Diagnosis & treatment of PCOS

DIAGNOSIS

- Patients must have two of the following:
- 1 Oligo- or anovulation
- 2 Hyperandrogenism (clinical or biochemical)
- **3** Polycystic ovaries identified on ultrasound (either 12 or more follicles or increased ovarian volume >10cc)
- Risk factors: family history
- Other symptoms: subfertility, oily skin, thinning hair or alopecia
- Clinical features: oligomenorrhoea, anovulatory infertility, hirsutism, acne, male pattern balding, depression, mood changes. Acanthosis nigricans may be seen in profoundly insulin resistant obese PCOS patients. 40-50% of patients have a raised BMI

DIFFERENTIAL DIAGNOSES

- Hypothyroidism
- Congenital adrenal hyperplasia (late-onset)
 In patients with menstrual disturbances and signs of hyperandrogenism:
- Hyperprolactinaemia
- Idiopathic/familial hirsutism
- Masculinising tumours of the adrenal gland or ovary (rapid onset of signs of virilisation)
- Cushing's Syndrome
- Anabolic steroid use



FOLLOW UP

Where simple measures such as weight loss and hormonal therapy are effective at reducing symptoms, this can be managed in primary care.

Anovulation must be reviewed in a gynaecology clinic regularly until regulated.

Infertility patients will be reviewed by the fertility specialists in secondary care

TREATMENT

daily subcutaneous)

- Conservative management if the patient does not have symptoms
- Weight loss increase physical activity and refer to dietitian
- Treat oligo-/amenorrhoea: combined oral contraceptive pills, or cyclical progesterone (10-14 days every three months). Induce a withdrawal bleed every three to four months to avoid endometrial hyperplasia developing in the long-term
- Consider metformin to regulate menstruation if contraception is not required
- Treatment of hirsutism: depilation, eflornithine, electrolysis, laser. Use of hormonal contraception may help by reducing circulating androgens

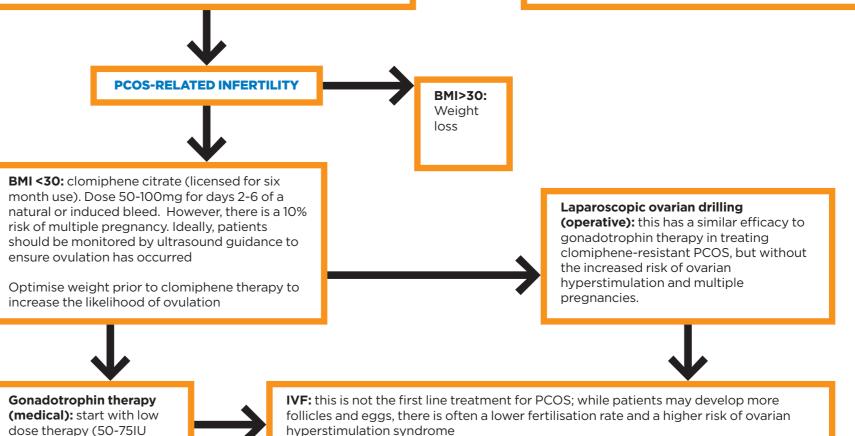
INVESTIGATIONS

- Increased androgens (testosterone and androstenedione). In cases where testosterone >5nmol/l, exclude other causes such as androgen-secreting tumours
- Increasing luteinising hormone (LH). In PCOS, an elevated LH:FSH ratio may be seen. This is best measured on day 1-5 of the cycle, if possible
- Normal FSH
- Reduced sex hormone-binding globulin (SHBG)
- Normal (mid-follicular range) oestradiol in anovulatory women; reduced progesterone
- Abnormal thyroid function may be seen
- Impaired glucose tolerance in obese patients
- Transvaginal ultrasound to assess the ovarian morphology and endometrial thickness. This is important in women with oligomenorrhoea, as a thickened endometrium may suggest hyperplasia and require an endometrial biopsy or hysteroscopy

COMPLICATIONS OF PCOS

Short-term

- Obesity
- InfertilityIrregular menses
- Abnormal lipid levels
- Hirsutism/acne/androgenic alopecia
- Glucose intolerance/acanthosis nigricans Long-term
- Diabetes
- Endometrial cancer (related to amenorrhoea and endometrial hyperplasia)
- Cardiovascular disease
- Dyslipidaemia
- Obstructive sleep apnoea
- Risks associated with pregnancy
- Increased risk of miscarriage
- Gestational diabetes
- Pregnancy-induced hypertension
- Pre-eclampsia



Dr Shree Datta is a consultant obstetrician and gynaecologist at King's College Hospital

References

- European Society of Human Reproduction and Embryology and the American Society for Reproductive Medicine (ESHRE/ASRM) Sponsored PCOS Concensus Workshop group 2003.
- Royal College of Obstetricians and Gynaecologists. Greentop guideline: Long-term consequences of PCOS. London: RCOG: 2014