CLEAR CELL CARCINOMA CERVIX OR CERVICAL CARCINOMA OF MESONEPHERIC ORIGIN

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Introduction

Clear cell carcinoma of the cervix is an uncommon tumor. One such case studied in the department of Pathology, Lady Hardinge Medical College, New Delhi, is being presented here.

Case Report:

A female 48 years of age complained of amenorrhoea, pain in lower abdomen and excessive white vaginal discharge for 5 months. Previously her cycles were normal and she had 5 full term normal deliveries, the last being 28 years back.

Local examination revealed a firm cervix which bled on touch; uterus was mobile, nontender, anteverted, firm, 18 weeks size and fornices were free. The clinical impression was that of multiple fibroids uterus.

No dysplastic or malignant cells were demonstrated on vaginal cytology. Endometrial biopsy showed groups of cells with abundant pink to clear cytoplasm and small dense nuclei mixed with small groups of cells with illdefined cytoplasmic outlines and hyperchromatic anisonucleotic nuclei giving an appearance of syncytial tissue. Gravindex test was negative.

Pathology:

Gross—The surgical specimen of the uterus measured 6.5 x 3 cms. A sessile polypoidal friable glistening greyish white growth continuous with the cervical lips, partially replacing the wall of the cervix and occupying the canal was present. It was extending into the uterine cavity upto 3.5 cms. Upper part of the uterine cavity was dilated, the tubes and the ovaries were unremarkable.

Microscopically, the growth comprised of well-demarcated solid groups, sheets and cords of polygonal cells with round to oval vesicular hyperchromatic nuclei showing anisonucleosis and abundant cytoplasm which was positive for glycogen but negative for mucin. A continuous basement membrane was surrounding these groups of cells (Fig. 1). These cells were infiltrating the surrounding fibromuscular tissues. On the basis of these fidings diagnosis of mesonephroma cervix was made.

Comments

Meyer (1903) was the first to report a case of cervical carcinoma of mesonephric origin. McGee *et al* (1962) have traced 36 published cases, first being that of Meyer (1903) and added 4 to these making it 40 reported cases for 60 years. Since 1962 more than 100 cases of mesonepheric carcinoma of cervix have been reported in the world literature (Fawcett *et al*, 1966; Hart and Norris 1972; Herbst *et al* 1974; Staffen *et al* 1976), but very few reports are there in Indian literature (Chakravarty and Gupta, 1976; Audi, 1976).

Clear cell carcinomas of mesonephric

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origin are rare tumours, the incidence being 2% of all the endocervical carcinomas (Fawcett *et al*, 1966; Audi, 1976). Differentiation between adenocarcinoma arising from the mucus glandular epithelium and that arising from the mesonephric structures can be made in an H&E stained section which can further be differentiated by mucin stains. It has been stated, in H&E stain, a continuous basement membrane surrounding mesonephric duct remnants is seen in cervix (Lamb *et al*, 1960). This can be demonstrated in the tumour tissue of the mesonephric origin also (Ferrar and Nedoss, 1961, McGee *et al*, 1962). There is no such membrane beneath the endocervical glands (Lamb *et al*, 1960). No basement membrane could be demonstrated in the adenocarcinoma of the cervix McGee *et al*, 1962).

Novak *et al* (1954) described a pattern similar to that of Schiller's mesonephroma in 1 case of mesonephroma of cervix with transition to the structure of clear cell carcinoma and concluded that these two tumours were probably of the mesonephric origin. Mackle's *et al* (1958) differentiated mesonephrotic from mesonephric group.

Hart *et al* (1972) reported 13 cases of mesonephric carcinoma of cervix and described 3 histological patterns (i) papillary configuration with 2 types of cells—clear cells and hobnail cells on the fibrovascular cores, (ii) tubular structures resembling mesonephric remnants found in normal cervix and (iii) solid sheets of clear cells showing alveolar pattern in few cases, but no tubular or papillary structures seen. This closely resembles the clear cell carcinoma of kidney. Pure solid variety, as is the present case, is quite rare. Only 1 out of 21 cases of clear cell carcinomas reported by Staffen *et al* (1976) was solid. Inspite of the resemblance of these tumours to hypernephroma under light microscopy, renal cell carcinoma has lipid bodies (Tannenbaum, 1971), while clear cell carcinoma has glycogen.

This type of carcinoma of cervix is less aggressive than adenocarcinoma arising from the glandular epithelium and has an age incidence curve with two peaks, 20-30 years and 60-70 years while adenocarcinoma has one peak at 40-50 years (Hameed, 1968). Five year survival of cases of clear cell carcinoma is nearly 50% which is more than adenocarcinoma of cervix (Hart *et al*, 1972), this being much more in older age group (Faucett *et al*, 1966).

Recently incidence of clear cell carcinoma of cervix and vagina has been found to be increasing in young girls (Herbst *et al*, 1974), mean age being 7-29 years. These cases have been frequently associated with prenatal exposure to diethyl stilbestrol.

Summary

A case of clear cell carcinoma of cervix in a 48 years old female is reported and relevant literature on the subject reviewed.

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See Fig. on Art Paper IX