

Diagnosis of Polycystic Ovary Syndrome in an asymptomatic patient on contraceptive use for different causes

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Abstract: Objective: The case report described aims to demonstrate the difficulties for the correct diagnosis of gynecological endocrinopathies by medical students in outpatient practice and how these comorbidities affect the quality of life of women, in addition to understanding the experience of these patients with the symptoms that feature. **Case report:** This is a descriptive report which consists of an analysis of the activities carried out by medical students at the University of Franca in consultations at the gynecology school clinics and the methodologies used to investigate gynecological endocrinopathies. **Results:** This article allowed the conclusion of the importance of linking medical practice to knowledge of the main and most common diseases in each area, as the lack of knowledge of the main risk factors and the main associated morbidities or resulting from some pathologies, amplifies the suggestion of various entities that may be hidden in the face of an unintentional treatment of a patient.

Keywords: Diagnosis, Women's Health, Polycystic Ovary Syndrome.

INTRODUCTION

Polycystic Ovary Syndrome, known as PCOS, represents a common comorbidity in gynecological clinical practice, affecting in general one in five women who are in the menarche period. It represents a common endocrinopathy, with hyperandrogenism as its main characteristic, which causes manifestations such as acne, hirsutism, alopecia and seborrhea (Andrade, et al. 2016).

Women with PCOS have several clinical repercussions resulting from the metabolic syndrome that accompanies the disease, such as insulin resistance, obesity, dyslipidemia, type II diabetes mellitus and cardiovascular diseases, as well as risks such as infertility, gestational diabetes, increased incidence of cancer of endometrium (Andrade, et al. 2016).

Its etiopathogenesis is not fully elucidated, however, it is known that it involves uncontrolled steroid production by the ovaries due to intrinsic defects in theca cells and the development of insulin resistance, associated with excess oxidative stress and environmental and genetic factors (Arie, et al. al, 2013).

This case report aims to demonstrate the difficulties for the correct diagnosis of gynecological endocrinopathies by medical students in outpatient practice and how these comorbidities affect the quality of life of women, in addition to understanding the experience of these patients with the symptoms that are part of it.

CASE REPORT

This article is a case report based on activities carried out by medical students, through curricular internships integrated in the teaching plan of their medical internship. Students performed care in the area of gynecology and obstetrics in specialized outpatient clinics of the teaching institution, affiliated with the municipality of the city of Franca - SP, in the countryside of São Paulo.

Women were referred to the service through the basic health units, and were assisted by academics accompanied by medical professors that are gynecologists and obstetricians. During the consultations, the cases were discussed by the group of academics and professors, at which time they evaluated the complaints presented and planned the appropriate conduct.

The consultation was initiated by the anamnesis of the 33-year-old white woman, single, G1Pc1A0, born and raised in Franca - São Paulo. She reports to the students that she attended the consultation for routine gynecological evaluation and had no relevant complaints at the time. She informed that she had not been undergoing pap smears and breast exams for more than 3 years.

During the service, a general investigation of the patient was carried out and she was asked about the date of her last menstruation, which the patient reported to not really know, due to the continuous use of oral contraceptive Mesygina for 3 years, since the birth of her only child. She was asked about the characteristics of her menstrual cycle before pregnancy and the patient reported irregular cycles, with low flow and severe dysmenorrhea. She reported having an active sex life, not having a steady partner and using barrier contraceptives.

She denied gynecological complaints, and there were questions about her various systems without changes that were relevant to the case. In her pathological history, she had arterial hypertension with the use of Losartan and captopril, in addition to type II diabetes mellitus using metformin.

On physical examination, the patient was in good general condition, had grade II acne on her face and an increased amount of hair, weight 111.5 kg, height 1.63 (BMI 41.97 - Obesity Grade III) and BP 120x80 mmHg. In the examination of the breasts in view of static, dynamic and palpation inspection, there were no alterations. The external genitalia presented hair that went beyond the pubic area and extended to the anterior aspect of the thighs. Her internal genitalia had no alterations, inflammatory signs or fissures. In the specular examination, it was possible to find the cervix with a pinkish color, without alterations with an intact vaginal wall. The collection of endo and ectocervical content for cytopathological analysis was carried out.

RESULTS AND DISCUSSION

Polycystic ovary syndrome (PCOS) was described in the thirties by Stein and Leventhal (Avila, et. al, 2014), and is now recognized as one of the main causes of secondary amenorrhea in women of reproductive age.

It represents an important endocrinopathy in females responsible for compromising the quality of life of a significant number of women. PCOS is characterized by the presence of hyperandrogenism which manifests itself through hirsutism, acne, seborrhea, alopecia, menstrual irregularities, obesity and ovarian cysts (Carmo, et. al, 2013). It is also responsible for reproductive complications such as infertility, endometrial cancer and metabolic changes that increase cardiovascular risk and predispose to high morbidity and mortality (Arie, et. al, 2013).

The diagnosis of Polycystic Ovary Syndrome can represent a great challenge to medical professionals and is supported by several consensus and criteria, the most used currently being that of Rotterdam (Carmo, et. al, 2013).

According to the Rotterdam criteria, to make the diagnosis of PCOS, the patient must meet 2 out of 3 criteria, including hyperandrogenism, characterized by the presence of clinical or laboratory signs that lead to the determination of the presence of hyperandrogenism, which is essential for the pathophysiology of PCOS (Febrasgo, 2018). Calculated free testosterone is the best way to identify laboratory hyperandrogenism, however elevated androstenedione or dehydroepiandrosterone (DHEA) can be used as diagnostic criteria in cases where testosterone is normal (Moura, et. al, 2011). It is important to report that due to the alteration in SHBG production, the biochemical evaluation of hyperandrogenism is not possible in women using hormonal contraceptives.

Clinically, hyperandrogenism can be expressed by dermatological symptoms, such as increased skin oiliness, higher incidence of acne, hirsutism and androgenic pattern alopecia. In an attempt to more objectively assess these symptoms, some scales were children, alopecia can be assessed using the Ludwig scale (Soares Junior, 2015).

Hirsutism is evaluated by the modified Ferriman-Gallwey scale, with values above 4-6 points indicating hirsutism. When evaluating hirsutism we must take into account the presence of terminal hair, which corresponds to hair with more than 5 mm of length, thicker, more pigmented and associated with exposure of hair follicles to androgens (Sogesp, 2021).

Another criterion included in Rotterdam is menstrual irregularity or chronic cancellation, which is typically characterized by long-interval cycles or amenorrhea (Sogesp, 2021). These patients often menstruate only after using progesterone or combined contraceptives. Cycles with intervals shorter than 21 days or longer than 35 days in women 3 years after menarche are considered menstrual irregularities. Intervals greater than 90 days one year after menarche. Intervals less than 21 days and greater than 45 days, between 1-3 years after menarche and primary amenorrhea after 15 years or 3 years after thelarche (Moura, et. al, 2011).

Finally, polycystic ovaries on ultrasound are included in the Rotterdam criteria. The simple identification of polycystic ovaries does not translate the diagnosis of PCOS (BRASIL, 2014). In young people up to 8 years after menarche, there is a high incidence of multifollicular aspect ovaries, which reflects the ovarian physiology at this stage of life. However, on ultrasound, the presence of 20 or more 2-9 mm follicles in at least one ovary and/or ovarian volume greater than 10 cm³ in one of the ovaries are the defined criteria for PCOS (Moura, et. al, 2011).

In addition, it is important to emphasize that polycystic ovary syndrome represents a diagnosis of exclusion and it is always necessary to investigate other causes of secondary amenorrhea that are also linked to hyperandrogenic nullifications such as hypothyroidism, hyperprolactinemia, Cushing's

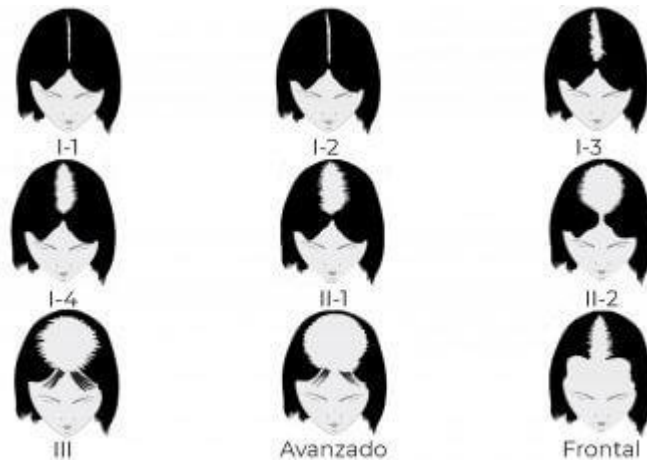


Figura 1. Escala de Ludwig (Sinclair R, et. Al., 2001)

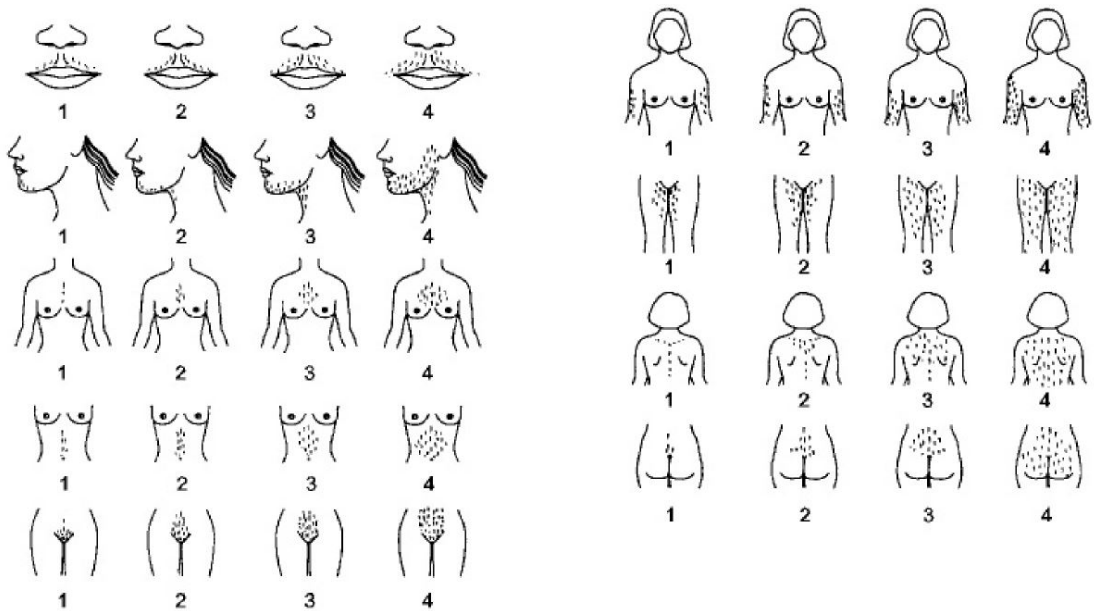


Figure 2. Modified scale of Ferriman-Gallwey (Azziz R, et. Al, 2000)

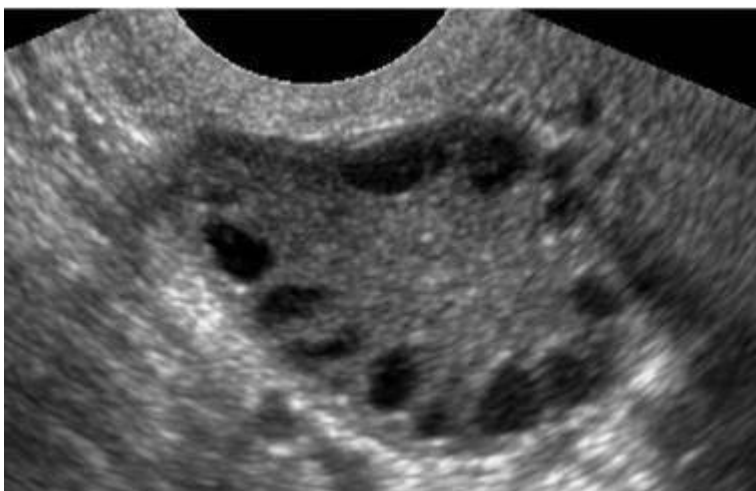


Figure 3. Polycystic ovaries. (Brazilian Journal of Ultrasonography, 2012)

syndrome, congenital adrenal hyperplasia, premature ovarian failure and androgen-producing tumors (Moura, et. al, 2011).

The patient in this case presented typical signs of PCOS, such as clinical characteristics of hyperandrogenism, in addition to morbid obesity and morbidities such as type 2 DM, with a high possibility of being a PCOS carrier, as this is more common in obese women due to the high levels of circulating estradiol and estrone resulting from the aromatization of androgens in the adipose tissue, which predisposes to the appearance of symptoms resulting from hyperandrogenism. In relation to insulin resistance, it is characterized by the ability to substantially interfere with the ovulation mechanism. However, this mechanism can also be found in leaner patients and even though this is a minor diagnostic feature, it is worth considering because it commonly affects the history of the disease (Associação Médica Brasileira, Conselho Federal de Medicina, 2014).

As a treatment, PCOS has three main axes to be treated, namely the treatment of clinical manifestations linked to hyperandrogenism and infertility, reducing cardiovascular risk and the development of associated pathologies, such as DM, SAH and endometrial hyperplasia (Carmo, et al. al, 2013).

Weight loss is the fundamental initial treatment for all obese patients with PCOS. With the reduction in body weight, there is a decrease in insulin resistance, reducing the stimulus to androgen production and leading to an increase in SHBG production, which further reduces its bioavailability. Thus, it is observed that the loss of 5-10% of weight may be enough to restore ovulatory cycles and return to menstrual regularity (Carmo, et. al, 2013).

Combined oral contraceptives (OAC), with estrogen and progesterone, are the first line for the control of hyperandrogenism and ovulatory dysfunctions, and they can be im-

planted even with the aim of contraception. Its action allows for the reduction of hyperandrogenism, as it inhibits LH hypersecretion, reducing the stimulation of androgen production by theca, in addition to increasing the hepatic synthesis of SHBG, reducing circulating active free testosterone. These actions can be further enhanced by the antiandrogenic action of some associated progestins (cypionate, dienogest, chlormadinone and drospirenone) (Arie, et. al, 2013).

In addition to their effect on the androgenic phenotype, OCs also act in endometrial protection, leading to the possibility of regular cycles, reducing the risk of developing endometrial hyperplasia and endometrial cancer (Arie et. al, 2013).

It is important to emphasize that the use of oral progesterone has a limited effect in the treatment of hyperandrogenism, as it acts only in the reduction of LH levels, without so many effects on the concentration of SHBG, which is highly influenced by the hepatic passage of ethinylestradiol, being, therefore, more often observed in users of pills combined with synthetic estrogen (Costa, et al. 2015).

As previously mentioned in the case description, the patient in question was using monthly injectable contraceptives and, therefore, did not have menstrual cycles. However, given the suspected diagnosis of PCOS, the patient ACHO was prescribed Desogestrel, as it has an ideal therapeutic response to the syndrome, especially in relation to signs such as acne, present in the patient. Therefore, in addition to treatment guidance, the importance of changes in the patient's lifestyle was also addressed, such as physical activity, losing weight, improving the diet, among others, to improve the condition.

CONCLUSION

The present study showed the analysis of a clinical case seen at the Escola Ambulatório

de Franca, SP, and focused on the discussion of a possible diagnosis of Polycystic Ovary Syndrome.

From a general analysis of the patient, it was observed that she does not actually have current symptoms that could suggest a diagnosis of PCOS. However, it was discussed with the responsible professor that such symptoms varied due to the regular and continuous use of contraceptives, but the presence of acne, morbid obesity and insulin resistance makes the possibility of the disease's existence clear, according to the criteria of Rotterdam, often used in current days. The patient was already using the main lines of medication for treatment. However, she was advised on the importance of changes in her lifestyle, such as physical activity, weight reduction and diet adjustment, among others, to improve her condition. In view of the report presented, it

was clear that the absence of symptoms reported in the consultation, given the unintentional treatment already carried out, left students in doubt about the proper diagnosis. However, based on the symptoms prior to treatment and the characteristics evidenced, such as grade III obesity and the presence of type 2 DM, in addition to signs such as acne and a history of anovulatory cycles, the diagnosis was suspected during the consultation. This allowed the conclusion of the importance of linking medical practice to knowledge of the main and most common diseases in each area, as the lack of knowledge of the main risk factors and the main associated morbidities or resulting from some pathologies, amplifies the suggestion of various entities that may be hidden in the face of an unintentional treatment of a patient.

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