

CLEAR CELL CARCINOMA OF THE OVARY

(A Report of Two Cases)

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SUMMARY

Clear cell carcinoma of the ovary is being described with brief review of literature because of its rarity in the ovary and close resemblance to clear cell carcinoma of the Kidney and other female genital tract. It constitutes 0.32% of the total ovarian tumours and 1.05% of malignant ovarian tumours.

Introduction

Clear Cell Carcinoma of the ovary are rare, apparently functionless Carcinoma, consisting largely of clear cells arise in or adjacent to the ovary. These tumours have been considered to arise from mesonephric remnant (Schiller, 1939) and mullerian origin and in the genital tract of mullerian origin. There have been few reports of clear cell carcinoma of the ovary in Indian literature (Patil *et al*, 1964; Bennington, 1968; Jagadeshwari *et al*, 1971; Ramchandran, 1972; Chaudhary *et al*, 1977; Kennedy and Gordon, 1981).

Material and Methods

The clincopathological study was carried out in two cases of clear cell carci-

noma out of 620 ovarian tumours recorded in the files of pathology department, S.P. Medical College, Bikaner during a period of 21 years from 1964 to 1985. Section were cut at 4 to 5U thickness from paraffin blocks and stained by routine haematoxylin and eosin Stain, PAS, DPAS, Alcian blue, Mucicarmine and Sudan III and IV stain on frozen section to assess the nature of the tumour.

Observations

Two cases of clear cell carcinoma accounted for 1.05% of the malignant tumours of the ovary and 0.32% of total ovarian tumours. Both the cases was seen in 2nd decade in nulliparous women. The commonest presenting complaint were pain in abdomen and lump in abdomen in both cases. Amenorrhoea and Ascites was noted in 1 of the patient. Menstrual history was normal in both of

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the patient. The duration of presenting symptoms ranged from 3 months to 7 months.

Gross-Appearance

The tumours were greyish white to greyish brown in colour, Firm to cystic in consistency. The size of tumour varied from 20 x 10 x 8 cm to 15 x 10 x 6 cm. External surface was lobulated. Cut surface showed greyish yellow to brownish solid areas with areas of haemorrhage and necrosis and multilocular cyst having protruded nodular masses and mucinous material into the lumen.

Microscopic-Appearance

On histopathological examination tumour showed polyhedral cells with clear cytoplasm, distinct cell membrane, vesicular accentric nucleus arranged as solid aggregates or tubular pattern and showed alveolar arrangement at places. The hobnail cells lining the tubules showed prominent bulbous nuclei protruding into the lumens of tubules (Fig. 1). On special staining, cells were PAS positive, DPAS sensitive, Alcian blue positive, Mucicarmophilic positive mucinous material was seen within the lumen of tubules and cysts, Sudanophilic droplets were seen on frozen section within the cells.

Discussion

Clear cell carcinoma are characterised by clear epithelial cells containing abun-

dant cytoplasmic glycogen, lipids and hobnail cells. Arrangement of the cells may be as solid sheets, tubular, adeno-papillary. The incidence of clear cell carcinoma ranged from 0.18% to 3.09% of all ovarian tumours (Patil *et al*, 1964; Bennington, 1968; Jagadeswari, 1971; Ramchandran, 1972; Chaudhary *et al*, 1977; Kennedy and Gorden, 1981). They occur most frequently between the age of 40 to 60 years. In the present study they were seen in 2nd decades and accounted for 0.32% of total ovarian tumours and 1.05% of malignant ovarian tumours. Novak and Woodruff (1959) analyzes 35 cases of ovarian mesonephroma which were histologically similar to clear cell carcinoma of lower genital tract.

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See Fig. on Art Paper VI