







Prevalence of Polycystic Ovary Syndrome in a gynecology outpatient clinic in the city of Olinda, Pernambuco, from 2018 to 2020



Prevalência da Síndrome do Ovário Policístico em um ambulatório de ginecologia da cidade de Olinda, Pernambuco, no período entre 2018 e 2020

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Abstract

Aim: To analyze the prevalence of Polycystic Ovary Syndrome (PCOS) in women treated at the gynecology outpatient clinic in the city of Olinda. **Methods:** This cross-sectional study used the medical records of patients with PCOS. **Results:** The prevalence of PCOS was 9.84%, with menstrual changes as the predominant form of presentation (52.0%), followed by ultrasound changes (23.0%), and hyperandrogenism-related symptoms (hirsutism [13.0%] and oily skin or presence of acne [7.0%]). **Conclusion:** This study verified a relevant number of PCOS in the studied context. Menstrual changes, ultrasound changes, and hyperandrogenism-related symptoms were the most frequently observed clinical and imaging manifestations in this population.

Keywords: Gynecology; Oligomenorrhea; Prevalence; Polycystic Ovary Syndrome.

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Resumo

Objetivo: Analisar a prevalência da Síndrome dos Ovários Policísticos (SOP) em mulheres assistidas no ambulatório de ginecologia da cidade de Olinda. **Métodos:** A pesquisa detém um caráter transversal e observacional, tendo como cenário os prontuários das pacientes com SOP. **Resultados:** A prevalência de SOP no ambulatório de ginecologia foi de 9,84%, sendo identificadas como forma de apresentação predominante as alterações menstruais (52%), seguidas de alterações ultrassonográficas (23%) e de hiperandrogenismo, das quais 13% foram relacionadas ao hirsutismo e 7%, à oleosidade da pele/presença de acne. **Conclusão:** Esse estudo verificou um quantitativo relevante de SOP no contexto estudado. As alterações menstruais, ultrassonográficas e relacionadas ao hiperandrogenismo foram as manifestações clínicas e radiológicas mais observadas nessa população.

Palavras-chave: Ginecologia; Oligomenorreia; Prevalência; Síndrome dos Ovários Policísticos.

INTRODUCTION

Polycystic Ovary Syndrome (PCOS) is a complex and multifactorial endocrine-metabolic disorder that affects women starting from menarche. This condition was first named the Stein-Leventhal syndrome by the American gynecologists Irving Freiler Stein and Michael Leventhal in the 1930s and was later renamed PCOS in the 1960s¹. Every year, 2 million new cases of PCOS are diagnosed in the Brazilian female population².

The clinical, laboratory, and ultrasound manifestations of PCOS were characterized in the Rotterdam Consensus (2003), which is the most widely disclosed worldwide. The PCOS diagnosis is described as the presence of two out of the following criteria: menstrual changes (e.g., oligomenorrhea), clinical or laboratory hyperandrogenism (or both), and ultrasound changes (e.g., presence of ovarian microcysts). Furthermore, other etiologies of hyperandrogenism and anovulation should be excluded, such as Cushing syndrome, hyperprolactinemia, thyroid disorder, ovarian or adrenal cancer, and the use of androgenic products^{3,7,10}.

Reproductive, metabolic, and cardiovascular consequences can be analyzed based on the different characteristics presented in the clinical condition. Thus, four phenotypes of PCOS were created based on the Rotterdam criteria: A (oligo-ovulation or anovulation, hyperandrogenism, and polycystic ovaries); B (oligo-ovulation or anovulation and hyperandrogenism); C (polycystic ovaries and hyperandrogenism); and D (oligo-ovulation or anovulation and polycystic ovaries). Phenotypes A and B presented greater reproductive and metabolic repercussions than the others; of these, phenotype D is the least severe in terms of cardiometabolic risk^{3,5,8}.

The PCOS also presents clinical and psychosocial repercussions. Clinical hyperandrogenism may impair the psychological condition and quality of life of women. Furthermore, this syndrome may have long-term negative impacts, such as insulin resistance progressing to type

II diabetes mellitus, metabolic syndrome, and interference with female fertility^{4,6,9}. Despite the significant number of PCOS cases, evidence on its prevalence in Brazil are scarce. Considering the need to conduct novel data collection, this study aimed to analyze the prevalence of PCOS in women receiving care at the gynecology outpatient clinic in the city of Olinda.

METHODOLOGY

This cross-sectional study analyzed the PCOS cases and their particularities in the gynecology outpatient clinic in the city of Olinda-PE from 2018 to 2020.

The study population comprised women between menarche and menopause who presented PCOS symptoms. Therefore, inclusion criteria encompassed women between 16 and 50 years old diagnosed with PCOS according to the Rotterdam criteria. Exclusion criteria considered women under 16 and over 50 years old or with clinical conditions (Cushing syndrome, hyperprolactinemia, thyroid disorder, ovarian or adrenal cancer, use of androgenic products, fibroids, and endometriosis) that could cause oligomenorrhea, amenorrhea, or hyperandrogenism.

Data were analyzed using the medical records of the patients, which were plotted in an Excel 2010[®] spreadsheet, following a stratification of the sample data. The study variables were age range, gynecological and obstetric history, clinical manifestations associated with PCOS, and the Rotterdam criteria. Then, the analysis occurred using equations that allowed the development of graphs and tables correlating with the prevalence of PCOS. In addition, a descriptive statistical analysis of the ages of the patients was performed using the miniWebtool software (<https://miniwebtool.com/>), a digital data operation tool.

RESULTS AND DISCUSSIONS

The present study analyzed 620 medical records; 61 patients (9.84%) presented PCOS. The mean age of the sample was 27.20 years (SD = 5.84) years.

Table 1. Age of the included patients.

Age (years)	N	%
18 – 25	26	42.63
26 – 33	23	37.70
34 – 41	11	18.03
Unreported	1	1.64

Campos et al.¹¹ included 2,458 women aged between 15 and 45 years who were equally divided into a group with a PCOS diagnosis and a control group (without PCOS) (n = 1,229 each); the mean age was 28.05 years. Conversely, Anjos et al.¹ evaluated students from Santa Maria College and found a mean age of 21.60 years. Therefore, the composition of the target population

in each study may have influenced the age difference.

Among the patients with PCOS, 40.98% (n = 25) did not have children, and 31.15% (n = 19) reported having children. Also, 14.75% (n = 9) did not inform the gestational status, and 13.12% (n = 8) reported one or more miscarriages.

Table 2. Gestational status among study patients.

Have children	N	%
Yes	19	31.15
No	25	40.98
Had miscarriages	8	13.12
Unreported	9	14.75

The criteria established for PCOS should match two out of three of the following characteristics: menstrual changes (e.g., oligomenorrhea), clinical or laboratory hyperandrogenism (or both), and ultrasound changes (e.g., presence of ovarian microcysts)⁸.

According to the Rotterdam criteria, 57.40% (n = 35) presented one, 31.1% (n = 19) presented two, and 6.6% (n = 4) presented the three characteristics. Among the patients included, 4.9% (n = 3) arrived at the outpatient clinic with a previous PCOS diagnosis without reporting active manifestations and used contraceptives.

The diagnostic hypothesis raised to most patients was based on clinical criteria since the absence of laboratory or imaging criteria (or both) was noted in the first consultation. In addition, the difficulty in data acquisition was related to the non-adherence to follow-up appointments, hindering the results of the present study.

Table 3. Rotterdam criteria presented by the patients included.

Rotterdam criteria	N	%
Presence of one criterion	35	57.4
Presence of two criterion	19	31.1
Presence of three criterion	4	6.6
Previous diagnosis without clinical manifestations	3	4.9

Among the clinical and imaging manifestations, 52.0% (n = 47) of patients reported menstrual changes, 23.0% (n = 21) the presence of ovarian microcysts in the ultrasound image, 20.0% (n = 18) mentioned hyperandrogenism-related symptoms, such as hirsutism (13.0%; n = 12) and oily skin or acne (or both) (7.0%; n = 6), and 5.0% (n = 4) were infertile.

Table 4. Clinical and imaging manifestations reported by the patients with PCOS.

Clinical manifestations	N	%
Menstrual changes	47	52%
Hirsutism	12	13%
Oily skin or acne (or both)	6	7%
Presence of ovarian microcysts (ultrasound image)	21	23%
Infertility	4	5%

N: number of participants.

In Anjos et al.¹ study, the prevalence of PCOS was 24.0%. Among the most prevalent clinical manifestations, menstrual changes accounted for 91.6%, followed by hyperandrogenism-related symptoms: oily skin (75.0%), acne (66.6%), and hirsutism (33.3%). Although the most observed clinical manifestation was similar to the present study, the second most recurrent was different between studies; Anjos et al.¹ evidenced oily skin, while the present study found ultrasound changes. Moreover, Campos et al.¹¹ found that 55.7% of the sample presented menstrual changes.

CONCLUSION

In the studied context, the prevalence of PCOS was about 10%. Menstrual changes, ultrasound changes, and hyperandrogenism-related symptoms were the most frequently observed clinical and imaging manifestations in this population.

CONFLICT OF INTERESTS

Nothing to declare

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AUTHOR CONTRIBUTIONS

MAR, SNO e AFR: Data curation, Formal analysis, Methodology, Supervision, Writing - original writing, Writing - review and editing; **LMD:** Conceptualization, Data curation, Investigation, Methodology, Project management, Resources, Supervision, Writing - original writing, Writing - reviewing and editing.

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