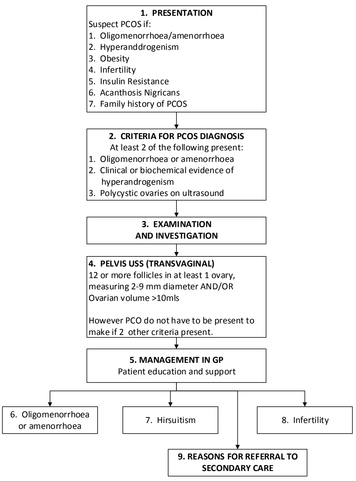
Homerton University Hospital NHS
NHS Foundation Trust

CITY AND HACKNEY POLYCYSTIC OVARIAN SYNDROME

NHS
City and Hackney
Clinical Commissioning Group



Polycystic ovarian syndrome (PCOS) is a heterogenous syndrome involving ovarian abnormality, disturbance to menstrual cycle, infrequent/absent ovulation, hyperadrogenisation, acne, obesity and metabolic disturbance. The main management is to improve symptoms and metabolic disturbances. Many women once they have been diagnosed choose to do nothing.

1. PRESENTATION
Suspect PCOS if:
- Oligomenorrhoea/amenorrhoea
- Hyperanddrogenism
- Obesity
- Infertility
- Insulin Resistance
- Acanthosis Nigricans
- Family history of PCOS

(Differential diagnosis-consider ovarian or adrenal tumour, cushing's syndrome, late onset congenital adrenal hyperplasia, or drug induced symptoms and signs).

2. CRITERIA FOR PCOS DIAGNOSIS:
At least 2 of following present:
1. Oligomenorrhoea or amenorrhoea
2. Clinical or biochemical evidence of hyperandrogenism
3. Polycystic ovaries on ultrasound

NB Diagnosis can be made on clinical criteria without the need for blood tests. However in City and Hackney, hirsutism amongst certain immigrant groups can be relatively common and would not meet the clinical diagnostic criteria of hyperandrogenism in PCOS

3. EXAMINATION AND INVESTIGATION
Pregnancy test if indicated
Blood Pressure and BMI, assessment of signs of hyperandrogenism

Blood tests
- Total testosterone (normal to moderately raised in PCOS)
- SHBG (normal to low in PCOS –provides surrogate measure of degree of hyperinsulinaemia, as insulin suppresses SHBG)
- FSH/LH – raised in Premature Ovarian Failure

EXCLUDE other causes of oligo- and amenorrhoea:
- Prolactin (may be raised in PCOS)
- TSH
- 17-hydroxy progesterone if suspicion of congenital adrenal hyperplasia (CAH) (if > 10 refer to endocrinologist). This needs to be measured in early follicular phase i.e. in first week after period but don't delay if amenorrhoeic.

(Suspect CAH if a patient presents with PCOS symptoms and signs but is thin (low BMI) or if there is a family history of known 21 hydroxylase deficiency or a history of a neonatal death / in utero death/NB Oestradiol NOT recommended (fluctuates).

4. Pelvic USS (transvaginal) – classic picture of PCOS:
12 or more follicles in at least 1 ovary, measuring 2-9 mm diameter AND/OR Ovarian volume >10mls. However polycystic ovaries do not have to be present to make diagnosis if 2 other criteria present.

5. MANAGEMENT IN GP:
Patient Education and support:
- Weight reduction
- Exercise
- Fasting glucose and lipids, (OGTT if raised fasting glucose). If results normal screen every 3-5 years
- Screen for gestational diabetes before 20 weeks if patients with PCOS become pregnant
- CVD risk (offer regular screening especially >40 years).

6. If Oligomenorrhoea or Amenorrhoea:
If endometrium normal thickness, advise treatment to prevent hyperplasia with COCP or POP (advise withdrawal bleed at least every 3/12)·

Treatment to induce a withdraw bleed every 3 months reduces the risk of endometrial hyperplasia that can lead to an increase chance of developing endometrial cancer (there is some evidence of an increased endometrial cancer risk in women with PCOS due to unopposed oestrogen stimulation of the endometrium, though evidence supporting this is not strong. (See reference 1, 2 and 3)

NB There is no need for a withdrawal bleed for women using POP continuously because it suppresses gonadotrophins and will thus prevent endometrial hyperplasia.

If there is abnormal PV bleeding this needs to be investigated accordingly.

Note: osteoporosis prophylaxis NOT needed – patients with PCOS are not oestrogen deficient

7. If Hirsutism:
- Weight loss can be effective in milder cases
- Advise re cosmetic measures + consider Rx with:
  - Dianette (cyproterone acetate+E2) or Marvelon
  - Spironolactone 100mgs OD, an aldosterone antagonist exhibits dose dependant competitive inhibition of the androgen receptor as well as inhibition of the 5 alpha reductase activity. Use of finasteride or cyproterone are other drug options. However these drugs are teratogenic so not recommended for women of a fertile age.

- If using any of these drugs ensure effective contraception is used. For further information see hirsutism guidelines (ref 4)

8. If Infertility:
- Assess for reasons other than PCOS
- Advice re weight loss (if >5% body weight can be lost there is good chance of restoring menstrual regularity and ovulation)
- Initiation of clomiphene as per protocol

9. REASONS FOR REFERRAL TO SECONDARY CARE
Refer gynaecology (PCOS dedicated clinic) if;
- Unusual endometrial appearance e.g. cystic changes, suspected hyperplasia or polypoidal appearance
- Treatment failure in primary care. Unable to tolerate or accept hormonal treatment and symptoms such as ongoing breakthrough bleeding, spotting, heavy irregular bleeding that remain distressing for the patient. (One off appointment for advice re management options)

Refer to fertility clinic for: Continuing failure to conceive after trail of clomiphene in primary care.

Refer Endocrinology if severe or rapid onset of symptoms/signs of virilisation e.g. short history of worsening hirsutism over a few months.

References
1. Chittended BG et al, PCOS and the risk of gynaecological cancer: a systematic review. Reprod Biomed Online Sept 2009, 19:398-405 (Systematic review -women with PCOS 3 x more likely to get endometrial cancer…but is rare in young women)

2. Pillay OC et al. The association between polycystic ovaries and endometrial cancer. Hum reprod 2006, 21, 924-9 (abstract no evidence increase in mortality but appears to be an association-chronic anovulation leading to chronic oestronisation of the endometrium unopposed by progesterone features of PCOS and risk factor for endometrial cancer

3.Fearnley EJ el al. PCOS increases the risk of endometrial cancer in women aged less than 50 years old: an Australian case-control study. Cancer Causes control, Oct 17, 2010 (Epub ahead of print) Women 4 x increase < 50 of developing endometrial cancer<50

4. Evaluation and Treatment of Hirsutism in premenopausal women, Journal of endocrinology and metabolism 2008

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