OVARIAN TUMOURS IN GOA : A CLINICOPATHOLOGICAL STUDY

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SUMMARY

343 cases of ovarian Tumours were studied for the 10 years between 1980-1989 at the Goa Medical College. The highest incidence occured in the reproductive age group of 20 to 49 years. The commonest benign tumours were the Cystadenomas (both Serous and Mucinous) with 187 cases, followed by Benign Cystic Teratoma with 53 cases. In the malignant variety the commonest tumours were again the cystadenocarcinomas with 33 cases. Of the 343 cases studied, 277 were benign, 58 malignant and 8 of borderline malignancy. The commonest presenting features were mass of distention of abdomen either singly or associated with other symptoms most commonly pain. The endometrium was also studied and co-related.

INTRODUCTION

The present study was undertaken to review and study the common morphological and histological types of ovarian tumours, their various clinical presentations and relative incidence in this part of our country; and also to corelate the various tumours with the endometrial pattern, wherever possible.

MATERIALS AND METHODS

A total of 343 cases of ovarian tumours were studied from 1980 to 1989 in the Department of Pathology, Goa Medical College. The gross and microscopic features of each tumour, clinical criteria like age, various signs and symptoms, menstrual irregularities, any virilising or feminising effects and signs of metastasis in malignant tumours were noted. A Gross examination of each tumour was carefully done and pieces put from representative areas and studied microscopically. The tumours were classified as per World Health Organisation Classification of Ovarian Tumours.

RESULTS

Of the 343 cases studied most occured between 20 to 59 years, peak incidence being

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Table I

Table showing the Age, Symptoms and signs, certain gross Pathological Features and percentage wish distribution of various histologic types of ovarian tumours

Histologic Type	Age range in years	Main Symptoms & Signs	Uni/Bilateral	Solid/ Cystic	Total Cases	%
I) Tumours of surface epithelium :						
A) Serous Tumours						
i) Serous Cystadenoma	7 - 88	Mass, Bleeding	101U, 3B	104C	104	30.32%
ii) Borderline serous Tumour	20 - 49	Mass	2U, 1B	3SC	3	0.87%
iii) Serous Cystadenocarcinoma	25 - 70	Mass	15U, 11B	25SC	26	7.58%
iv) Cystadenofibroma	17 - 65	Mass	13U	13SC	13	3.79%
B) Mucinous Tumours						
i) Mucinous Cystadenoma	16 - 70	Mass	82U, 1B	83C	83	24.20%
ii) Bordeerline Mucinous Tumour	25 - 65	Mass	5U	5SC	5	1.46%
iii) Mucinous cystadenocarcinoma	19 - 51	Mass	7U	7SC	7	2.05%
C) Endometroid Carcinoma	-	-	-	-	0	0
D) Clear Cell Carcinoma	-	-	-	-	0	0
E) Brenner's Tumour	25 - 70	Mass	6U, 2B	6S, 2SC	8	2.33%
F) Undiffrentiated Carcinoma	22 - 70	Mass	4U	RS	4	1.17%
II) Germ Cell Tumours :						
A) Teratomas						
i) Benign Cystic Teratoma	13 - 54	Mass, Pain Bleeding	48U, 5B	53SC	53	15.45%
ii) Immature Teratoma	22 - 40	Mass	4U	rS	4	1.17%
(i.e. Struma Ovarii)	65	Mass	1U	1S	1	0.29%
B) Dysgerminoma	13 - 35	Mass	10U	10S	10	2.90%
C) Endodermal Sinus Tumour	27	Mass, Ascites	1U	1S	1	0.29%
D) Choriocarcinoma	30	Mass, Pain Bleeding	1U	1S	1	0.29%
E) Others (Embryonal Carcinoma, etc.)	-	-	-	-	0	0
III) Sex chord stromal Tumours						
A) Granulosa Cell Tumour						
i) Granulosa Cell Tumour	50 - 64	Mass	4U	4S	4	1.17%
ii) Thecoma	55; 71	Mass, Bleeding	1U, 1B	2S	2	0.58%
iii) Fibroma	22 - 65	Mass	7U, 1B	7S, 1SC	8	2.34%
B) Sertoli Leydig Cell Tumour	-	-	-	-	0	0
C) Gonadoblastoma	-	-	-	-	0	0
IV) Unclassified						
i) Leiomyoma	37	Mass	1U	1S	1	0.29%
V) Metastatic (Krukenberg's)	19 - 38	Mass, Ascites	5B	5S	5	1.46%
Total			313U, 30B	187C 46S 110SC	343	100.00%

Abbreviations : U - Unilateral, B - Bilateral, S - Solid, C - Cystic, SC - Solid to Cystic

in the reproductive age group of 20 to 49 years showing 243 cases (70.86%). The youngest patient was 7 years old, oldest 88 years. Mass in abdomen either as a single symptom or associated with other symptoms occured in 90.2% of cases. Pain associated with the mass or as a combination of pain, mass in abdomen and irregular menstrual bleeding occured in 39.26% of cases. Ascites was found along with mass in 4.91% cases, and all these were malignant. The Gross features of the tumours studied showed 313 cases (91.25%) were unilateral whereas 30(8.75%) bilateral. Smallest size of tumour was 1.5 x 1 x 1 cms, the largest 50 x 50 x 40 cms. Gross pathology showed 61.23% tumours cystic, 28.57% solid to cystic and 10.20% solid. Of the 343 tumours, 277(80.76%) were benign, 58(16.91) malignant and 8(2.33%) borderline malignant. Combining the last two figures combined malignant percentage works out to 19.24%. Of the malignant tumours 41(70.69%) showed metastasis whereas 17(29.31%) did not. The high incidence of metastasis can be accounted for by the fact that most patients in our study came to hospital in the late stage of the disease.

DISCUSSION

All the tumours were examined and confirmed histologically (Refer Table I).

Serous Tumours

Serous cystadenoma was the commonest tumour with 104 cases (30.32%). Hertig and Gore (1961) and Tyagi et al (1978) reported 29.1% and 31.54%. On Gross examination the largest size was 40 x 40 cms. Borderline serous tumour was seen in 3 cases (0.87%) and all had papillary projections in the wall. Serous cystadenocarcinoma comprised 7.58% with 26 cases. Ramchandran et al (1972) reported 7.09%. 10 cases had ascites and 21 had metastasis mostly to the omentum. Gross examination showed cystic specimens with greyish white friable papillary projections. Cystadenofibromas were present in 3.79% (13 cases). Cut section showed cyst with papillary projections.

Mucinous Tumours

Mucinous cystadenoma was the commonest mucinous tumour with 83 cases (24.20%). Hertig and Gore (1961) reported 23.8%. Largest tumour was 50 x 50 x 40 cms. 80 cases were multilocular and the cysts were filled with mucinous material. Borderline mucinous tumour was seen in 5 cases (1.46%). Prabhakar and Maingi (1989) reported 1.41%. Largest tumour was 50 x 50 cms. Mucinous cystadenocarcinoma was seen in 7 cases (2.05%), like Tyagi et al (1967) who reported 2.50%. Largest size of tumour was 40 x 35 cms.

Brenner's Tumour

8 cases (2.33%) of Brenner's tumour were seen in this study. Silverberg (1971) reported a lower percentage of 1%. One of the patients had cystic hyperplasia of the endometrium.

Undifferentiated Carcinoma

4 cases (1.17%) were seen. Tyagi et al (1967) reported 1.67%.

Teratomas

Mature Teratoma in form of benign cystic teratoma (dermoid cyst) were seen in 53 cases (15.45%). This figure lies between 12% and 17.5% as reported by Mehta and Purandare (1964) and Kent and McKay (1960). Largest tumour was 30 x 30 cms. Malignant teratomas were seen in 4 cases (1.17%). Prabhakar and Maingi (1989) reported 0.94%. Two cases (0.58%) showed malignant change in dermoids, one primary malignant melanoma and other squamous cell carcinoma. The other two cases were immature teratomas. Specialised teratomas were represented in our study by 1 case (0.29%) of struma ovarii.

Dysgerminoma

This tumour was present in 10 cases (2.90%).

Jagdeeshwari et al (1971) and Gupta et al (1986) reported 3.4% and 3.53%.

Endodermal Sinus Tumour

One case (0.29%) of this rare malignant tumour was seen. Prabhakar and Maingi (1989) reported 0.31%. The tumour was unilateral, 12 x 8 x 4 cms. Cut section showed solid yellowish grey areas, necrosis and haemmorage. The alpha feto protein level was very high.

Choriocarcinoma of the Ovary

Another rare tumour seen in 1 case (0.29%). Prabhakar and Maingi (1989) and Jagdeeshwari et al (1971) quoted 0.15% and 0.40%. The left ovary was replaced by a tumour 8 x 8 x 6 cms, fribale, spongy and haemmoragic. The endometrium showed decidual change.

Granulosa Cell Tumour

4 cases (1.17%) were seen. Chitkara and Sharma (1957) reported 0.76% cases. One had irregular post menopausal bleeding. Her endometrial curretage showed cystic glandular hyperplasia. Cut section showed yellowish appearance. The largest size was 14 x 10 x 10 cms.

Thecoma

2 cases (0.58%) were seen. Prabhakar and Maingi (1989) report 0.78%. One patient had hyperplasia of the endometrium, the other adenomatous hyperplasia. The larger tumour measured 10 x 8 x 8 cms. Cut section of both had a orange yellow appearance.

Fibroma

8 cases (2.34%) were seen in this study, similar to the figures of 2.35% of Gupta et al (1986). Of these, 2 cases (0.58%) were fibrothecomas, who showed cystic glandular hyperplasia in their endometrium. The largest was 10 x 8 cms.

Leiomyoma

A single case (0.29%) of Leiomyoma of the ovary was seen in this study.

Krukenberg's Tumour

5 cases (1.46%) of Krukenberg Tumour were seen in this series, similar to 1.57% of Prabhakar and Maingi (1989). Largest size was 30 x 15 x 15 cms one side with 15 x 10 x 10 cms ovary other side. Cut section was greyish white with mucinous areas at places.

Endometrial Pattern

Endometrial pattern of the patients was studied wherever possible. Proliferative endometrium was seen in 99 cases (28.86%) whereas secretory endometirum in 71 cases (20.70%), most patients being reproductive age group of 20 to 45 years. Atrophic endometrium was seen in 68 cases (19.83%), all post-menopausal women. These three patterns were seen in all types of ovarian tumours with no specific co-relation between tumour and endometrium. Endometrial hyperplasia was seen in 6 cases (1.75%). 2 granulosa cell tumours, 2 thecomas, one Brenner's tumour and one mucinous cystadenoma, borderline malignant. Decidual change was seen in 2 cases (0.58%) one patient was on hormones, other a case of primary choriocarcinoma of ovary. In 5 cases (1.46%) the curretings showed products of conception, all being cases of ovarian tumours associated with early pregnancy, the patient having come to hospital primarily due to the signs and symptoms caused by the ovarian tumour. 12 pregnant patients (3.50%) had their ovarian tumour detected during routine antenatal checkup. Dilatation and curretage was not done in 21 patients (6.12%) who were unmarried and no data, was available in 59 cases (17.2%). Hence, in general, there was no specific co-relation between ovarian and endometrial pattern. However, in contrast to this, functional ovarian tumours did have a definite effect on the endometrium in the form of endometrial hyperplasia, decidual change, etc. as already highlighted earlier.

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