SIGNIFICANT HYPERANDROGENISM IN A POSTMENOPUASAL WOMAN FROM AN OVARIAN SOURCE

KAMATH C, ROUTLEDGE M, ASHRAF M, PREMAWARDHANA LD, ADLAN MA

GIG CYMRU NHS WALES | Bwrdd Iechyd Prifysgol Aneurin Bevan University Health Board

Sections of Endocrinology and Gynaecology, Aneurin Bevan University Health Board, Ysbyty Ystrad Fawr Hospital, Caerphilly, CF82 7EP, UK

BACKGROUND

The polycystic ovary syndrome is the commonest cause for hyperandrogenism in young women. However, in older women adrenal and ovarian tumours are more common, particularly if -
(1)hyperandrogenism is of short duration,
(2)it is causing significant clinical abnormalities such as severe hirsutism, thinning of hair and baldness etc.
(3)it is biochemically severe.

We present an elderly woman with severe hyperandrogenism, who presented diagnostic and therapeutic difficulty

CASE PRESENTATION

This 67 year old woman presented with excessive hair growth on the face and abdomen, and thinning of scalp hair with extensive bald patches, of only 4 month's duration. She had a history of COPD, diabetes mellitus, peripheral vascular disease and a previous hysterectomy. She was on amlodipine, atorvastatin, pentoxiphylline, montelukast, bronchodilators, aspirin and omeprazole but on no drugs causing hirsutism.

Clinically, she had hirsutism of the upper lip, chin, abdomen and back (Ferriman-Gallwey score of 27), but no signs of Cushing's syndrome. She also had significant generalized alopecia with temporal recession and a large bald patch on her scalp. Examination of her systems was entirely normal

INVESTIGATIONS AND RESULTS

Investigations	Results
Plasma testosterone	46.8, 50 nmol/l
DHEAS	10 nmol/l (0.8 - 2.1)
Androstenedione	7.5 nmol/l (0.5 – 3)
17 hydroxyprogesterone	11.6 (2.6)
Overnight Dexamethosone suppression test	Cortisol <28 nomol/l
Short Synacthen test for CAH	17 hydroxyprogesterone increment - normal
LH,FSH, Prolactin, TFT, Renal and Liver profiles	Normal

	Day 1	Day 5
Cortisol	328	<28
Testosterone	40.4	46.6

Table 2
5 day dexamethasone androgen suppression test showing lack of suppression of plasma testosterone

Table 1
Tests showed high testosterone, without evidence of Cushing's syndrome or CAH

Table 3
Selective venous sampling of adrenals and ovaries - Suggestive of a predominantly right ovarian source for testosterone

Site	Testosterone	Cortisol
Peripheral	9.5	392
Left Adrenal	12.6	243
Right Adrenal	30.5	21569
Left Ovarian	117.3	454
Right Ovarian	>160	339

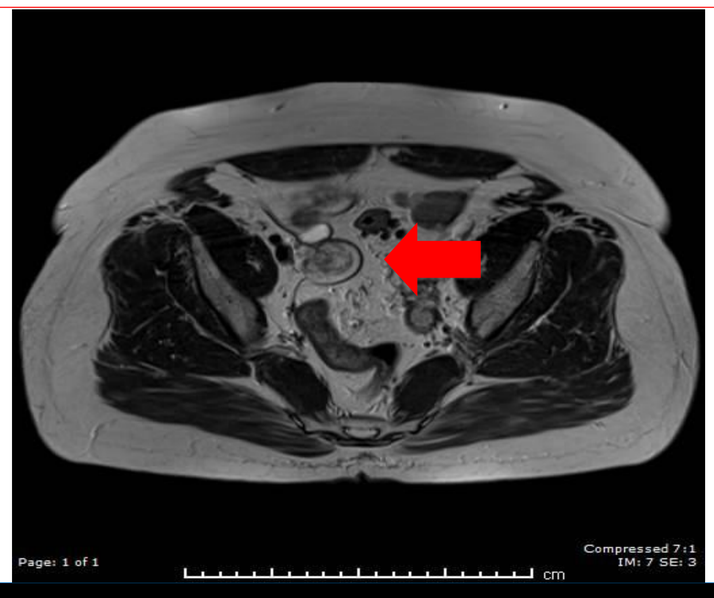

Figure 1
An encapsulated right ovarian mass (red arrow) on a CT scan taken one year after the original diagnosis, confirming benign appearances and lack of interval growth

CONCLUSIONS

(a) This elderly female presented with a rapid onset of severe clinical and biochemical hyperandrogenism suggestive of an androgen secreting tumour of the adrenals or ovaries

(b) Imaging, biochemical tests, and selective venous sampling confirmed a possible ovarian source. However, a right sided predominance was consistent with the CT scan findings.

(c) Interval scans a year later showed a lack of growth confirming the benign nature of the ovarian mass

(d) She is frail and unfit for surgery and is currently treated with cyproterone acetate with good clinical and biochemical response – plasma testosterone dropped to 1.9 nmol/l with improvement of symptoms

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