

OVARIAN NEOPLASMS - A 14 YEARS STUDY

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SUMMARY

Analysis of 190 consecutive ovarian neoplasms observed during the period of 14 years showed 129 (67.9%) benign tumors and 61 (32.1%) malignant neoplasms. Cystic or partly cystic consistency was more commonly seen in the benign tumors (91.4%) whereas among malignant tumours 52.5% were solid tumours. Mucinous cystadenoma was the most common benign tumour (21.6%) followed by 19.5% of serous cystadenomas and 16.9% of dermoid cyst of ovary. Serous adenocarcinoma was commonest malignant tumour with 11.1% followed by 5.3% of dysgerminoma and 4.7% of mucinous adenocarcinoma. Borderline malignant cases comprised of 7 cases including 3 cases of serous adenocarcinoma, 2 cases of mucinous tumour and 2 cases of teratoma.

The age range in benign tumour was 7 months to 70 years and that in malignant ones 8 to 63 years.

INTRODUCTION

In the female genital tract, ovary is unique in that it is relatively resistant to most diseases except perhaps to neoplasia and it is the third most common site of primary malignancy in the female genital tract. Ovarian malignancy accounts for 6% of

all cancers in the females (Cotran et al 1989). The ovarian tumours present a wide variation in the clinical and morphological features. Wide variation persists in its incidence in various parts of the world including India. The present article aims at a retrospective study of the incidence of ovarian tumours and the different morphological types in a setting of teaching hospital in rural

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Bengal over a period of 14 years.

MATERIAL AND METHODS

The materials of the present study were confined to consecutive cases of ovarian neoplasms both benign and malignant as recorded in the department of Pathology, Burdwan Medical College, Burdwan, W.B. during the period of 14 years (1980-1994). The materials were all surgically resected specimens. The tissues as removed at operation were all subjected to gross and microscopic examinations. Sections from different areas of the specimens were stained routinely by haematoxyline and eosin stain and by PAS, reitriculin and Masson's trichrome stains wherever applicable. The cases were classified according to the classification proposed by Novak and by the International Federation of Gynecology and Obstetrics (Novak and Woodruff 1979).

OBSERVATIONS AND DISCUSSION

A total of 190 cases of ovarian neoplasm were documented during the study period. Non-neoplastic cysts such as luteal cysts and follicular cysts were excluded. Out of 190 cases, benign neoplasm were observed in 129 cases (67.9%) and the remaining 61 (32.1%) were malignant of which 7 were considered as borderline malignancy. Similar results have been reported by other workers. Gupta et al (1986) over a period of 20 years observed 59.4% benign tumours, 40% malignant ones and 2 borderline cases. Prabhakar and Maingi (1989) also observed 66% benign tumours and 31.6% malignant tumours out of 636 cases. Radhawa and Lata (1980) similarly reported 62.2% benign and 34.8% malignant ovarian tumours. Mukherjee et al (1991) in their 10 years

study report with 285 cases observed the incidence of benign neoplasm as 63.5% as against 36.5% of malignant ovarian tumour. The range of age in our study was 7 months to 70 years. While the youngest one (7 months age) had a benign cystic teratoma (Dermoid cyst), the eldest (70 years) had a mucinous cystadenoma. Among the malignant tumours the youngest patient was 8 years old with endodermal sinus tumour and the eldest member was 63 years of age having serous cystadenocarcinoma. The majority of the cases were observed in the 3rd and 4th decades of life in our study. Such findings are in agreement with those of Gupta et al (1986) and Prabhakar and Maingi (1989). The occurrence of different types of ovarian neoplasm with age range has been shown in Table I.

The macroscopic examination of the specimens revealed that majority of the tumours were cystic in benign case. Of the 129 benign, tumours, 118 (91.4%) were cystic or partly cystic in consistency and 11 (8.6%) were solid. In all malignant group (61 cases) tumours (52.5%) were solid in comparison to 7 (11.5%) totally solid tumours. The remaining 22 cases (36%) were of mixed consistency. Gupta et al (1986) observed 76.2% cystic, 2.4% solid and 21.5% mixed consistency in their benign tumours and 49.2% solid and 44.1% of mixed consistency in the malignant tumours. Prabhakar and Maingi (1989) reported similar incidence of solid, cystic and mixed consistency in the benign group but in the malignant group, mixed consistency was observed in majority of cases. Similar observations were also made by Mukherjee et al (1991). However they did not include

TABLE I
INCIDENCE OF BENIGN AND MALIGNANT OVARIAN NEOPLASM
TOTAL CASES - 190

Type	Incidence		Age range in years. (mean)	Cystic	Consistency	
	No. of cases	Percent			Solid	Mixed
I Surface epithelial tumours						
1. Serous tumours						
i. Cystadenoma	37	19.5	20-55 (33)	37	-	-
ii. Cystadenofibroma	1	0.5	24	-	-	1
iii. Papillary Cystadenoma.	7	3.7	22-42 (29)	7	-	-
iv. Borderline malignancy	3	1.6	32-46 (38)	-	-	3
v. Adenocarcinoma	21	11.1	36-63 (44)	4	13	4
2. Mucinous tumours						
i. Cystadenoma	41	21.6	10-70 (41)	39	-	2
ii. Borderline malignancy	2	1.0	28-48 (38)	1	-	1
iii. Adenocarcinoma	9	4.7	20-50 (39)	2	3	4
3. Endometrioid carcinoma						
4. Clear cell carcinoma	4	2.1	33-45 (37)	-	4	-
5. Brenner tumour	1	0.5	41	-	1	-
II Sex cord tumours.						
1. Granulosa cell tumour	3	1.6	12-45 (32)	-	3	-
2. Thecoma	3	1.6	22-26 (24)	-	3	-
3. Thecofibroma	3	1.6	22-40 (34)	-	3	-
4. Arrhenoblastoma	1	0.5	42	-	1	-
III Germ cell tumours						
1. Dysgerminoma	10	5.3	18-40 (28)	-	10	-
2. Endodermal sinus tumour	4	2.1	8-19 (13)	-	1	3
3. Teratoma						
i. Benign cytic	32	16.9	7/12-40 (26)	32	-	-
ii. Solid benign (struma ovarii)	1	0.5	40	-	1	-
iii. Borderline	2	1.0	36-41 (39)	-	-	2
iv. Malignant	3	1.6	11-43 (31)	-	-	3
4. Malignant mesonephroma	1	0.5	25	-	-	1

mixed consistency as a separate group.

Mucinous cyst-adenoma was the commonest benign tumour. A total of 41 cases (21.6%) was observed. It was followed by 32 cases (16.9%) of benign teratoma. Next in frequency was the serous cystadenoma with 37 cases (19.5%). Gupta et al (1986) and Mukherjee et al (1991) however observed benign cystic teratoma as the commonest benign tumour closely followed by mucinous cystadenoma. Serous cystadenoma was reported as the most frequent type by Randhawa and Lata (1980) and Prabhakar and Maingi (1989) followed by the mucinous cyst-adenoma. Maheswari et al (1994) also observed serous cystadenoma to be the commonest (32.2%) followed by the mucinous cystadenoma. Graulosa cell tumour and thecofibroma were observed in 3 cases (1.6%) each, which is very close to the findings of different authors in the literature (Saxena et al 1980, Gupta et al 1986, Mukherjee et al 1991).

Among the malignant ovarian tumours, we have observed serous cystadenocarcinomas to be the commonest type with 21 cases (11.1%) followed by mucinous carcinomas (9 cases (4.7%)). This is in agreement with majority of the studies in the Indian literature (Randhawa and Lata 1980, Sikdar et al 1981, Gupta et al 1986, Mukherjee et al 1991). However there are

a few reports of mucinous carcinoma to be more common than the serous ones as observed by Saxena et al 1980, Maheswari et al 1994. Dysgerminoma was the commonest (5.3%) malignant germ cell tumour followed by the 2.1% of endodermal sinus tumour. No case of anaplastic carcinoma, choriocarcinoma or metastatic tumour in ovary was observed by us in the present series. Perhaps relatively small size of our study could explain this disconcerting observation:

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