SARCOMA-LIKE MURAL NODULE IN OVARIAN MUCINOUS TUMOUR (A Case Report)

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MJAFI 1997; 53 : 133-134

KEYWORDS : Mucinous tumours; Ovarian tumours.

Introduction

Mucinous tumours account for about one fifth of all ovarian neoplasms. An unusual finding -- in otherwise typical benign, borderline, or malignant mucinous neoplasms -- that has provoked much interest is the presence of single or multiple circumscribed nodules of various sizes in the wall of the cysts. The nodules have been classified as sarcoma, anaplastic carcinoma, or sarcoma-like mural nodules based on their histologic appearance [1-3]. We report an unusual case of sarcoma-like nodule in an ovarian mucinous tumour.

Case Report

A 18-year-old unmarried female patient was admitted with history of having noticed a gradually increasing lower abdominal swelling associated with dull ache and loss of appetite for the last 6 months. There was no associated menstrual irregularity or pressure symptoms. Clinical examination revealed a lower abdominal mass arising out of pelvis. The mass was cystic, smooth surfaced, non-tender with restricted mobility. There was no free fluid in the abdomen. It resembled, in size, a 26-week gestational uterus. The mass was separate from the uterus as made out on per rectal examination. Ultrasonography showed normal sized nonparous empty uterus and there was 12.8 x 8.4 cm multiloculated cystic mass in the left ovarian region. Right ovary was normal. There was no collection in the pouch of Douglas. Plain radiograph of the abdomen showed soft tissue shadow in the lower abdomen. There was no evidence of calcification. CT pelvis was not done. Clinical diagnosis of benign left ovarian cyst was considered and staging laparotomy was performed. At operation the left ovary was seen to be replaced by smooth-surfaced cystic mass without any adhesions. Uterus and right ovary were normal. Peritoneal fluid was not haemorrhagic. The cyst was mobilized and left ovarian cystectomy performed. Peritoneal fluid was sent for cytology and omental biopsy performed as a matter of routine. These revealed no abnormality. Postoperative period was uneventful.

On gross examination the left ovary was found to be completely replaced by the cystic round mass, measuring 16x15x12 cm. The cut surface showed multiple loculi containing viscous material of mucoid nature. Most cysts were thin walled except one large cyst which had a solid nodule 3.5x3x3 cm arising from the wall and protruding into its lumen (Fig 1). The nodule had brownish black soft areas on the surface and yellowish-white firm areas in the deeper cut parts. On microscopic examination the cyst wall was seen to be lined by tall columnar nonciliated mucinous epithelium. Nuclei showed hyperchromatism, stratification and excessive mitoses. However, no stromal invasion or abnormal mitosis was seen. The nodule showed loose oval to spindle cell stroma transversed by large number of multinucleated osteoclast-like giant cells (Fig 2). The giant cells were of variable size with up to 50 uniform nuclei and pale eosinophilic cytoplasm. Some areas showed a mixture of pleomorphic spindle cells and giant cells with atypical hyperchromatic nuclei. Most of the stromal cells showed hyperchromatic nuclei with increased mitosis. No abnormal mitoses were seen. This sarcoma-like nodule had pushing margin with no infiltration. The case was diagnosed as mucinous tumour of left ovary of borderline malignancy with sarcoma-like mural nodule.

Discussion

The occasional association of mucinous tumour of the ovary with another type of ovarian neoplasia or non-neoplastic proliferation is well recognized. Prat and Scully [1] first reviewed 14 ovarian mucinous tumours, including 7 of their own patients, which showed sarcoma-like mural nodules. From India two similar tumours have been reported [4,5]. Verma et al reported a patient with this tumour having, in addition, osteoid formation [5]. However, its occurrence in a 18 year young unmarried girl has not been reported from India. There was no recurrence up to 6 months of follow-up. In the experience of some authors the prognosis is excellent if lesions are sharply circumscribed

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Fig. 1 : Figure shows cut surface of the left ovary with folded cyst wall and multiple loculations. The solid nodule attached to the cyst wall is seen with dark and light areas on its surface (left lower corner).

without invasion of surrounding tissue or vascular spaces [1,3,6]. In our patient also there was no invasion of surrounding tissue or blood vessels so prognosis was thought to be excellent. The significance and histogenesis of sarcoma-like nodules remains unclear despite both ultrastructural and immunohistochemical investigations regarding their origin [7]. Actually, it is generally interpreted that the sarcoma-like nodules are also of neoplastic nature and related histogenetically to the other two processes, classified as sarcoma and anaplastic carcinoma [8]. This fact is supported by occasional coexistence of these lesions. However, it is important to consider sarcoma-like nodules separately because of their excellent prognosis [1,3]. Prat and Scully [1] presented evidence that these nodular proliferations were not sarcomatous in behaviour though they had been generally regarded morphologically as such.

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Fig. 2 : Shows cyst wall lined by tall columnar mucinous cells with nuclear stratification, hyperchromatism and atypia. Around this are loose, oval or spindle shaped, atypical looking stromal cells transversed by large numbers of multinucleated osteoclast-like giant cells (H&E 400x).

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