

Review of Ovarian Tumours

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Ovarian malignancy accounts for almost 25% of gynaecological cancers and 50% of all deaths from cancers of the female genital tract. During the last 50 years, the death rate from ovarian cancer has doubled. This study was conducted in Gynaecology Unit-I, Services Hospital, Lahore for a period of two years. Seventy patients were enrolled. Incidence, age, parity, presentation, diagnosis and treatment were studied with review of the literature. As the etiology of ovarian tumours is not exactly known, incidence is rising and diagnosis is often made late, there is increasing awareness of the population to make screening tests available.

Key words: Ovarian tumours, rising incidence, early diagnosis

The ovary gives rise to a wider variety of tumours than any other organ in the body. During the last 50 years, the death rate from ovarian cancers has doubled (Office of Population Census and Surveys 1981). No satisfactory screening test has yet been established and in spite of the radical surgery, coupled with new cytotoxic drugs, the 5 year survival rate remains around 25-30%. The total 5 years survival estimated for malignant ovarian tumours is 26.29%²⁰. Primordial germ cell differentiation anomalies give rise to a whole array of generally benign and malignant tumours of various histological nature¹⁶. The relative risk for ovarian malignancy increases significantly after the age of 40 years²¹. The risk of borderline tumours increases with late age of first birth¹⁵. An early menarche and late menopause are associated with an increased risk⁷. Use of oral contraceptive is associated with a reduced risk of benign ovarian neoplasms³. There is a relationship between the disease and high quantity of fiber or vitamin A, asbestos, talc and pelvic irradiation. Mumps oophoritis is protective. Results provide a clear evidence for the involvement of genes in ovarian tumours¹⁴. There is a significant increase in IgG and IgM while IgA is not altered in benign tumours. In carcinomas there is no significant change in IgG and IgM but IgA is increased⁶. The commonest presenting feature (71.9%) is an abdominal lump¹². Presence of ascites, abdominal distention, urinary complaints and loss of weight and appetite are suggestive of malignancy²¹. The most frequent finding is a palpable mass on abdominal or pelvic examination¹⁷. Investigations include full blood count, serum urea, sugar, urine analysis and electrolytes, liver functions, x-ray chest, IVP and barium enema in case of malignancy. On ultrasonography, simple anechogenic ovarian cysts are benign with a probability of 98%¹³. Colour Doppler findings may be of assistance in follow up after conservative surgery for ovarian malignancy²⁴. Lymph nodes are involved in 23% cases¹¹. CT scan can correctly diagnose the lymph node and hepatic spread of ovarian cancer⁴. The information value of malignant cells in pleural effusion or ascitic fluid is 80.5%¹. Good correlation exists between the serological amount of CA125 and the tumour mass before surgical removal²³.

Serum level of glycoprotein TAG 72 is abnormal in 60% of the patients¹⁸. Treatment varies for benign and malignant disease. Frozen section technique is used principally to guide the extent of surgery¹⁹.

Materials and methods

Seventy patients of ovarian tumours were admitted in Gynae Unit I Services Hospital, Lahore during the period from June 1996 to December 1997. Various aspects of disease such as age, parity, nature, methods of diagnosis and treatment were studied. Patients were admitted through outpatients department and emergency.

Detailed history was taken and examination and necessary investigations were carried out. Majority of the cases were diagnosed on clinical grounds and ultrasound. A few were diagnosed on laparoscopy and laparotomy. Appropriate surgery was performed. Patients with malignant tumour were referred to oncologist for chemotherapy.

Results

During two years, 70 patients were admitted, 50(71.5%) had benign and 20(28.5%) had malignant tumours, 46(65.8%) tumours were of epithelial origin, 22(31.4%) were of germ cell origin, and fibromas and metastatic carcinomas each constituted 1(1.4%) (Table 1).

Table 1: Histological groups of ovarian tumours

Group	No. of Pts.	%age
Epithelial tumour	46	65.8
Germ cell tumour	22	31.4
Fibroma	1	1.4
Undifferentiated metastatic carcinoma	1	1.4

In epithelial tumours, 23(50%) were of serous type with 15(65.3%) benign and 8(34.7%) malignant types. Mucinous tumours constituted 18(39%) and in those 12(66.6%) were benign and 6(33.3%) were malignant. Adenocarcinoma and Brenner's tumours constituted 4(8.7%) and 1(2.2%) respectively. Germ cell tumours were comprised of 21(95.4%) dermoid cysts and 1(4.6%) yolk-sac tumours.

In epithelial tumours, benign serous and mucinous tumours were common in younger age group i.e., 11(73.4%) in 18-35 years (serous) and 10(83.4%) in 18-45 years (mucinous). Their malignant counterparts were common in old age i.e. 5(62.5%) serous and 5(83.3%) mucinous in 50-65 years age group. Adenocarcinoma was seen in 23-38 years in 3(75%) cases. Brenner's tumour occurred at 30 years. Dermoid cyst was common in 18-45 years in 19(90.4%) cases. Yolk sac tumours, fibroma and metastatic tumours occurred at 21, 35 and 50 years respectively.

Low parity was seen in 66.7% benign and high parity was seen in 58.4% of benign mucinous tumours.

The presenting complaints were mass in abdomen in 22(31.5%) menstrual irregularity in 12(17.2%), pain abdomen 11(15.7%), weight loss in 4(5.7%) and acute abdomen in 3(4.2%) cases. Methods of diagnosis are mentioned in Table 2.

Table 2. Various methods of diagnosis

Methods of diagnosis	No. of Pts.	%age
Clinical grounds	40	57.2
Ultrasound	25	35.8
Laparotomy	03	4.2
Laparoscopy	02	2.8

Five patients had pregnancy. Laparotomy was performed in all cases. In malignant cases, cytoreductive surgery was performed in 3(15%) patients, 2(10%) were inoperable. All patients with malignant disease were referred for chemotherapy.

Discussion

In this study of 70 patients of ovarian tumours, 65.8% were of epithelial origin and 31.4% were germ cell tumours, 71.5% tumours were benign and 28.5% were malignant. Distribution of benign and malignant tumours was equal in serous and mucinous types. Dermoid cyst was the commonest benign tumour. Mature cystic teratomas have been reported in association with mucinous cystadenocarcinoma and malignant germ cell neoplasm².

Thanikasalam and co-workers studied 280 cases of ovarian tumours, of these 68.9% were benign, 28.9% were malignant and 2.1% were of borderline malignancy. There was equal distribution of serous and mucinous tumours among the benign and malignant types²². Teratomas were the commonest benign tumour among Malays and Chinese. Serous cysadenomas were the commonest among Indians. In Africa, germ cell tumours constituted 47.8% and common epithelial tumours formed 29.3% of all tumours. Sixty seven percent tumours were histologically benign and 33% were malignant⁸.

In a similar study by Maheshwari and co-workers, epithelial tumours constituted 65.7% of all ovarian tumours, benign tumours were 71.9% of low malignant potential 4.4% Low parity and infertility are associated with an increased risk and multiparity with a reduced risk

of benign epithelial ovarian neoplasms³. In the study the chief complaints were mass abdomen, menstrual irregularity, pain abdomen, weight loss and acute abdomen. The most common physical finding was a palpable mass¹⁷. Commonest presenting feature was abdominal lump in 71.9% cases and pain abdomen in 47.4% cases¹².

In the study ultrasound was carried out in every case. The sensitivity and specificity of ultrasound scan in the diagnosis of malignant or borderline tumours are 82 and 86% respectively⁹. For solid appearing masses and in early ovarian malignancy. Doppler ultrasound facilitated the preoperative discrimination between benign and malignant process¹⁰. In the study, frozen section was not carried out in any case, however the positive predictive value of frozen section in the diagnosis of malignant lesions is quoted as 100%⁹. In this study, 5 patients had pregnancy, El-Yahia reviewed the incidence of this complication being 1:653⁵.

Conclusions

In this study, most of the patients presented when they felt pain or a pelvic mass of considerable size. Some of the patients had advanced disease when they seek for medical advice. This is because of lack of awareness, lack of education and of a proper gynaecological examination. Screening tests are expensive and are available only at some large centers. For better prognosis and survival of these patients early detection and treatment is required. There is need to increase awareness of the population. Screening methods should be made readily available.

Pelvic examination should be carried out routinely in every patient presenting with a gynaecological problem. If a pelvic mass is detected, ultrasonography should be carried out. Colour Doppler ultrasound and frozen section facilities should be available at all tertiary centers. During caesarian section or laparotomy, performed for any other disease, ovaries should be inspected and if suspicious looking, should be biopsied.

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