

Polycystic Ovaries



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PCOS

- First described by Irving Stein and Michael Leventhal in 1935 as a triad of
 - Amenorrhea
 - Obesity and
 - Hirsutism

Rotterdam criteria for diagnosis 2003

Two of the following three criteria

1. Polycystic ovaries

In one or both ovaries

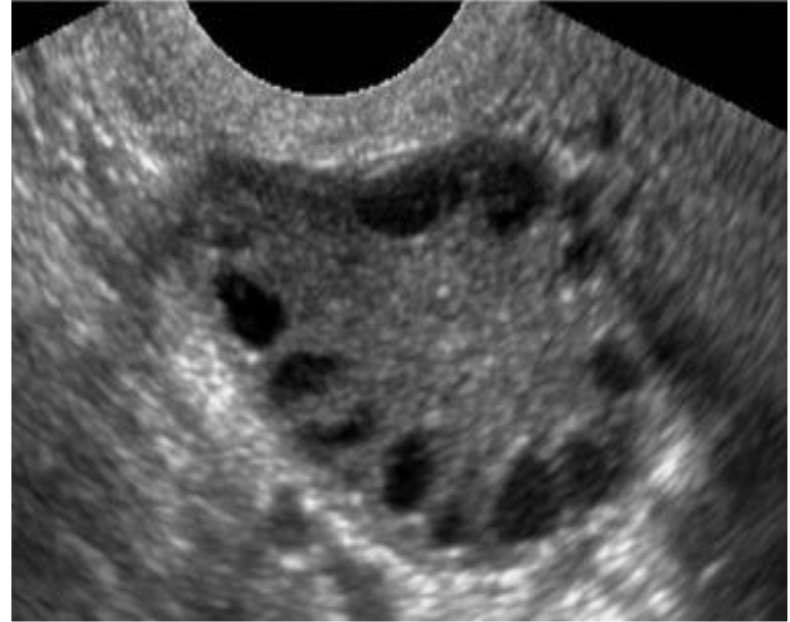
↑ ovarian volume > 10 ml

≥ 12 follicles, 2-9mm in diameter

Echo dense stroma

2. Oligo or anovulation

3. Clinical and/or biochemical signs of hyperandrogenism



Prevalence

PCO present in

22% of 'normal' population

PCOS present in

6-7% women

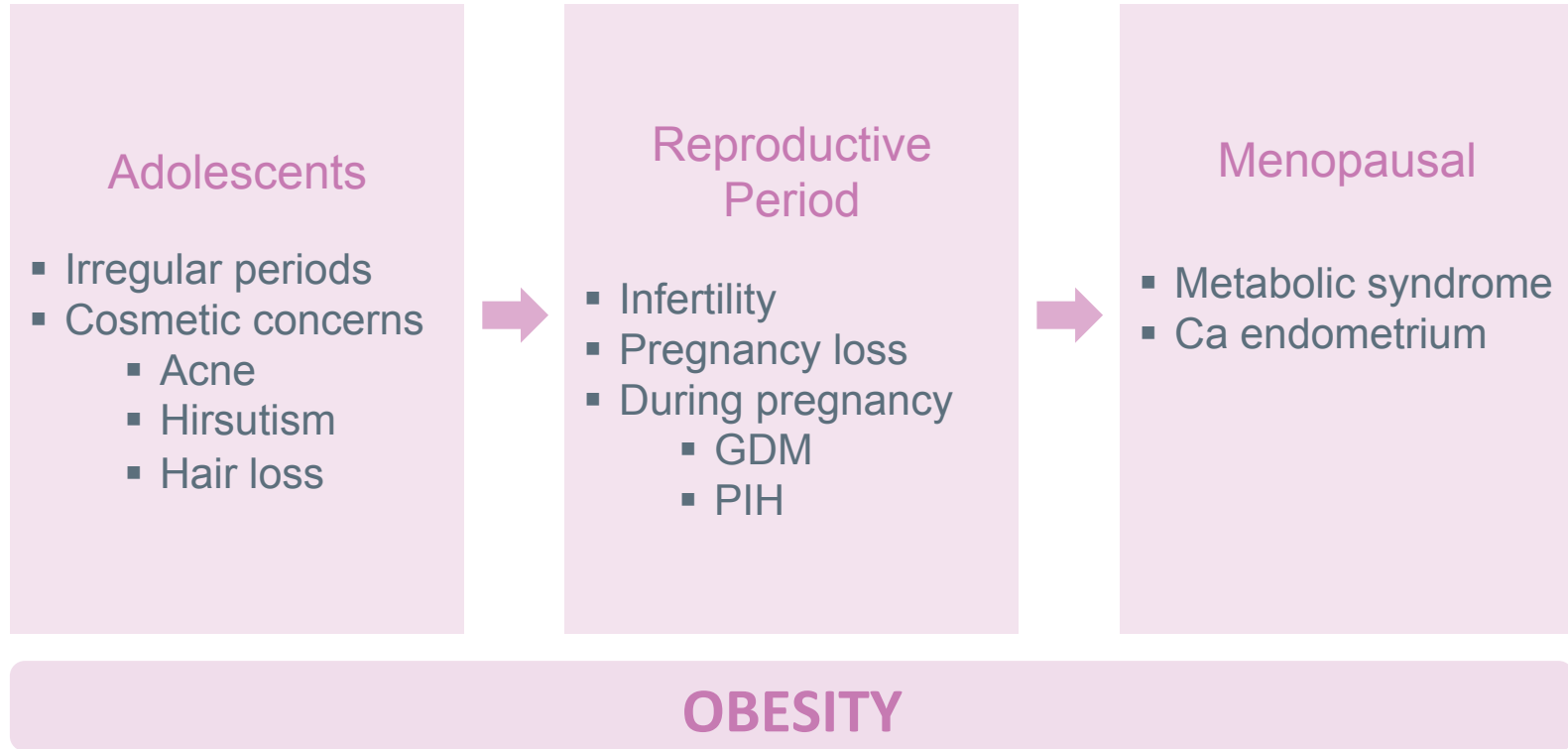
32% of women with amenorrhoea

87% with oligomenorrhoea.

87% with hirsutism / acne and regular cycles

73% of women with anovulatory infertility

Clinical presentation



PCOS: metabolic disorder

- Insulin Resistance
- Obesity
- Endometrial Cancer
- Cardiovascular disease
- Sleep apnea
- Depression

PCOS: what tests to do?

- USS

- Day 2 FSH / LH / Oestradiol / Prolactin / SHBG / Testosterone / DHEA / ?AMH
- Free Androgen Index
- Thyroid Function tests

Hirsutism or T>5 nmol/L

- 17-Hydroxyprogesterone
- Cortisol levels
- DHEAS

Pregnancy

- Screen for GDM and PIH

- Other tests

- BP measurement
- GTT after 40
- Obesity + Snoring = Sleep studies to rule out sleep apnea

Management options: general principles

- Weight Loss
 - Low GI diet + Exercise
 - Lifestyle modifications
 - Smartphone apps eg MyFitnessPal
- Associated with
 - Spontaneous resumption of ovulation
 - Improvement in fertility
 - Increased SHBG
 - Reduced insulin \diamond normalisation of glucose metabolism
 - Reduced risk of developing Type 2 diabetes

Management options: Oligomenorrhoea / Amenorrhoea

- Aim to have at least 4 periods per year
 - Progesterone withdrawal / Mirena
 - COC Pill
 - Yasmin / Dianette
- Management of heavy periods
 - COCP
 - Mirena
 - Tranexamic Acid

Management options: infertility

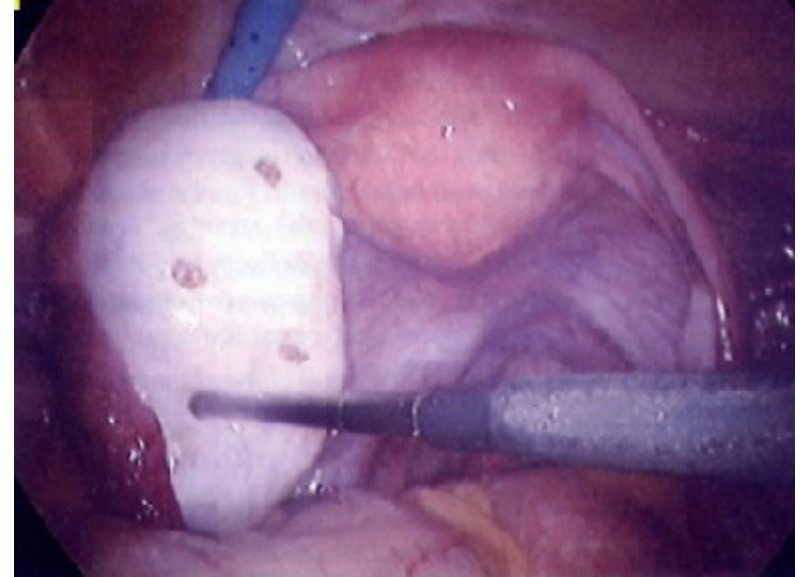
- 50-60% will conceive naturally
- Weight loss
- Metformin
- Ovulation induction with Clomiphene Citrate
 - Follicular tracking to reduce risk of overstimulation

Management options: hirsutism

- Best results are achieved by combination of
 - Anti-Androgens
 - COCP ◊ Increased levels of SHBG
 - Dianette Yasmin
 - Cyproterone Acetate
 - Spironolactone 100-200mg/d
 - Flutamide 250mg/d (non-steroidal antiandrogen, hepatotoxic)
 - Finasteride 5mg/d (inhibits 5a reductase)
 - Topical treatments
 - Vaniqa (Eflornithine)
 - Shaving / Bleaching
 - Electrolysis / Laser

Management options: surgery

- Laparoscopic ovarian drilling, in selected cases, eg.
 - Anovulation with normal BMI
 - Increased androgens
 - Laparoscopy reqd for other indications
- Leads to ovulation, normalisation of androgens and SHBG
- Results are long-lasting (up to 20y!)



Management options: metformin

- Indicated in increased BMI
- Infertility
 - Helps in weight loss
 - Increased rates of ovulation
 - Synergistic effect on Clomiphene
 - Reduces risk of GDM in pregnancy

Management options: pregnancy

- Metformin reduces risk of miscarriage and GDM in women with PCOS
- Safe with pregnancy and breast-feeding

- Women should be screened for GDM before 20wks
- Increased risk of PIH, IUGR

PCOS: Take Home Messages

- PCO is common (1 in 4) & women with PCO & >6 periods a year are normal.
- PCOS = PCO and symptoms

- Dietary recommendations: low GI, low fat diet
- OCP – may increase triglyceride levels, but OCP better than metformin for acne & hirsutism.
- Anti-androgens & Eflornithine lotion for hirsutism or acne
- Metformin may be useful to help IR, aids weight loss & may induce ovulation.

- Tranexamic acid will control heavy periods if the uterus is normal.
- The Levonorgestrel-IUD is an excellent option for many women with PCOS as it controls heavy periods & prevents uterine cancer

Thank You



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