

## ANALYSIS OF OVARIAN TUMOURS IN TEENAGE

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### SUMMARY

Keeping in mind that ovary is never too young or old to produce a tumour, study of ovarian tumours in teenage was carried out of Govt. Medical College and Hospital, Nagpur over a period of 7½ Yrs, starting from January 1985. During this period a total of 268 cases of ovarian tumour were admitted. Out of which 63 (23.5%) were in the teenage group.

The disease was more prevalent in nulliparous and unmarried females (85.1%). Most of the patients (61.9%) presented with lump in abdomen, while only 14.13% had amenorrhoea.

Incidence of benign, malignant & nonneoplastic tumours was 59.4%, 24.3% and 16.3% respectively.

Right ovary was the more common site of involvement. Most of the cystic swellings were either benign or nonneoplastic while almost all solid & mixed tumours were malignant.

Germ cell tumours were more frequently observed & constituted 54% of all cases. Dysgerminoma was the commonest of all malignant tumours (38.9%).

Surgery was undertaken for most of the patients while some cases required either chemotherapy, radiotherapy or both in addition to surgery. One patient was given chemotherapy only, as she was unfit to undergo surgery.

### INTRODUCTION

Although ovarian tumours are one of the leading disorders in gynaecology, they are overshadowed by the frequency of cervical malignancies in India. Ovarian tumours, par-

ticularly at a tender teenage pose special threats as they often mislead the diagnosis and when they exist, 2/3rd of them are potentially malignant.

Of late, the recent advances in diagnostic aids like ultrasound, CT scan and NMR are however changing the previous scenario. So that most of the ovarian tumours in teenage can be diagnosed earlier.

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Accepted for Publication on 30.11.1992.

The present study was undertaken to analyse the incidence, type and nature of ovarian tumours in teenage, which will enable us to know the present trends and will also open a door for introspection in future.

#### MATERIAL & METHODS

The present study was carried out at Govt. Medical College & Hospital Nagpur over a period of 7½ Yrs. beginning from Jan. 1985. Out of all the cases of ovarian tumours, teenagers were selected for the study. The proforma included careful history, general and systemic examination, pelvic examination, routine investigations like HBL, TLC, DLC, platelet count blood group and urine examination, and special investigations like X-ray abdomen & chest, ultrasound examination in some cases.

Endometrial biopsy was taken to determine the endometrial histopathology. All patients except one, underwent laparotomy. Gross appearance of the excised tumours was studied and tumours were sent for histopathological examination as well. Further management was decided depending upon surgical staging and histopathology reports.

#### OBSERVATIONS

Overall there were 268 cases of ovarian tumours, out of which 63 i.e. 23.5% were in the teenage (Table I). Amongst them, 29.8% were nulliparous 14.9% were parous & 55.3% were unmarried. This suggests the prevalence in nulliparous teenagers.

Most of the patients i.e. 61.9% presented with a lump in abdomen while 39.7% had some menstrual disturbances (14.3% having amenorrhoea) and 7.9% presented with symptoms suggestive of torsion (Table II). Ascitis was associated in 7% cases while pregnancy coexisted in 4.7% cases.

Table III suggests frequent involvement of the right ovary i.e. in 42.66% as compared to 27% in left ovary the remaining being bilateral tumours.

Nature of the tumours on gross examination is shown in Table IV. Most of the cystic swellings were either benign or nonneoplastic while almost all the solid and mixed tumours were malignant.

Germ cell tumours were most common, constituting 54% of all the cases (Table V).

Incidence of malignancy was 24.3%

Table I

Age wise distribution of ovarian tumour cases

Sr. No.	Age in Years	No. of Cases	Percentage
1.	13 - 19	63	23.5%
2.	20 - 29	87	32.5%
3.	30 - 39	56	21.0%
4.	40 - 49	38	14.0%
5.	50 - 59	17	6.5%
6.	60 - 69	5	2.0%
7.	70 & above	2	0.5%
	Total	268	100%

**Table II**  
Symptomatology of patients in the present study

Sr. No.	Symptom	No. of Cases	Percentage
1.	Lump in abdomen	39	61.9%
2.	Menstrual disturbances. (amenorrhoea)	25 9	39.7% 14.3%
3.	Chronic pain in abdomen	29	46.0%
4.	Pressure Symptoms	5	7.9%
5.	Symptoms due torsion	6	9.2%
6.	Prolapse	16	1.5%

**Table III**  
Site of involvement & Nature of tumour

Sr. No.	Nature of tumour	Unilateral				Bilateral				Total	%
		Rt	%	Lt	%	Rt	%	Lt	%		
1.	Benign	21	28.4	12	16.2	7	9.5	4	5.4	44	59.5
2.	Malignant	10	13.5	7	9.5	1	1.3	—	—	18	24.3
3.	Nonncoplastic	1	1.3	1	1.3	3	4.1	7	9.5	12	15.2
Total		32	43.2	20	27	11	14.9	11	14.9	74	100

**Table IV**  
Relation of nature of tumour with gross pathology of tumour

Sr. No.	Nature of tumour	Solid	%	Cystic	%	Mixed	%
1.	Benign	—	—	42	56.8	2	2.7%
2.	Malignant	12	16.2	—	—	6	8.1
3.	Nonncoplastic	—	—	12	16.2	—	—
Total		12	16.2	54	73	8	10.8

(18 cases) dysgerminoma being the most common histological type (38.9%) (Table VI).

Most of the patients presented in stage I (61.1%), 33.3% in stage III & 5.6% in stage IV.

In three cases tumour was inoperable. (A case each of cystadenocarcinoma & adenocarcinoma)

53 patients (84.1%) underwent surgery either as a curative or cytoreductive procedure. 3 patients (4.8%) received chemotherapy in addition to surgery. These included a case of grade I teratoma and 2 cases of malignant teratoma. One patient out of this died 2 months

offer starting chemotherapy. 5 patients (7.93%) received radiotherapy after surgery (out of this one had recurrence 6 months after completion of radiotherapy). 1 patient (1.6%) received only chemotherapy as she was declared unfit to undergo surgery. Table VII shows the distribution according to the type of treatment given. Nine patients in our series were lost to follow up.

Most of the nonneoplastic ovarian enlargement were follicular cysts.

#### DISCUSSION

A 23.5% incidence of ovarian tumours in

Table V

#### Incidence of Germ cell & Non Germ cell tumours

Sr. No.	Nature of tumour	Germ cell tumours	%	Non Germ cell tumours	%
1.	Benign	26	35.1	18	24.3
2.	Malignant	14	18.9	4	5.4
3.	Nonneoplastic	—	—	12	16.3
Total		40	54	34	46

Table VI

#### Histopathological analysis of malignant ovarian tumours in present Study

Sr. No.	Type of tumour	No. of Cases	%
1.	Serous cystadenocarcinoma	—	—
2.	Mucinous cystadenocarcinoma	2	11.1
3.	Adenocarcinoma	1	5.6
4.	Malignant teratoma	3	16.7
5.	Dysgerminoma	7	38.9
6.	Endodermal Sinus Tumour	5	27.7
Total		18	100.0

Table VII

## Distribution of patients according to type of Treatment given

Sr. No.	Type of tumour	No. of Cases	%
1.	Surgery	53	94.1
2.	Surgery + Chemotherapy	3	4.8
3.	Surgery + Radiotherapy	5	7.9
4.	Surgery + Chem. + Radiotherapy	1	1.6
5.	Chemotherapy Only	1	1.6
Total		63	100.0

teenage in the present study correlates well with the 20.96% incidence quoted by Lahiri (1976). Although Olshausen (1942) gave this incidence as 60%, it should be noted that his study included patients even below 13 Yrs. of age.

Symptomatically, lump in abdomen was noticed in 61.9% of patients in our study while it was found 82.93% cases by Lahiri (1976). Deshpande's study (1983) quoted amenorrhoea as a leading symptom in 29.41% while we found it only in 14.3 cases.

Right ovary as a commoner site of involvement was noticed in 42.66% of cases by us, which matches well with the findings of Dart (63.89%). Incidence of malignancy in present study was 24.3% while it was 58.54% in Deshpande's study & 23.22% in Lahiri's (1976) study.

### CONCLUSION

Possibility of ovarian tumour should always be kept in mind whenever a teenaged

female approaches a gynaecologist. This is more so because most of the ovarian enlargements in this age group are new growths from ovary and the disease often presents at a later stage. An attempt towards early diagnosis should be followed by a proper staging during exploratory laparotomy. For tumours which appear benign clinically, unilateral oophorectomy with careful inspection of contralateral ovary and frozen section examination should suffice. Subsequent management should depend on the histopathology report. Radiotherapy & chemotherapy are best avoided in teenagers to keep her obstetric hopes alive and to avoid subsequent possibility of genetic mutations.

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