

Virilisation in postmenopausal female secondary to Steroid cell tumour of the ovary

Virilisation in postmenopausal women is uncommon and often points to an underlying hormone-producing tumour. This article discusses a case of virilisation in a postmenopausal woman caused by a steroid cell tumour, outlining the clinical features, diagnosis, and treatment.

Clinical presentation

(symptoms for 10 years prior to being investigated):

- 70-year female
- Balding
- Acne (new onset)
- Excess hair growth on upper and lower limbs
- Noted masculine changes in voice and appearance

Obs Hx:

- Para-2

Past Medical Hx:

- Hypercholesterolemia
- Ulcerative Colitis
- Osteoarthritis
- Thyroid nodule

Past Gynaecological Hx:

- LAVH for heavy periods and history of endometriosis 21 years prior to presentation

Investigations:	
S. testosterone	10.8nmol/L (0.2 – 2.0)
Free testosterone	422pmol/L (3-30)
SHBG	30 nmol/L (12-37)
DHEA	4 nmol/L (0.21-42.3)

Pelvic US: Unremarkable, ovaries not seen	
CT abd+pelvis	Bulky ovaries, no masses
CA-125	7.3 (<30)
AFP	4 mcg/L (0-10)
Cortisol	354 nmol/L (120-620)

Discussion with Gynae-Oncologist

Likely Androgen producing ovarian tumour.

Management:

- Laparoscopic Bilateral Salpingo-ophorectomy + peritoneal washings

Intraoperative findings:

- Normal appearing tubes and ovaries
- Adhesions with surrounding omentum and bowel

Histopathology:

- Steroid cell tumour – favouring Leydig cell tumour
- Serum testosterone 4 weeks post op 0.1nmol/L (0.1-1.5)
- Testosterone levels remained low on further serial monitoring

Continued over...

Ovarian tumour classification:

1. Epithelial tumours

- Serous
- Mucinous
- Endometrioid
- Clear Cell
- Brenner
- Undifferentiated

2. Germ Cell tumours

- Teratoma (mature, immature)
- Dysgerminoma
- Endometrial Sinus tumour
- Embryonal Cell Carcinoma
- Choriocarcinoma

3. Sex Cord Stromal Tumours

- Granulosa Stromal cell tumours
- Granulosa cell tumour
- Fibro-thecoma
- Sclerosing stromal tumour
- Sertoli Stromal tumours
- Sertoli Leydig Cell tumour
- Steroid Cell tumour
- Other tumours

4. Metastatic tumours

Summary of Steroid Cell Tumours of Ovary:

- Steroid cell tumours are rare hormone producing tumours of the ovary with only a few thousand cases reported till date
- They produce steroid hormones, commonly androgens
- Although they are common in women in reproductive age group, they can be found in women of all ages
- They are usually unilateral and well circumscribed, 6% present bilaterally
- Most cases are benign
- Most common presentation is virilisation
- In a subset of cases, it can be associated with ACTH secretion leading to co-presentation of Cushing's syndrome
- Other clinical presentations may include Iso-sexual pre-cocious puberty in paediatric age group, irregular periods and infertility in younger women of reproductive age group, postmenopausal vaginal bleeding in older women
- Management includes resection of the tumour and/or oophorectomy depending on the age of presentation.
- Long term outcomes are good without recurrences post resection.



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Special Interests

- Low and high-risk pregnancy care
- General gynaecology including uterine fibroid management, uterine prolapse management, cervical screening abnormalities, ovarian cysts, endometriosis, menstrual disorders
- Laparoscopic surgery
- Management of menopausal issues

Dr Anu Mahadik is an Obstetrician, Gynaecologist and Laparoscopic Surgeon with admitting privileges at Westmead Private, Norwest Private and St George Private Hospitals. Her Public Hospital attachment is at Bankstown Hospital.

After completing her MBBS, she obtained her postgraduate degree in Obstetrics and Gynaecology from KEM hospital in Mumbai (one of the oldest and most prestigious hospital in India). She then went on to obtain membership of the Royal College of Obstetricians and Gynaecologists, UK (MRCOG)

She has been in Australia since 2007 and has obtained her Fellowship of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (FRANZCOG).

She is very passionate about women's health and believes in providing responsible and accountable one to one care. She is a firm believer of practicing evidence-based medicine, taking into consideration personal expectations and beliefs.

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