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Polycystic Ovary Syndrome (PCOS)



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Polycystic Ovary Syndrome (PCOS)

Polycystic ovary syndrome is the commonest endocrine condition (15-20%) affecting women of reproductive age. It is a heterogeneous disturbance and its pathophysiology appears to be multifactorial and polygenic. The PCOS is familial and various aspects of the syndrome may be differentially inherited.

There are many extra-ovarian aspects contributing to PCOS, yet ovarian dysfunction remains central. Key features include menstrual cycle irregularities, raised androgen hormones, increased body weight, subfertility and ovaries with polycystic appearance. Noteworthy, polycystic ovaries can exist without other clinical signs, which may become expressed over time often influenced by interlinking factors. For instance, it is well known that a gain in weight is associated with a worsening of symptoms whilst weight loss improves both the metabolic profile and the symptoms. Women with PCOS may have insulin resistance and hyperinsulinaemia, and the prevalence of diabetes is about 11% in those who are obese. An association between PCOS and recurrent miscarriage has been suggested. Possible late sequelae of PCOS are diabetes, hypertension, cardiovascular disease, dyslipidaemia and endometrial cancer.



Investigations for the diagnosis of PCOS include: pelvic ultrasound (preferably transvaginal), androgens measurements (testosterone, sex hormone binding globulin, free androgen index), gonadotrophins (FSH and LH) and anti-Müllerian hormone (AMH).

The clinical management of women with PCOS should always be focused on the individual problem. An association between the symptoms of PCOS and a significant reduction in health-related quality of life (physical, psychological and social aspects) has been clearly demonstrated. Regular physical exercise and low-calorie diet lead to weight-loss and improve the hormonal profile, the metabolic symptoms and the reproductive performance (i.e., fertility). Anti-obesity drugs (orlistat and sibutramine) may help with weight loss and can be prescribed for individuals with a body mass index (BMI) > 30 kg/m². Bariatric surgery has a role in women with (BMI) > 35 kg/m².

Cycle control and regular withdrawal bleeding are achieved with oral contraceptive preparations (Dianette and Yasmin) or progestogens, such as medroxyprogesterone acetate, for 12-14 days every 3 months. Metformin is an alternative to control the menstrual cycle if contraception is not required, yet weight loss should be encouraged.

With regard to subfertility, ovulation can be induced with the anti-oestrogens, such as clomiphene citrate (50-100mg daily) or tamoxifen (20-40mg daily). The pregnancy rate is 40% and the risk of multiple pregnancy is about 10%. For patients who are resistant to this oral treatment, the therapeutic alternatives are injectable gonadotrophin therapy or

laparoscopic ovarian drilling. The risks of gonadotrophin therapy but not of ovarian drilling include multiple pregnancy and ovarian hyperstimulation syndrome (OHSS). Both treatment strategies are effective giving a cumulative conception rates after 6 months of approximately 60%. Metformin may also improve fertility potential when given to non-obese women with PCOS. A dose of 500mg t.d.s. or 850mg b.d may be prescribed.



Treatment options of increased male hormones are cosmetic and medical regimens. The use of lasers and photothermolysis techniques has become popular. Repeated treatments are necessary as only hair follicles in the growing stage are treated at each treatment session. Patients should be adequately selected and warned that complete hair removal is not guaranteed and some scarring may occur. Vaniqa cream is a topical treatment; improvements may be noticed within 8-10 weeks of commencing treatment. Medical regimens include an anti-androgen (cyproterone acetate) and a weak diuretic (spironolactone). Anti-androgen therapy can be combined with topical anti-acne agents (retinoids and anti-microbials).