A CLINICOPATHOLOGICAL STUDY OF 107 OVARIAN TUMOURS

Pages with reference to book, From 194 To 197

Muhammad Muzaffar (Departments of Gynaecology, Army Medical College, Rawalpindi.)
Iftikhar A. Malik, Saeeda Ashraf (Departments of Pathology, Army Medical College, Rawalpindi.)

Abstract

One hundred and seven patients operated for ovarian tumours were assessed clinically and histologically. Most patients were multiparous, between 19-39 years of age, presenting with low abdominal pain, pelvic mass, vague gastrointestinal symptoms and bleeding per vaginum. Histologically 72.85% tumours were benign and 27.06% malignant. Mucinous epithelial tumour was the commonest type of tumour. Serous epithelial tumours were 22 (14 benign, 8 malignant). There were 33 teratomas of ovary, majority being benign and only 2 were malignant. The tumours of stromal cell origin were seen in 6.5% cases (JPMA 37: 194, 1987).

INTRODUCTION

In 1977 ovarian cancer was the fifth common fatal form of cancer in USA.[1] The epithelial ovarian tumours constituted about two third of all the primary ovarian neoplasms whereas malignant epithelial tumours were about 90% of all the ovarian cancers. The remaining 10% were mostly of the germ cell and sex cord stromal origin. [2]

In majority of the menopausal women, the observation of a palpable adenexal mass, no matter how small, and the cytological findings of abnormal maturation of squamous cells in vaginal smear remain crude but valuable clues to the possibility of an ovarian cancer[3].

The aim of this retrospective study was to report 5 years' experience in the histological interpretation of the ovarian tumours. The frequency, age distribution and histological classification of the ovarian tumours is also worked out.

MATERIAL AND METHODS

The clinical and pathological features of ovarian tumours in 107 patients admitted to the gynaecological ward of Military Hospital from 1980-1985 were analysed. The clinical case sheets, operation notes and the surgical pathology reports were the main sources of the data assessed.

RESULTS

Most of the patients (66) belonged to 19 39 years age group (Range 3 - 60 years). Parity was recorded in 84 cases of which 57 were multiparous and 27 nuffiparous.

Low abdominal pain and mass, vague gastrointestinal complaints and vaginal bleeding were the common symptoms. The duration of symptoms varied from 1 to 14 months. Eleven patients had no symptoms and the ovarian tumour was discovered during routine pelvic examination.

A total number of 78 benign and 29 malignant ovarian tumours were diagnosed on histology (Table I).

TABLE – 1
Ovarian Tumours – Microscopic Diagnosis.

	BENIGN		MALIGNANT		BENIGN & MALIGNANT	
	No.	% of type	No.	% of type	No.	% of all cases
Mucinous Tumours	26	24.29	14	13.08	40	37.38
Serous Tumours	14	13.08	08	07.47	22	20.56
Teratomas	31	28.97	02	1.86	33	30.84
Clear Cell Carcinoma	–	–	01	0.93	01	0.93
Endodermal Sinus Tumour	–	–	02	1.86	02	1.86
Choriocarcinomas	–	–	02	1.86	02	1.86
Brenner's Tumour	02	1.86	–	–	02	1.86
Granulosa Cell Tumours	02	1.86	–	–	02	1.86
Sertoli Leydig Cell Tumours	02	1.86	–	–	02	1.86
Lipid Cell Tumours	01	0.93	–	–	01	0.93
Total	78	72.85	29	27.06	107	99.91

The bulk of the ovarian tumours were mucinous epithelial tumours (3738%) followed by teratomas which constituted 30.84% of total tumours (Figures 1 & 2),

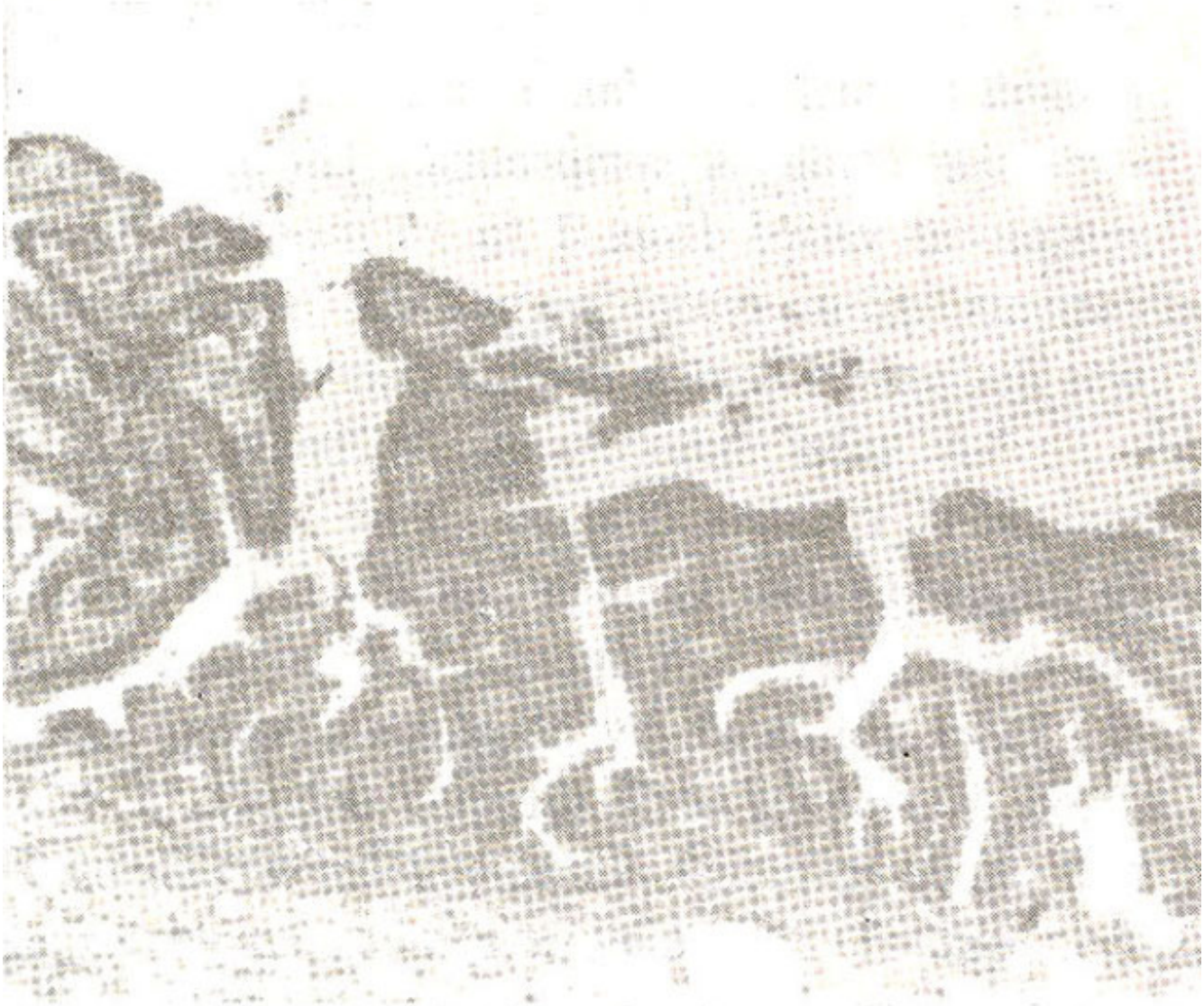

Figure 1. Ovary - Section showing papillary mucinous cystadenoma of ovary, H & E x 390.

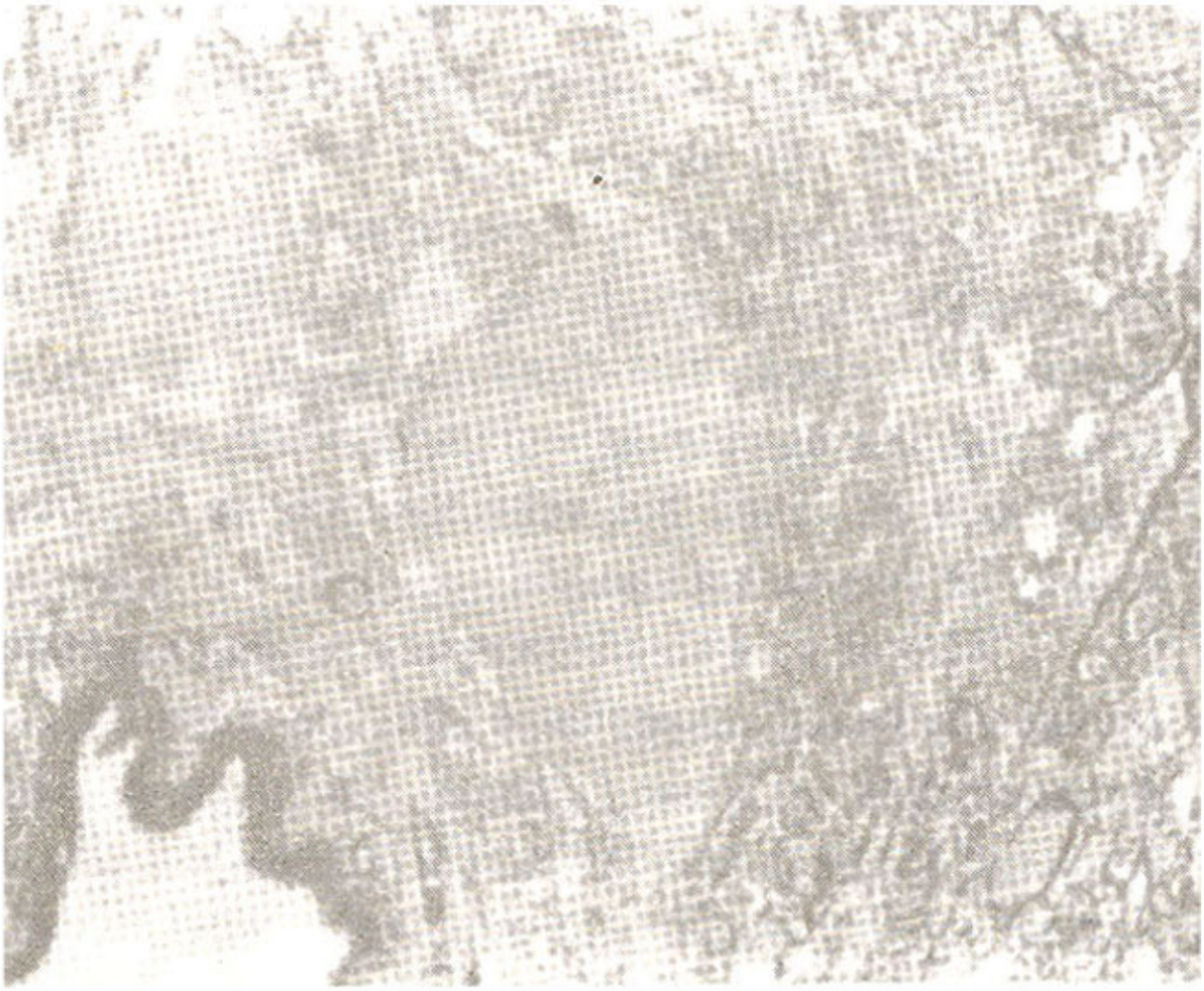

Figure 2. Ovary - Section showing a benign cystic teratoma of ovary with bronchial mucosa, cartilage and groups of thyroid follicles, H & E x 390.

and serous epithelial tumours (20.56%) (Figure 3).

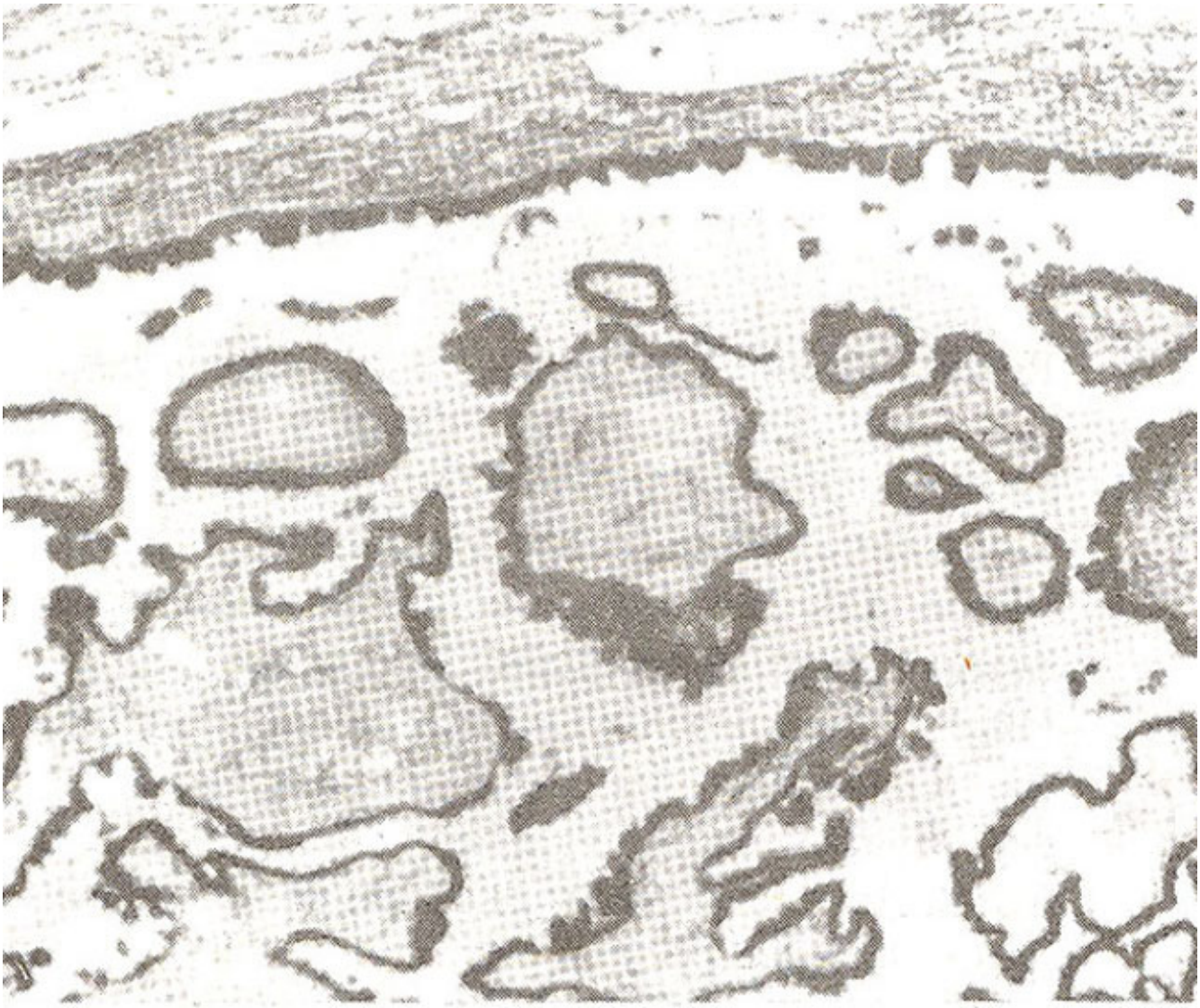

Figure 3. Ovary-Section showing papillary serous cystadenoma of Ovary, H & E x 390.

Two out of 26 mucinous carcinomas were diagnosed as borderline mucinous cystadenocarcinomas (Figure-4).

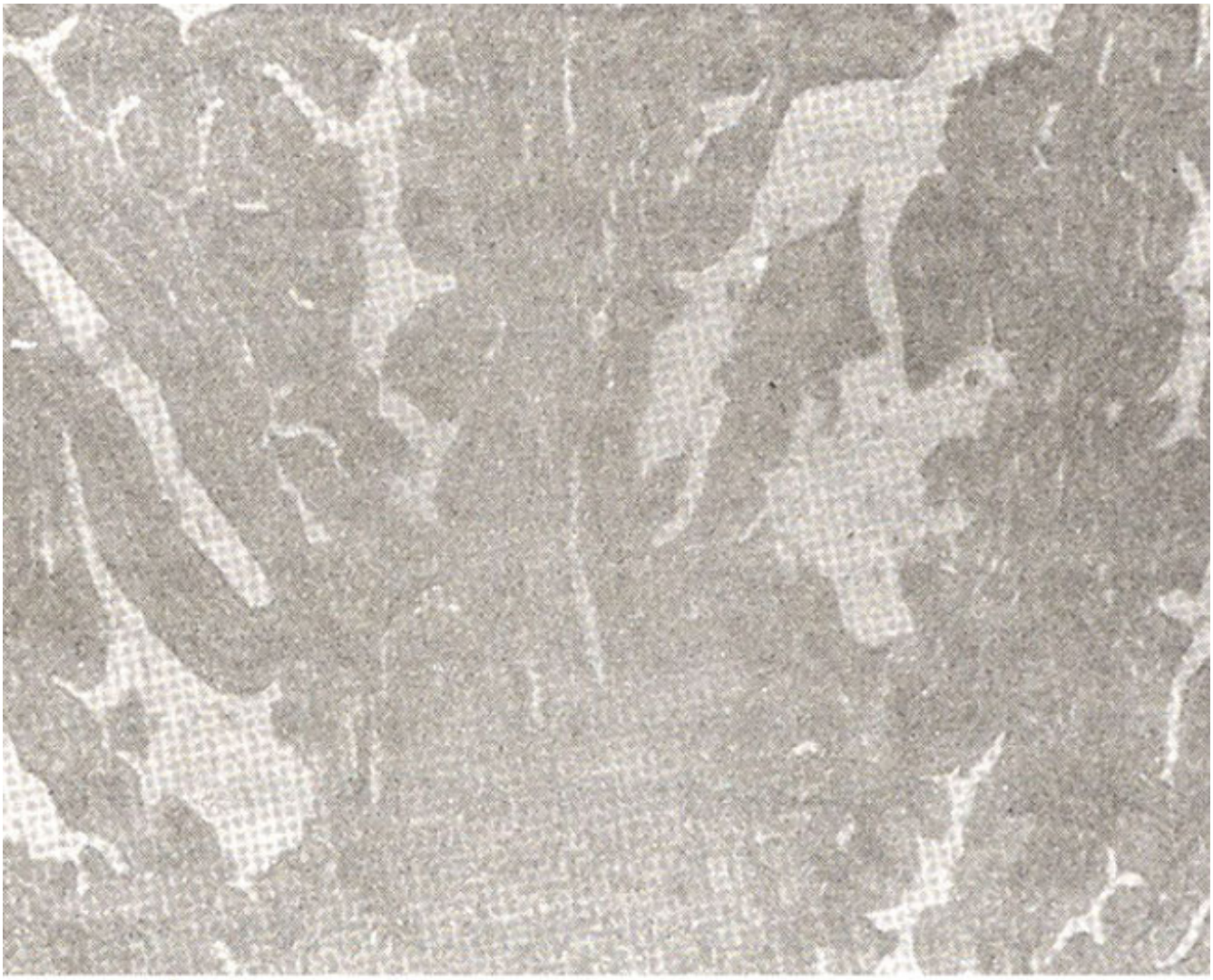

Figure 4. Ovary - Section showing a Borderline Mucinous cystadenoma of ovary, H & E x 990.

The rest of the ovarian tumours such as lipid cell tumour, clear cell carcinomas, choriocarcinomas, Brenner's tumours, Granulosa cell tumours and Sertoli cell tumours, combined together, represented 12.6% of tumours.

Two cases of Sertoli cell tumour occurred in girls aged 16 and 18 years, who presented with amenorrhea of 6 and 4 months duration respectively. The lipid cell tumour of the ovary was seen in a 17 years girl with endocrine disturbances.

Surgical records showed that in 11 cases the tumour had invaded the capsule but peritoneal tumour implants were seen only in 3 cases. Torsion of the tumour occurred in 4 cases.

Benign tumours were generally upto 35 ems in greatest diameter, mostly cystic, multilocular and contained mucinous or serous to clear fluid (Table II).

TABLE – II
Ovarian Tumours – Gross Pathology.

Unilateral		– 105
Bilateral		– 02
Size	5 cms	– 10
	5 – 15 cms	– 56
	> 15 cms	– 41
Gross	Solid	– 20
	Semisolid	– 26
	Cystic	– 61

Malignant tumours measured upto 26 ems, partly solid or cystic, and their cut surfaces yellowish or greyish white with mucinous and haemorrhagic areas.

DISCUSSION

Most common age group for ovarian tumours in Pakistani females was from 19-39 years. The mean age of patients with ovarian tumours was appreciably lower in Indian women[1] as compared to the age incidence reported from Europe[2] and U.S.A. [3] The relatively younger age of the patients in this study generally concurred with the Indian experience. Early marriage is one of the probable reasons for relatively younger age of patients in the present study.

The present study showed that most ovarian tumours (5 7.9%) were of epithelial ongin[4] Frequency of mucinous tumours (3738%) was high compared to other stUdies showing 18.9% frequency. [5] The frequency of mucinous tumours of the ovary in Pakistani females was higher than that from India.[1] Mucinous cystadenocarcinoma were 35% of the total mucinous tumours of the ovary-a figure much higher than other reports[1,6]

Incidence of the serous cystadenocarcimas is three to four times more than that of mucinous cystadenocarcinomas of the ovary[7] but in the present study mucinous cystadenocarcinomas (13.0%)

were more prevalent than the serous carcinomas of ovary (7.4%). The increased prevalence of the mucinous cystadenocarcinomas of the ovary in Pakistani females may be related to genetic, environmental or racial factors.

The borderline mucinous carcinomas were 5% a much lower figure as compared to frequency of 20% reported by Russel[8].

Other malignant tumours of the ovary were infrequent in this series.

In this study nearly two third of the ovarian cancers had spread widely and beyond surgical control. This emphasizes need to detect them at an early stage. The annual pelvic examination is not very helpful because an ovarian cancer may be impalpable on one such examination and palpable several months later when inoperable spread may have already occurred. Laboratory tests currently done include measurement of carcinoembryonic antigen, beta-subnit of human chorionic gonadotropin, specific tumour ,antigens and antibodies and various steroid hormones and their metabolites. These methods are yet in early stages of their evolution and beset with technical problems . [9]

Recently a circulating antigen expressed by human ovarian carcinoma cells has been discovered[10] the concentration of this antigen was increased in the serum of 82% of the. women with epithelial ovarian cancer. [11]

Recent imaging techniques for the preoperative diagnosis include ultrasound, computed axial tomography and nuclear magnetic resonance. Ultrasound can detect an ovarian tumour which is not palpable by manual examination. Entirely anechoic lesions have a high probabifity, but no certainty, of being benign. It is generally accepted that the more echogenic material in a tumour, the greater the likelihood of malignancy. Of ,mixed lesions with greater than 50% echogenic material, 63% were malignant in one series[12]

Computed tomography (CT) of the abdomen and pelvis has been used for several years both for assessment at initial presentation and for the presence of residual, recurrent or progressive disease after therapy[13]. Resistive magnetic resonance imaging (M.R.J) (0.1ST) and C.T. are equivalant in staging of gynaecological malignancies and in the detection of recurrence. [14]

In conclusion, one might add that inspite of all advances in the preoperative diagnosis of ovarian tumours, surgical removal followed by histological examination continues to be the final arbiter as to the true nature of the tumour. It provides a clue to distogenesis of the tumour which may have a bearing on prognosis and also can help the gynaecologist in planning the extent of surgery.

REFERENCES

1. Ramachandran, G., Harilal, K.R., Chinnamma, K.K. and Thangavelu, M. Ovarian neoplasms. J. Obstet. Gynecol. India, 1972; 22: 309.

2. Richardson, G.S., Scully, R.E., Nikrui, N. and Nelson, J.H. Jr. Common epithelial cancer of the ovary. N. Engi. J. Med., 1985; 312: 474.

3. Miller, J. Weibliche Geschlectsorgane. Dritter Tell; Die Krankheiten des Eierstockes, in Handbuch des speziellen-pathologischen Anatomie and Histologie. Edited Uy 0. Lubarsch and F. Henke. Berlin, Springer, 1973.

4. Scully, R.E. Ovarian tumours; a review. Am. J. Pathol., 1977; 87:6 86.

S. Kent, S.W. and McKay, D.C. Primary cancer of the ovary; an analysis of 349 cases. Am. J. Obstet. Gynecol., 1960; 80: 430.

6. Schenker, J.G., Polishuk, W.Z. and Steinistz, R. An epidemiologic study of carcinoma of the ovary in Israel. Isr. J. Med. Sci., 1968;4: 820.

7. Fox, H. and Langley, F.A. (Ed) Tumouis of the ovary. 2nd ed. London, William Heininann, 1976, p. 26, 27, 210.

8. Russell, P. The pathological assessment of ovarian neoplasms .11. Pathology, 1979; 11: 251.
9. Rome, R.M., Laverty, C.R. and Brown, J.B. Ovarian tumours in postmenopausal women; clinicopathological features and hormonal studies. J. Obstet. Gynecol. Br* Common W., 1973; 80: 984.
10. Bast, R.C. Jr., Feeney, M., Lazarus, H., Nadler, L.M., Colvin, R.B. and Knapp, R.C. Reactivity of a monoclonal antibody with human ovarian carcinoma. J. Clin. Invest., 1981; 68: 1331.
11. Bast, R.C. Jr., Mug, T.L., John, E. S., Jenison, E., Nioff, J.M., Lazarus, H., Berkowitz, R.S~ Leavitt, T., Griffiths, C.T., Parker, L., Zurawaski, V.R. Jr. and Knapp, R.C. A radiounmunoassay using a monoclonal antibody to monitor the course of epithelial ovarian cancer. N. Engi. J. Med., 1983; 309:883.
12. Moyle, J.W., Rochester, D., Sider, L., Shrock, K. and Krause, P. Sonography of ovarian tumours; predictability of tumour type. A. J. R., 1983; 141 :985.
13. Ainendola, M.A., Walsh, J.W., Amendola, B.E., Tisnado, J., Hall, D.J. and Goplerud, D.R. Computed tomography in the evaluation of carcinoma of the ovary. J. Comput. Assist. Tomogi., 1981, ; 5: 179.
14. Bies, J.R., Ellis, J.H., Kopecky, K.K, Sutton, G.P.,Klatte, E.C., Stehman, F.B. and Ehilich, CE. Assessment of primary gynaecologic malignancies; comparison of 0.15-Tresistive MRI with-Cr. A.J.R., 1984; 143:1249.