A RARE HISTOLOGICAL TYPE OF OVARIAN TERATOCARCINOMA

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Ovarian teratomas comprise 5-10% of cystic ovarian tumours and malignancy is reported with the frequency varying from 1 to 5.5% (Greenhill, 1972). A variety of tissue elements are discernible in these tumours giving rise to carcinoma or sarcoma (Hartz, 1945; Azoury and Woodruff, 1971). A combination of proliferative activity of both epithelial and stromal components hitherto unpublished, is being recorded.

CASE REPORT

Mrs. K., aged 45 years was admitted for gradual distension of the abdomen and continuous bleeding per vaginam for the last 8 months. She had attained menopause 4 years ago and her last child birth was 5 years ago. On examination the abdomen was uniformly distended. A cystic mass arising from the pelvis was found to extend upto the xiphisternum. There was no free fluid in the peritoneum. The tumour was felt through anterior fornix on vaginal examination and on speculum examination blood stained discharge was seen in the cervical canal. X-ray of chest and abdomen and intravenous pyelogram were normal. She was found to have hypertension (140/100 mm of Hg.). At laparotomy the left ovary was found to be the seat of the tumour with a variable consistency. The right ovary appeared normal. Total hysterectomy with bilateral salpingo-oophorectomy was done after releasing few flimsy adhesions between the tumour and omentum. A haemorrhagic nodule measuring 1 cm in diameter was seen in the anterior surface of uterovesical pouch and this was removed for histology. All other abdominal organs were normal. A clinical diagnosis of malignant left ovarian tumour was made. The patient developed infection of the wound in the postoperative period and was discharged in a good condition on the 32nd day of operation.

Pathology: The uterus, cervix, right ovary and tube appeared normal. The left ovarian tumour weighed 6.2 kg and measured 45 x 35 cms. The capsule was intact with flimsy adhesions on the surface. Cut section showed multilocular cavities containing mucinous material suggesting a mucinous cystadenoma. In between these cystic spaces there were compact yellowish areas which projected into the cystic cavity as nodules and plaques and which appeared to be an intimate and integral part of the cystic tumour. No papillary processes were present. In one area there was calcification. The left fallopian tube was stretched over the tumour mass.

The uterus had an actively proliferative endometrium though no cystic hyperplasia or adenomyosis was seen to explain the post-menopausal bleeding. The ovarian tumour showed pseudomucinous cystedenocarcinoma. Sections from the solid non-mucinous yellowish areas showed granulosa-theca cell tumour. A total of 50 sections were studied to analyse the relationship between the mucinous cystadenocarcinoma and the granulosa-theca cell tumour. These two components were closely intermixed with a single layer of mucus secreting columnar epithelium overlying an area of granulosa-theca cell tumour (Fig. 1) of the mucous glands lying in a stroma composed of granulosa-theca cell tumour (Fig. 2). Foci of cortical stromal hyperplasia were seen in between the mucous glands in some areas

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Further detailed study showed few foci of cartilage formation (Fig. 3) embedded in the granulosa-thecal cell component which led to a diagnosis of teratocarcinoma. It appeared that the granulosa-theca cell tumour was arising in the stroma of a mucinous cystic spaces. The right ovary showed foci of stromal hyperplasia in the medulla with few islands of granulosa cells. The fallopian tubes were normal. The peritoneal nodule was found to be organising haemorrhage without any tumour cell.

Comments

Though granulosa cell tumour and teratoma are known to exist in two overlies of the same person (Murray *et al*, 1942), the occurrence of this as a stromal change in a teratoma is not recorded previously. The functional activity of the granulosa-theca cell tumour component was shown by the post-menopausal bleeding in the patient, though the endometrium was actively proliferative without any cystic hyperplasia.

Summary

A teratocarcinoma of the ovary with mucinous cystadenocarcinomatous component and cartilaginous foci with granulosa-theca cell tumour as a stromal change in a 45 year old female is being reported.

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See Figs on Art Paper XI-XII