ARRHENOBLASTOMA OF OVARY

(A Case Report)

by

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Arrhenoblastoma is a rare biologically active ovarian neoplasm which causes defeminisation and virilization of a previously normal female. Pick (1905) was the first to draw attention to this and described it as a curious testicular-like tumour in an otherwise normal female and he presumed that it arose from an ovotestis. It was Blair-Bell (1915) who recognised it as an hormonally active tumour. Meyer (1930) first described its histological characteristics and correlated them with its functional effects.

So far, about 320 cases have been reported in the world literature. From India, 5 cases have been reported so far. (Paranjpe, 1959, Parekh and Parekh, 1963, Ipye and Mukherjee 1966, Banerjee 1967 and Saxena *et al* 1970).

The present case is reported because of rarity of this tumour and quick reversion to normal feminine function and ensuing pregnancy within a few months after removal of the tumour.

Case Report

A 20 years old Hindu female I.B.K. was admitted to the hospital on 26th May 1969 with history of amenorrhoea for one year and a lump in abdomen for the last 6 months which was increasing gradually. She got married about a year ago and her complaints started soon after marriage. On asking direct questions she informed that her breasts were becoming smaller, her voice was getting gradually hoarse and she had to shave the upper lip, regularly. Her menstrual cycles prior to above complaints were quite normal and regular.

General examination revealed a fairly built young woman, showing hirsutism of face and limbs. Vulval distribution of hair was masculine. Her B.P. was 130/70 and pulse and temperature were normal. Abdominal palpation revealed a smooth, uniform mass arising from pelvis, of about 20 weeks' size of pregnant uterus, quite freely mobile and not tender. Per vaginam the same mass was felt in the right fornix separate from the uterus. With these findings and history, a provisional diagnosis of virilizing ovarian tumour was made.

INVESTIGATION: Hb. 68%—Urine-nil abnormal. Blood urea 30 mg. Blood group B-Rh+ve

Buccal smear for nuclear sex chomatin and pyelography could not be done due to technical difficulties.

She had an examination under anaesthesia and diagnostic curettage under intravenous pentothal 2 days after admission. The cervix was easily dilated to No. 13 dilator but no curettings were obtained. The tumour was found to be freely mobile without any deposit in the pouch of Douglas. Laparotomy was done under mupercaine anaesthesia on 5th of June. The right ovary was enlarged by a partly cystic and partly solid tumour, size of 4″ x 6″, free of adhesions. Right ovariotomy was done. The left ovary appeared normal and on bisecting it, no solid

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areas were found and was sutured. Plication of round ligaments was done. Appendicectomy was further carried out since the appendix was thick and inflammed. She had a very smooth postoperative period and was discharged on 15th postoperative day.

Histological report of the tumour was a well differentiated arrhenoblastoma (Fig. 1). Surprisingly, she resumed first menstruation exactly one month after the laparotomy i.e. on 6th July and continued to menstruate normally. She conceived within the next six months. She attended antenatal O.P.D. regularly and delivered normally on 26th August 1970 a healthy female child weighing 3120 grms. Puerperium was uneventful. On follow-up examination in post-natal clinic she showed no recurrence or any other abnormality.

Comments

Arrhenoblastoma is characteristically a tumour of young women with maximum incidence in the third decade of life. It is a defeminising and virilizing ovarian neoplasam. The tumour is unilateral in 95% of cases and bilateral in 5% and is of variable size (Whetton and Christian, 1966).

These functioning tumours cause defeminisation followed by masculinisation. Defeminisation is evidenced by oligomenorrhoea followed by amenorrhoea, atrophy of breasts and sterility. These symptoms are present in 70% of cases. Signs of masculinisation viz. hirsutism, change of voice and enlargement of clitoris follow signs of defeminisation. All these above symptoms, were present in this case. Hirsutism is the most common virilising symptom.

The simultaneous occurrence of arrhenoblastoma and pregnancy is very rare. It is possible that these tumours were probably inert at the time of conception or the androgens secreted did not inhibit ovulation. During pregnancy these tumours either remain inactive or become active and cause pseudohermaphroditisim in the female infant.

Removal of the tumour is often followed by a return of menstruation and subsequent pregnancy as happened in this case. Such an episode is also reported by O'Hern and Neubecker (1962) 3 cases, Novak and Long (1965) 9 cases, Parekh and Parekh (1968) and Banerjee (1967), 1 case each.

Malignancy in these tumours is found in 22 to 34% of cases, Javert and Finn (1951) 22%, Pedowitz and 'C' Brien (1960) 21.3% and Novak and Long (1965) 34%.

Summary

A case of unilateral arrhemoblastoma of the right ovary in a woman aged 22 years is described where all defeminising and virilizing symptoms were present. Prompt reversion to normal menstruation and pregnancy followed soon after removal of tumour.

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