



Mini Review

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Polycystic Ovary Syndrome: Diagnosis And Management In Primary Care



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Summary

Polycystic ovary syndrome (POCS) is a highly prevalent endocrine disorder which is not always diagnosed in young women. We must think about it in any adolescent woman with hirsutism or other skin manifestations of hyperandrogenism, obesity or menstrual irregularities. As it is an exclusion diagnosis, we must do a differential diagnosis from other hyperandrogenic disorder. An early diagnosis is important for a woman's health (reproductive, oncologic and metabolic risk) and, therefore, as doctor we must follow up for a long term. The treatment should always start with correction of metabolic derangements.

Definition

Polycystic ovary syndrome (POCS) is a set of symptoms related to an imbalance of hormones that can affect women of reproductive age. We can define it as the combination of signs and symptoms of androgen excess, ovarian dysfunction and polycystic ovarian morphology on ultrasound [1]. In Primary Care, we can define it as underrecognized, underdiagnosed and understudied: at least 70% of women with PCOS remain underdiagnosed [2].

It is important to know how PCOS is defined and categorized. "Polycystic" does not primarily define this syndrome [3]. In the POCS pathophysiology at least three types of interrelated alterations stands out: neuroendocrine dysfunction (hypersecretion of Luteinizing Hormone), metabolic disorder (hyperinsulinemia and insulin resistance) and a dysfunction of steroidogenesis and ovarian folliculogenesis. To make it easier, in Rotterdam (2003) a criteria to be diagnosed was published. We can diagnose it by, at least, two of three diagnostic criteria (Rotterdam criteria [4]):

a) Hiperandrogenism: high levels of androgens lead to dermatological symptom [5]: hirsutism, acné, balding, alopecia. As Primary care doctors, we have to know that these symptoms can also be caused by puberty rather than PCOS. If it was necessary we could ask for laboratory tests to do a differential diagnose: Total Testosterone (recommended Free Androgen Index [6]: Testosterone/SHBG>4.5, dehydroepiandrosterone (suprarrenal

cause of hyperandrogenism), androstenedione (commonly elevated in menopause), 17-hidroxiprogesterone (21-hidroxilasa déficit), LH/FSH>2 (not used in the last years).

b) Menstrual disorders: they can vary from amenorrhea to oligomenorrhea (menstruation delayed to 35 days or more) to menorrhagia. It can cause several problems to women who suffer from POCS: women with PCOS are 15 times more likely to report infertility [7].

c) Polycystic Ovaries (only available thanks to ultrasound): excessive follicles (25 or more from 2 to 10mm in a transvaginal ultrasound) may be present. Furthermore, increased ovarian volumen (more than 10mL) may be present [8] (Table 1).

Treatment

a) As Primary Care doctors, we must help the patient with non-pharmacologic and pharmacologic treatment. We must be honest with the patients and explain them that there is no cure for PCOS, but symptoms can be managed with lifestyle changes and medication:

b) Obesity is recognised as aggravating PCOS, especially abdominal circumference [9]. In addition, exercise helps to reduce many PCOS symptoms. The Centers for Disease Control and Prevention (CDC) recommends 150 minutes of moderate-intensity

exercise per week or 75 minutes of high-intensity exercise per week and strength training 2 days per week [10].

c) Avoid inflammatory foods (gluten and high glycemic load: potatoes, bread, sugary desserts...) [11].

d) Low-androgen oral contraceptives (most common used: drospirenone or progestin-only pills): they are considered

first pharmacological step. They will suppress LH secretion and decrease ovarian androgen biosynthesis [12].

e) Metformin: reducing insuline resistance.

f) Lipid-lowering agents for women with lipid abnormalities.

Table 1: Possible phenotypes of PCOS. Type A and C are the most prevalent phenotypes.

Phenotype	Hyperandrogenism	Ovarian Dysfunction	Polycystic Ovarian Morfphology
Type A	X	X	X
Type B	X	X	
Type C	X		X
Type D		X	X

Long-Term Medical Follow-Ups

a) As Primary Care doctors, we must be prepared to follow up regularly these patient (as we said before, this is a chronic disease):

b) Blood sugar test once a year and Hemoglobin A1C test once a year.

c) Vitamin D level test.

d) Thyroid function test.

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