OVARIAN LEYDIG CELL TUMOUR—AN UNUSUAL CLINICAL PRESENTATION

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Among the neoplasms of the ovary classified by the W.H.O. as the Sertoli-Leydig cell tumours, are those which arise from the male-directed cells found at the ovarian hilus. These tumours are androgenic and have been variously called Hilus or Hilar cell tumours, Lipid cell tumours or Adrenal rest tumours. These not only constitute the rarest—incidence 0.5 to 1.0 per cent-of all ovarian tumours, but are also fascinating from clinical and pathological view points. One such case is presented.

CASE REPORT

A 55 year old female presented in May 1978 with polymenorrhagia (5-6/17-28 profuse) of 2 years duration. She had attained menopause 10 years previously. She had undergone left simple mastectomy in 1971 for lobular carcinoma-in-situ and an excision biopsy of a nodule in the right breast in 1972 which was also histopathologically diagnosed as lobular carcinoma.

She had marked facial hirsuitism dating back to menopause, no clinical or radiological evidence of recurrence of breast malignancy and moderate hypertension (BP 130/90 to 160/100) The abdominal and pelvic findings and routine investigations were normal.

Premenstrual fractional curettage done on 30th April 1978 showed chronic cervicitis and oestrogen phase endometrium. She underwent abdominal total hysterectomy with bilateral salpingo-oophorectomy on 6th May 1978. At laparotomy, the uterus and adnexa appeared normal and healthy. The postoperative period was uneventful.

At histopathology, the left ovary showed ovarian stroma with an encapsulated neoplasm composed of sheets of polyhedral cells with abundant granular cytoplasm with granular brown pigment and round to oval vesicular nuclei, with prominent nucleoli. In a few of the neoplastic cells, Reinke crystalloids were seen which appeared eosinophilic and measured 3 x 1 micron in size. A few compressed corpora albicantia and corpus luteum were seen adjacent to the neoplasm.

The cervix showed mild chronic cervicitis with squamous metaplasia and endometrium in the oestrogen phase with adenomyosis.

The right ovary appeared normal.

Discussion

The Leydig cell tumours are generally recognised as androgen-producing neoplasms and clinically, an initial defeminization followed by virilisation is to be expected. While there was marked facial hirsuitism noted in this case there were no other virliising signs like clitoromegaly or hoarseness of voice.

Along with the androgenic influence there was oestrogenic effect apparent as evidenced by post-menopausal bleeding and a histologically diagnosed oestrogen phase, endometrium and a bilateral lobular carcinoma of the breast. Of the 30 cases reported by Taylor and Norris

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(1967) a majority were post menopausal.

This incongruous association of androgenic and oestrogenic features is interesting and apparently paradoxical, but may be explained on the capacity of hilar cells to produce a variety of steroids. This fact has been demonstrated by Jeffcoate and Prunty (1975) who biochemically studied oestrogen and androgen synthesis, by these tumour cells. An oestrogenic pattern of endometrium is not rare after menopause as shown by Saxena (1971) in their study (9.8 per cent) but postmenopausal bleeding is certainly rare as has been noted by Taylor and Norris (1967) in 6 of their 30 reported cases. It should however be noted that 15 per cent of neoplasms may not demonstrate any hormonal activity.

The neoplasm reported here was unilateral, occurring inside a grossly normal ovary and detected only on histopathology. Novak (1975) claim that this tumour is characteristically unilateral and small, only 5 per cent being bilateral. Three of the 4 intraovarian neoplasia reported by Rao and Prasunamba (1973) were oestrogen producing, while the fourth was androgen producing. Fathalla (1968) presented 25 such intraovarian tumours occurring in the postmenopausal age and all with abnormal oestrogenic activity. Disaia and Marrow (1975) reported an associated Cushingoid syndrome featuring obesity, impaired glucose tolerance test and hypertension which was seen in 10 per cent of cases. Our case had moderate hypertension alone.

In general, hilus cell tumours are benign lesions which are cured by panhysterectomy in the perimenopausal age. In a younger woman with virilism, bisection of ovaries at laparotomy may reveal a brown or yellowish intraovarian tumour, characteristic of steroid producing lesion. The Reinke albuminoid crystalloids are diagnostic of Hilus cell tumour but not mandatory to diagnosis.

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