# ANDROBLASTOMA COMPLICATING PREGNANCY

## (A Case Report)

by

ASHA GOYAL,*

K. SOOD,**

GURDEEP KWATRA,***

and

R. D. SHARMA****

*Introduction*

The designation arrhenoblastoma was coined by Meyer (1930) for those tumours which were thought to originate in certain male directed cells persisting in the ovary from foetal life. The manifestations of masculinisation vary much in degree. Although most of these tumors are virilizing, some are endocrinologically inactive and others are oestrogenic (Serov *et al*, 1973).

Virilizing arrhenoblastomas constitute less than 0.4% of primary ovarian neoplasms, however the non-functioning arrhenoblastoma the so called androblastomas are still rarer. Out of 111 cases of arrhenoblastoma, 98 were associated with virilism and only 13 cases with no androgenic effect.

Concomitant pregnancy was noted in only 2 women at the time of operation. So occurrence of pregnancy in association with arrhenoblastoma is a rare instance. Considering the rarity of lesion and its unusual presentation, this case is reported.

*Associate Professor of Pathology.
**Associate Professor of Obst. & Gynae.
***Demonstrator of Pathology.
****Prof. of Pathology and Microbiology.
Himachal Pradesh Medical College, Simla.
Accepted for publication on 29-9-79.

**CASE REPORT**

Patient R. P. aged 17 years was admitted for ammenorrhea for the last 8 months and distension of abdomen since 1 month. Five months back she had vaginal bleeding which was scanty and lasted for two days. After that ammenorrhea continued but she did not feel any foetal movements.

Menstrual cycles were normal and regular before the onset of amenorrhea. On general examination, she had marked anemia, and oedema of feet. Submandibular lymph nodes were enlarged. Examination of chest revealed harsh vesicular breathing, occasional rhoncii were heard.

Abdomen was greatly distended, flanks were full, umblicus everted, distended veins were visible. Foetal parts were palpable. She had a hard ballotable head like structure felt throughout the abdomen. She had shifting dullness with demonstrable fluid thrill. On vaginal examination there was oedema of the vulva, cervix was soft, uterus retroverted and bulky, and there was a tense feeling in all fornices. No mass was Palpable. Patient was kept for exploratory laparotomy which was to be done on 18-6-1979, but on 16-6-1979 she started having pain in abdomen and aborted a dead foetus with placenta at 12 A.M. on 17-6-1979. It was foul smelling and weighed 900 gms. There was no vaginal bleeding. Uterus was explored but nothing could be found except that there was tense feeling in all the formices. Inspite of the fact that she aborted the foetus abdominal size remained the same. There was marked ascites and multiple firm nodular masses could be felt all over the abdomen. It

clinically appeared to be a case of malignant ovarian tumour with ascites and she was again kept for exploratory laparotomy.

**On Investigation**

Hb-7 gm%
T.L-C. 10800/Cm.

Cytological examination of ascitic fluid showed it to be full of polymorphs and red cells with 2.5% proteins. X-ray chest showed raised domes of diaphram.

X-ray abdomen-showed evidence of mummified foetus.

**Operative Findings**

Abdomen was opened by right paramedian incision. There was markedly haemorrhagic deeply yellow coloured ascitic fluid, about 4 litres of which was drained. There was a huge soft solid ovarian tumour arising from the right ovary and reaching under the diaphram. Surface of the tumour was multilobulated and capsule was ruptured at two to three places anteriorly probably due to repeated tapping of ascites.

The uterus was about 10 weeks pregnant size, soft like a post abortal uterus. The left ovary and tubes were apparently healthy. Omentum appeared thickened and multiple adhesions were present. Panhysterectomy was done along with removal of bilateral adenexa, tumour and a part of omenteum. Liver was visualised. It appeared healthy. Para-aortic lymph nodes were not enlarged. There were no other secondaries.

**Histopathology**

Gross examination of specimen showed uterus to be enlarged. Uterine cavity was dilated. The endometrial surface appeared very shaggy and haemorrhagic. However, the serosal surface was normal. Left ovary and tube did not reveal any significant changes. Omentum grossly did not show any infiltration. Examination of tumour showed it to be a huge growth weighing 3 kg. and measuring 24 x 16 x 10 cm. External surface showed irregular nodular appearence with intact capsule. Cut surface showed variegated appearence. It was partly solid, partly cystic. Solid areas were greyish-white, while cystic areas at places contained thin haemorrhagic fluid while many of the cysts were filled with mucinous material. The largest cyst measured 4 cm. in diameter. There were multiple areas of haemorrhage and necrosis scattered throughout the tumour tissue.

**Microscopic Examination**

Microsections from the uterus showed the picture of postabortal endometritis.

Omentum showed heavy acute and chronic inflammatory cell reaction. Multiple sections from different parts of the tumour were studied. It was composed of imperfectly (Photo 1) formed tubules and acini lined by cuboidal cells and separated by abundant sarcomatous stroma. Scattered diffusely in the stroma were multiple clumps of interstitial cells which were round to polygonal showing abundant acidophillic cytoplasm with a round nucleus. These were very characterstically identified as leydig cells. There were large areas of necrosis and haemorrhage. Some of the acini were greatly dilated and filled with mucinous material. Histologically, on the basis of above findings the tumour was diagnosed as "intermediate group of androblastoma."

*Discussion*

Androblastoma is a rare tumour of ovary which characteristically develops in young women during the third decade of life (Pedowitz and O'Brien, 1962). A quarter of the affected subjects were under 20 years of age, as also our patient.

The occurrence of tumour in association with pregnancy is a very rare phenomenon. Only 2 cases have been reported. One must assume as did Pedowitz and O'brian (1962) that there was insufficient androgen to inhibit ovulation or the tumour was biologically inert or one must postulate that conception occurred before secretion of enough androgens to inhibit ovulation. In the present case the tumour was so large that one can presume that it must have been slowly growing before the conception occurred and it was biologically inert.

Histologically in all respects the functional and non-functional tumours have the same appearence. Leydig cells are not absent and actually in absence of

virilizing features, presence of Leydig cells is really helpful in clinching the diagnosis of androblastoma as has also been reported by (Tyagi and Madan, 1978). In most of the cases reported from India virilizing effects were well evident except in 1 case reported by (Tyagi and Madan, 1978) where the diagnosis of androblastoma was made with difficulty due to absence of virilizing signs.

It is quite difficult to evaluate the degree of malignancy of this tumour group (Novak and Woodruff, 1974). The degree of malignancy is unquestionably much less than that of common types of primary ovarian cancer but much greater than some appear to believe.

Generally it is the arrhenoblastoma of undifferentiated pattern that commonly metastasizes. However, if there is definite gross and microscopic evidence of lymphatic and vascular spread or perforation of capsule, one is justified in assuming that the tumour is malignant.

*References*


1. Meyer, R.: Zischrf. Geburchu. Gynaec. **98: 543, 1930.**
2. Novak, E. R., Woodruff, J. D.: Novak's Gynaecology and Obstetrics Pathology, Oct. 7, 1974 Philadelphia, London. Toronto W. B. Saunders and Co., Tokyo Igaku Shon Ltd. p. 469.
3. Pedowitz, P. and O'Brien, F. B.: Obstet. Gynaec. **16:** 62, 1962.
4. Sarov, S. F., Scully, R. E. and Sobin, L. H.: Histological Typing of Ovarian Tumours, World Health Organisation, Geneva, 1973.
5. Tyagi, S. P. and Madan, A.: J. Obstet. Gynaec. India. **28: 921, 1978.**


*See Fig. on Art Paper IV*