

Letter to the Editor

Postmenopausal Hyperandrogenism of Ovarian Origin: Diagnostic and Therapeutic Difficulties

Dear Sir;

Rapidly progressive hirsutism or virilization raises the suspicion of an androgen-secreting tumour. Virilizing tumours are rare; they develop from the ovary or adrenal cortex and are observed more frequently in postmenopausal women. We describe two rare cases of occult virilizing ovarian tumours.

Case 1: a 66 year-old woman presented with 4 years history of hirsutism and virilization. She has history of longstanding uterine bleeding secondary to uterine fibroids. Investigations revealed raised serum total testosterone, 5.6 nmol/L (N: 0.0–3.4 nmol/l), with normal sex hormone binding globulin (SHBG), dehydroepiandrosterone-sulfate (DHEAS), androstenedione, 17-hydroxyprogesterone (17 OHP) and overnight dexamethazone suppression test (ODST). CT abdomen and pelvis was unremarkable except for uterine fibroid. Because of the uterine bleeding, she underwent hysterectomy with bilateral oophorectomy. Histopathological examination showed benign uterine leiomyomata and bilateral ovarian fibrothecoma. Postoperative testosterone levels returned to normal (<0.1 nmol/l).

Case 2: a 61 year-old woman presented with hirsutism and male-pattern baldness developing over a two year period. 40 years previously, she had undergone total abdominal hysterectomy and left oophorectomy. Initial endocrine testing revealed elevated serum total

testosterone, 12.8 nmol/l with normal SHBG, DHEAS, androstenedione, 17 OHP and ODST. CT scan of abdomen and pelvis was negative. Transvaginal ultrasound was also unremarkable. A laparoscopic right oophorectomy was performed and 17 mm Leydig cell tumour of hilus cell type was detected on histological examination. Two months later, she had a regression of hirsutism and her serum testosterone returned to normal.

Androgen-secreting ovarian tumours may represent a diagnostic and therapeutic challenge. Virilizing adrenal tumours are usually ruled out by hormonal testing and imaging studies; they typically present with large malignant adrenal masses and raised DHEAS levels. However, the diagnosis of ovarian virilizing tumours can be difficult, because the size of such tumours is often too small to allow detection by imaging studies [1, 2]. Selective venous sampling is associated with technical problems, and also has a limited accuracy as ovaries secrete the hormones in an episodic fashion [3]. Finally, exploration by laparoscopy or laparotomy does not always lead to correct determination of the location of small ovarian tumours [1]. In postmenopausal women with progressive hirsutism or virilization, it may be reasonable to consider bilateral oophorectomy in the setting of normal adrenal and ovarian imaging and biochemical evidence of ovarian source of the hyperandrogenism. This approach avoids unnecessary investigations and delays in definitive management. Laparoscopy may be useful in the diagnosis and treatment of selected cases.

References

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