

When PCOS Isn't the Answer: Müllerian Para-ovarian Cyst Presenting with Hyperandrogenism

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Abstract

Hyperandrogenism in women is most commonly caused by polycystic ovary syndrome (PCOS), congenital adrenal hyperplasia (CAH), or androgen-secreting ovarian/adrenal tumors. Para-ovarian (para-tubal) cysts are generally benign and hormonally silent.

A 42-year-old obese (BMI 35Kg/m²) woman presented with progressive hirsutism and amenorrhea for 5 years. Biochemistry revealed elevated total testosterone 4.66 nmol/L; normal: 0.38-1.97 nmol/L. Adrenal imaging, 17-hydroxyprogesterone and DHEA -S was normal. Trans vaginal USG reported polycystic ovaries along with right adnexal cyst[9.3x6.5cm]. MRI revealed a right adnexal ovarian cyst along with bilateral ovarian hyperplasia. The patient underwent laparoscopic cystectomy. Post-operatively, serum testosterone dropped markedly to 1.13 nmol/L without any anti-androgen medication, and clinical symptoms improved evidenced by resumption of menstruation and improvement of hirsutism. Histopathology confirmed a Müllerian cyst with no evidence of neoplasia. Although para-ovarian cysts are typically non-functional, rare reports suggest possible androgen production or paracrine ovarian stromal stimulation due to cystic lesions. In our case, normalization of testosterone following cystectomy strongly supports a causal relationship. Possible mechanisms include stromal luteinization within the cyst wall or stimulation of adjacent ovarian tissue. [*J Assoc Clin Endocrinol Diabetol Bangladesh*, 2025;4(Suppl 1): S58]

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