FIBROSARCOMA OF OVARY

(Report of Two Cases)

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Fibrosarcoma of the ovary—malignant variant of fibroma is an extremely rare ovarian tumour. Majority of them occur in older age group though a few cases have been reported in children and young adults (Abell and Holtz 1965 and Radman and Korman 1960).

The rarity of the lesion prompted us to publish these two cases.

CASE REPORTS

Case 7:

H.P., a Hindu female aged 45 years, Para 7 + 0, was admitted on 30-3-71 in the gynaecology ward with a history of lump in the abdomen. This was noticed by her four years back as a small ball of 10 cm. in size on the right side of the abdomen and was freely mobile. It suddenly increased in size during the last two months and had occupied the whole of the abdomen. She became gradually weak more so during the last two months. Nothing significant was noticed in the past history and obstetrical history of the patient.

On examination the patient was weak and cachectic.

Abdominal Examination: An irregular lump reaching upto 3 cm. below the xiphisternum was felt. The lump was of variable consistency i.e. partly cystic and partly solid. Its mobility was restricted. There was free fluid in the abdomen.

Vaginal Examination: Uterus was small and atrophied. The abdominal mass was also felt through the anterior and the right fornices.

Systemic Examination: All the systems were normal. Skiagram of the chest was normal.

Blood Examination: Haemoglobin was 8.0 gm%; total white cell count 6,600/cmm.; differential white cell count, neutrophils 64%, lymphocytes 34% and eosinophils 2%; erythrocyte sedimentation rate, 43 mm. for the first hour (Wintrobe) and blood group 0 Rh +ve (anti-D).

Laparotomy was done on 9-4-71. A big mass was found arising from the right ovary. It was adherent to the loops of the small bowel. Multiple nodular masses of different size were present in the mesentery. Liver and the other ovary were normal. Ovariotomy with massive resection of the bowel along the secondary deposits was done. Panhysterectomy could not be performed as patient's condition became very low during the operation.

Histopathological Report:

Gross Examination: Specimen consisted of an ovarian mass, a part of the small bowel and mesentery. The ovarian tumour was cystic, smooth, oval and measured 23 x 16 x 10 cm. in dimensions. On cutting, a dark brown gelatinous fluid came out. The tumour was an unilocular cyst, the thickness of the wall varied from 3 to 5 mm. Inner surface of the cyst was irregular, ragged and covered with fibrous flakes (Fig. 1). The cyst was found to be adherent to the bowel. The resected part of the small bowel measured 100 cm. in length. There were

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multiple nodular masses of varying consistency in the mesentery, some of them even encroached the bowel wall resulting into narrowing of the lumen. These nodules were of different sizes, largest being 4 x 6 x 3 cm. Cut surface of the nodules was greyish white, homogenous and slimy and clear gelatinous fluid was exuding from it. Some of the nodules showed firm homogenous structure, whereas one or two were purely cystic and filled with haemorrhagic slimy fluid (Fig. 2).

Microscopic Examination:

Section from different parts i.e. wall of the ovarian tumour, metastatic growth and wall of the intestine showed similar morphology. The tumour was a mesenchymal growth consisting of plumpy fibroblastic cells arranged in streaks or had a tendency to whorl formation (Fig. 3). The central portion of the sections showed mucoid degeneration where the spindle cells were separated by loose oedematous eosinophilic stroma. Nuclei were hyperchromatic and showed pleomorphism and occasional mitotic figures. Overall picture was that of a fibrosarcoma of ovary with myxomatous degeneration.

Case 2:

O.W., a Hindu female 31 years old, Para 1 + 0, was admitted with the complaints of distention of abdomen for two months, watery discharge per vaginam and pain in the abdomen for 20 days. Menstrual history was normal. She was very ill and anaemic.

Abdominal Examination: There was a firm intra-abdominal lump reaching 7 cm. below xiphisternum. Its mobility was restricted and the lower limit of the tumour was not defined.

Vaginal Examination: Uterus was pushed back by the tumour. It was felt through the anterior and left fornices.

Investigations: Skiagram of the chest did not show any evidence of secondaries. Haemoglobin was 8.5 gm per cent total white cell count, 11,500/cmm.; differential white cell count, neutrophils 72%. lymphocytes 26%, eosinophils 1% and monocytes 1%. Blood group was AB Rh +ve (anti-D).

Laparotomy was done. The tumour was found to be inoperable as it was fixed to the surroundings. Only a small piece was taken for biopsy and the abdomen was closed. Follow-up was not possible as the patient did not turn up after the operation.

Histopathology Report:

The picture was that of a mesenchymal growth comprising of spindle shaped cells or oval cells with hyperchromatic nuclei and fair number of division figures (Fig. 4). The cells were arranged in bundles with an attempt of whorl formation at places. Myxomatous degeneration as evident by light stained areas was present in the tumour.

Discussion

Fibrosarcoma of the ovary is extremely rare. The incidence has been reported to be 0.03%, 3 cases out of 10,000 ovarian tumours, (Barzilai 1943) and 1%, 3 cases out of 312 ovarian fibromas (Dockerty and Masson 1944). Abell and Holtz (1965) while reviewing the ovarian neoplasms in childhood and adolescence reported two well established cases of fibrosarcoma (1.7%) out of 170 ovarian neoplasms. In our country Patil *et al,* (1964) and Ramchandran *et al,* (1972) have reported the incidence of fibrosarcoma as 0.7% and 0.33% of the ovarian neoplasms, respectively. The authors have observed these two cases of fibrosarcoma of the ovary among 103 ovarian tumours, incidence being 1.9% of all the ovarian neoplasms.

The commonest age group for this tumour is 55 to 65 years (Hertig and Gore 1961). The present cases were comparatively of younger age group (45 and 31 years, respectively).

The presenting complaints were mostly abdominal e.g. painful mass in the abdomen and distention. These could be explained on the basis of pressure of the metastatic nodules as well as of the tumour itself on the bowel and the stretching of the mesentric nerves. Other complaints like urinary symptoms and vaginal bleeding were strikingly absent in the present cases.

Degenerative changes are fairly common in these tumours as in case 1 the entire ovarian tumour became cystic due to myxomatous degeneration. Similar change was also seen in the metastatic nodules. Besides degeneration the overall histological picture was of a low grade malignant mesenchymal tumour characterised by less pleomorphism and scanty division figures. The clinical behaviour of the tumour was quite contrary to the relatively well differentiated histological picture. Abell and Holtz (1965) also described similar disparity between the rapid fatal course and the relatively well differentiated picture of the tumour. According to them fibrosarcomas are the most difficult of the ovarian tumours to evaluate histologically and appear deceptively benign, consisting of fairly uniform hyperchromatic spindled cells. The indication of activity are the relative plumpiness of the cells, a loose arrangement and the presence of division figures. On the other hand, case 2 presented the picture of a highly malignant tumour as evident by the pleomorphism and large number of both typical and atypical bizzare looking mitotic divisions. It also showed some degree of myxomatous degeneration.

Fibrosarcoma is generally considered a malignant variant of fibroma of the ovary arising from ubiquitous hormonally inactive fibroblasts. It can occur as a primary growth or may have a teratomatous origin (Novak and Woodruff, 1962). However, reviewing the clinical history of case 1 it is presumed that the tumour started as a simple fibroma of the ovary four years back, changing to malignant form as evident from the rapid increase in the size of the tumour and distant metastases within the last two months. On the other hand, in case 2 the clinical course was so rapid as to suggest that the tumour might be a primary fibrosarcoma of the ovary.

Panhysterectomy is the treatment of choice in these cases. Role of irradiation is debatable.

Summary

Two cases of fibrosarcoma of the ovary have been reported. Myxomatous degeneration in one case was to such a great extent that the entire tumour became cystic. Similar change was also seen in the metastatic nodules. The problem of disparity between the clinical course and the histological morphology of the tumour has been reviewed.

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