ARRHENOBLASTOMA

(A case report)

by

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Arrhenoblastoma of the ovary is an interesting tumour to a gynaecologist because of its rarity and capacity to produce striking sex changes. For the latter effect it is surrounded with a sort of scientific glamour. A process of defeminisation is followed by virilisation in a woman who was perfectly normal previously. A case of Arrhenoblastoma treated in Eden Hospital, Calcutta is reported here.

CASE REPORT

M.B., aged 18 years, single, was admitted on 27-6-1979 with complaints of (i) excessive body hair particularly on face and amenorrhoea for one year, (ii) enlargement of abdomen since one month.

History of Present Illness: The girl felt shy and depressed for excessive growth of hair on face along with cessation of menstruation. Moreover she noted an abdominal swelling which gradually increased in size. Since menarche at 15 years, she had periods at interval of 2-3 months, lasting for 3-4 days with normal flow followed by amenorrhoea for 1 year.

Genetic History: Only daughter, no history of hirsutism in the family.

On examination: Nutrition—fair, Height—140 cms., Span—142 cms., Voice—coarse, Thyroid—not enlarged. Facial hirsutism—moderate. Breasts well developed, hair on chest and breast (Fig. 1), Male type of hair on abdomen and inferior extremity. Pulse—82/min., B.P.—110/70 mm. of Hg., Heart & Lungs—NAD. Per abdomen a mass was felt in the lower abdomen extending 8 cms., above umbilicus, with well defined lateral margins. Lower pole could not be reached, mobile from side to side, rubbery in feel, surface lobulated.

Examination of the Genitalia: Clitoris—enlarged (Fig. 2). Vulva—adult type, excessive hair, introitus normal.

Rectal Examination: Pelvic lump felt, uterus could not be properly differentiated. E.U.A.—vagina—normal depth; cervix—nulliparous: uterus—normal in size, lower pole of the lump felt filling up the pelvis and pressing the uterus backwards.

Investigations: Hb—9.3 gm%; TC, DC—normal, Blood sugar (P.P)—95 mg%: Blood urea—38 mg%; X-ray abdomen—evidence of a soft tissue mass. Vaginal cytology—Midzone shift. Buccal smear—sex chromatin positive; Thyroid I131 uptake-1 hour—6%, 24 hours—27.2%. Urinary—17 Ketosteroids—9.9 mg/24 hours.

Treatment: laparotomy was done on 26-7-1979. The right sided pedunculated ovarian tumour was eventrated. Its consistency was variable from solid to cystic with multiple cysts visible on the surface. Right sided ovariotomy and salpingectomy was done. Capsule of the tumour was intact, no encroachment into the broad ligament. No pelvic or para-cortic nodes felt, Liver, not enlarged. No free fluid in abdomen. Ureters visualised in normal course. The uterus, left tube and ovary were normal without any evidence of corpus luteum. Appendicectomy was done as it was 12 cm. in length. Postopera-

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tive period was uneventful and she was discharged on 2-8-1979.

Follow up: She had menstruation on 6-9-1979 and 26-9-1979 lasting for 4 days with average flow, hirsutism and clitoridal enlargement persisting.

Pathological observation: Macroscopically, the specimen comprised of a large cystic mass measuring 30 cms x 22 cms x 15 cms. Cut section showed multiocular areas filled up with mucoid fluid. There were greyish white homogeneous solid areas at certain places. Microscopy—structure of Arrhenoblastoma, intermediate type, showing strands of cells with inperfect tubule formation.

Discussion

Apart from this case only one case of Arrhenoblastoma was found in this hospital in 7 years (1972-78) among 29,281 gynaecological admissions and 460 ovarian tumours. Novak and Long (1965) collected 321 cases from ovarian tumour registry but only 11 cases have been reported in India (Grewal and Kanta, 1977). Interesting enough, the present case had no atrophy of breasts and the tumour was large, which is seldom so (Dewhurst, 1976). The cut section showed mucoid fluid as found in pseudemucinous cystadenoma. The ovary is a hot bed of differentiating potentiality and this mucinous change is a form of simple metaplasia (Smiley *et al* 1953).

Urinary—17-Ketesteroids in the present case were normal as is usual. Strickler and Warren (1979) recently have discussed the issue excellently. The strongest androgen-testosterone is not itself a Ketestroid and 99 per cent of its is bound to a carrier protein. So a major part of urinary Ketosteroids are derived from weak androgens usually of adrenal origin. Rather free serum testosterone (normal 2-9 pg/ml) is an excellent monitor for most androgenic problems (Strickler and Warren, 1979). Hirsute women have increased androgen production and so it is not necessary to postulate on end organ abnormality (Kirschner and Bardin, 1972).

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See Figs on Art Paper III