, Thiruvananthapuram. Chemotherapy and/or radiotherapy were given in 58 patients as part of initial treatment. 28 patients underwent second look laparotomy to know the response to treatment or for second surgery. All live patients were followed up during the period January 1992 to March 1992 and their present

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status evaluated. The data were computerised and analysed using SPSS programmes. The survival rates were calculated using Kaplan - Meier product limit method.

**OBSERVATIONS AND DISCUSSIONS**

The maximum frequency of the disease was observed in the age group of 46-55 years. (Chakraborty D. K., 1990), and the range being 2 years to 74 years. 41% of the patients were para three or above while 16% were nulliparous.

**AGE DISTRIBUTION OF MALIGNANT OVARIAN TUMORS (90 CASES)**

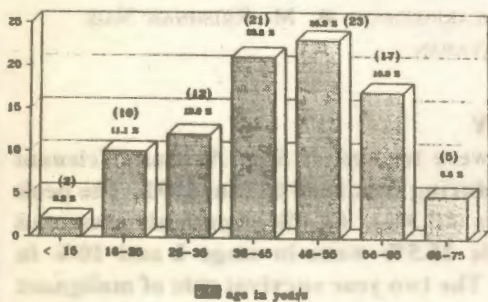


Fig. 1

The clinical presentations were of protean nature and the common symptoms were of advanced disease (Fig. 2). The most common symptoms were abdominal distension (53.3%), pain in abdomen (52.2%) and mass in abdomen (50%). In 40% of cases ascitic fluid cytology was positive for malignant cells, and ultrasonography detected ovarian pathology in 73.3% of cases.

Of the 90 cases 48 cases presented in stage III with majority in stage III c (38 cases), This was followed by stage I (n-23), stage IV (n-10) and stage II (n-9). (Table I). 71 cases (82.6%) were epithelial tumours, the commonest being papillary serous cyst adenocarcinoma (n-27), followed by Germ cell tumours (n-10), sexcord stromal tumours (n-4) and others (n-5). There was one case of Brenner tumour. 90% of patients with germ cell tumours were

**Distribution of Clinical presentation**

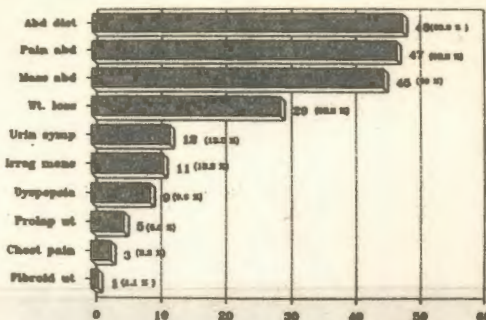


Fig. 2

in the younger age group. 73% of epithelial tumours presented in Stage III and IV where surgical cancer clearance was impossible while 70% of germ cell tumours presented in stage I and II where surgical cancer clearance was

**Table I**

**Surgical Staging of Malignant Ovarian Tumours (FIGO - 1988) (n - 90)**

Stage	Number of cases	Percentage
Stage I	23	25.5
I a	13	14.4
I b	2	2.2
I c	8	8.9
Stage II	9	10.0
II a	0	0
II b	3	3.3
II c	6	6.7
Stage III	48	53.3
III a	4	4.4
III b	6	6.7
III c	38	42.2
Stage IV	10	11.2



Table II

Table III

Surgical treatment of malignant ovarian tumours

	N	Percentage
Adequate Surgery	27	30
Cyto-reductive Surgery	50	55.5
Biopsy alone	13	14.5

Two year survival rates of malignant ovarian tumours by histology

	N	Percentage
Germ cell Tumours	60%	10
Strome & Others	57%	9
Epithelial Tumours	32%	71

possible. This has influenced the survival rate in each type of tumours.

The majority of patients (55.5%) had debulking surgery while adequate surgery was given in 27 cases (30%). (Table II) Biopsy alone was done in 13 cases due to inoperability of the tumour. Chemotherapy was the most common adjuvant therapy given (46.6%) followed by radiotherapy (18.8%), combination of radiotherapy and Chemotherapy (14%). Eighteen patients did not have any postsurgical treatment as they had adequate surgical cancer clearance at first laparotomy. 38% of cases had complete response with surgery and/or chemotherapy/radiotherapy while partial response was achieved in 35%. 5% had no response while 22% had progressive disease.

Of the 28 case who underwent second look laparotomy 1/3rd (n-10) had no evidence of macroscopic or microscopic disease while 2/3rd of cases (n-18) had positive evidence of disease. Of the positive cases 90.2% of cases were of stage III or IV, consistent with other studies (Ngan et al, 1989). The survival rate did not improve when second surgery was done along with second laparotomy (Hoskins W. J., 1989).

The overall two year survival was only 36% in our patients. The survival rate was influenced by the stage at diagnosis and the type of surgery done at first laparotomy. If adequate surgery was done, in stage I and II, the two

year survival rate was markedly improved - 91% in stage I (n-11) and cent percent in stage II (n-4).

Malignant germ cell tumours had 60% two year survival when compared to 32% two year survival in epithelial tumours (Table III).

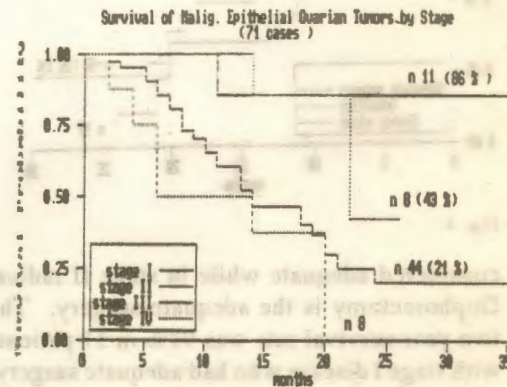


Fig. 3

Of the 71 cases of epithelial tumours, 11 cases in stage I had two year survival of 86%, II-43%, III-21% and IV-none alive (Fig. 3).

The two year survival rate was 91% in 15 patients who had adequate surgery; it was 26% in 45 patients who had cytoreductive surgery; and none in 11 patients who had biopsy alone. (Fig. 4) The adequate surgery differs according to the stage of disease. In stage I total Abdominal Hysterectomy with Bilateral Salpingo - Oophorectomy and/or Omentectomy was

Table IV

## Two year survival of malignant ovarian epithelial tumours by surgery

Adequate Surgery 91% (n - 15)			Debulking Surgery 26% (n - 45)			Biopsy alone 0% (n - 11)		
Stage	%	N	Stage	%	N	Stage	%	N
I	91	11	II	38	4	III	0	8
II	100	4	III	28	36	IV	0	3
			IV	0	5			

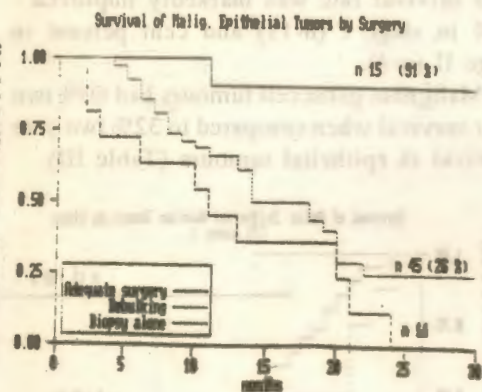


Fig. 4

considered adequate while in stage II radical Oophorectomy is the adequate surgery. The two year survival rate was 91% in 11 patients with stage I disease who had adequate surgery; and was cent percent in 4 patients with stage II disease (table IV). Out of the 45 patients who had debulking surgery, the two years survival rate was 38% in stage II (n-4); it was 28% in stage III (n-36). All the five patients in stage IV who had debulking surgery died within 20 months from diagnosis.

All the 8 cases in stage III who had only biopsy died at the end of two years whereas patients who had debulking had 28% two year survival. (Table IV) Hence debulking surgery especially in stage III improve the survival. This correlates with other studies (Hoskins W.

J., 1989; Heintz A. P. et al, 1988). The number of complete clinical response and the number of complete pathological response were maximum in patients who had minimal residual disease after debulking. Even though all stage IV patients who had debulking or biopsy died, in patients who had debulking surgery the individual duration of survival was improved.

## CONCLUSION

In our study of malignant ovarian tumours 64.4% presented in advanced stage disease. The clinical presentations were of protean nature such that the diagnosis can be obtained only with a high index of suspicion by the gynaecologist. 71 patients out of 90 had epithelial tumours, 73.2% of which were in stage III and IV. The survival rate depends on stage at diagnosis and the type of surgery at first laparotomy. Adequate surgery in stage I and II resulted in acceptable survival. In stage III and IV debulking surgery with minimal residual disease (Less than 2 cm) at first laparotomy gave better survival compared to biopsy alone. This study emphasizes the importance of cancer clearance surgery at first laparotomy in the management of malignant ovarian tumours.

## REFERENCES

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