MULTIPLE CYSTIC GRANUOSA CELL TUMOUR

(Report of a case)

by

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Granulosa cell tumours are solid ovarian tumours but a mixed variety of cystic with the solid areas is also seen at times. Purely cystic tumour is rare. Sher and Marsh (1963) found 15 purely cystic tumours, out of 523 cases of granulosa cell tumour collected from the literature to which they have added one of their own. Palladino *et al* (1965) also found one such tumour with cystic changes and was able to add two cases of Voight (1938) and Baldwin (1959) to the total so far reported.

The present communication is of such a rare case of cystic granulosa cell tumour.

CASE REPORT

The patient was 30 year old gavida 2, para 3 who was admitted to Kamala Nehru Memorial Hospital, Allahabad complaining of gradual enlargement of the abdomen for the last six months. Her last delivery was normal. Her menstrual cycles were regular but flow was scanty. The family and the past histories were non-contributory.

On general examination the patient was of good built and height and her cardiorespiratory systems were normal.

There was a suprapubic lump which was extending upto the umbilicus. It was an oval, smooth, cystic mobile tumour measuring 14 cms with ill-defined margins.

On bimanual examination the cervix was pointing foreward and the uterus was deviated towards the left side. It was retroverted and normal in size. The lower pole of the cystic tumour was felt in the right fornix.

Endometrial biopsy done before operation revealed proliferative phase of the endometrium.

Laparotomy was done. The cyst was found to be arising from the right ovary. The surface was glistening white and there were no adhesions with the adjoining structures. It was thought to be a benign pseudomucinous cyst and ovariotomy was done. The other ovary and the uterus with the tubes were normal.

Gross Appearance of Tumour

The tumour was unilateral, solitary and cystic. The size was 20 x 20 x 18 cm. weighing 1500 gms. The external surface was smooth shining with focal areas of dark discolouration. The cut surface showed multilocular cysts varying from 5 to 10 cms having straw coloured fluid. The thickness of septa varied from 1 to 3 mm. The inner surface of these cysts were smooth. There were no solid portions in whole of the tumour mass (Fig. 1).

Microscopic Picture

The cyst was lined by granulosa cells. They were multilayered with rosette like arrangement. Call-Exner bodies were present. The centre of rosette like arrangement revealed a homogenous pink acellu-

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lar material. The lining cells were of uniform size, cuboidal to low columnar with scanty cytoplasm and deeply basophilic nuclei. At places there were no lining cells and only fibrocollagenous cyst wall was seen, especially in large loculi. Beneath the granulosa cells in some areas there were fusiform cells having pale lightly stained nuclei and scanty cytoplasm called theca cells. There was no evidence of necrosis, haemorrhage or scarring (Fig. 2 & 3).

Discussion

True cystic granulosa cell tumour is a rare morphological variant of granulosa cell tumour. So far only 2 such case reports (Sher & Marsh, 1963 and Palladino *et al*, 1965) are available in the literature. Fifteen cases of tumour collected earlier by Sher and Marsh (1963) and two by Palladino *et al* (1965) however, contained some solid areas of granulosa cell tumour.

Various views have been put forward to formulate the etiology of the cystic changes in a granulosa cell tumour. Haemorrhage and necrosis have been found to be associated with it. Liquifaction of the solid areas is also considered to be one of the factors. Novak & Novak (1958) attributed this to "Secretory and degenerative liquifying process". The process of cyst formation is said to be like the formation of Call Exner bodies, (Haines and Jackson 1950) or is formed by intrinsic growth pattern of a tumour by a macrofollicular type (Meyer 1931).

Scanty menstruation associated with the cystic granulosa cell tumour was the feature noted but since no hormonal assays were carried out it is not possible to state regarding the hormonal status associated with this tumour. Moreover, according to Brewer and De' Costa (1967) all patients do not have abnormal bleeding and this is consistent with the fact that all granulosa theca call tumours do not secrete estrogens.

The present tumour consisted of many follicular cavities lined by an inner layer of granulosa cells and an outer layer of theca cells.

These cysts have been confused with follicular cyst of the ovary or with pseudomucinous cyst.

The large size and number of daughter cysts are in favour of neoplasia and help to differentiate from the follicular cyst. Neoplastic tumour may attain any size but follicular cysts are usually small and rarely over 6 or 7 cms in diameter (Palladino *et al* 1965).

Summary

A rare purely cystic granulosa cell tumour of ovary is reported. The cystic cavities were lined by the granulosa cells. No solid area along with necrosis, haemorrhage and scarring were noted.

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See Figs. on Art Paper III