



METABOLIC CHARACTERISTICS AMONG POLYCYSTIC OVARY SYNDROME-PHENOTYPES IN A SAMPLE OF HISPANIC PATIENTS



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INTRODUCTION

Polycystic Ovary Syndrome (PCOS), a common endocrinopathy affecting women in their reproductive years, is associated with an increased risk for cardiometabolic comorbidities. Even though PCOS is a common condition, there is often a delay in diagnosis and treatment due to several proposed diagnostic criteria. Due to the complexity of this syndrome and different clinical manifestations, it has been recommended to identify their 4 phenotypes.

OBJECTIVE

This study aimed to compare the clinical and metabolic characteristics among PCOS-phenotypes in a sample of Hispanic patients.

METHODS

Cross-sectional study of females between 21-45 years of age with confirmed PCOS using the Rotterdam criteria.

RESULTS

- A total of 63 patients with confirmed PCOS were evaluated.
- Only 26 patients (41%) had a previous diagnosis of PCOS.

Table 1. Metabolic characteristics in a sample of Hispanic patients with PCOS

| Characteristic | A | B | C | D | p-value |
|--------------------------------|--------------------|---------------------|-------------------|---------------------|--------------|
| Age (years ± sd) | 38 (60%) | 13 (21%) | 3 (5%) | 9 (14%) | 0.032 |
| Metabolic Syndrome | 20 (53%) | 8 (62%) | 0 (0%) | 5 (56%) | 0.377 |
| BMI (kg/m ²) | 32.1 (20.2,5.4) | 35.4 (28.9,50.4) | 24.6 (19.5, 32.1) | 34.3 (21.2,52.5) | 0.076 |
| Obesity (n, %) | 33 (87%) | 13 (100%) | 1 (33%) | 8 (89%) | 0.036 |
| Waist circumference (cm) | 95 (69,170) | 109(94, 136) | 74 (61,87) | 94 (71,127) | 0.019 |
| Hip circumference (cm) | 113 (91,150) | 121 | 99(83,113) | 106 (80,150) | 0.053 |
| Waist-to-Hip ratio | 0.9 (0.7,1.6) | 0.9 (0.8,1.1) | 0.7 (0.7, 0.8) | 0.9 (0.7,1.2) | 0.076 |
| HOMA-IR | 3.4 (1.7,5) | 3.1 (2.6,6.8) | 2.2 (2,4.5) | 3.1 (1.6,4.9) | 0.808 |
| hs-CRP (mg/L) | 4.9 (1.6,8.1) | 4.3 (2.6,9.7) | 0.5 (0.3,1.4) | 6.9 (2.2,7.2) | 0.129 |
| FBS (mg/dL) | 94 (86,108) | 102 (98,107) | 88 (78,90) | 98 (92,111) | 0.204 |
| Fasting insulin (mIU/ml) | 14.9 (8.9,20.9) | 11.6 (10.7, 19.7) | 10 (9,23.2) | 12.8 (8.6,20) | 0.916 |
| 2hr glucose after OGTT (mg/dL) | 120 (82,137) | 109 (83,132) | 84 (78,127) | 132 (105,140) | 0.415 |

CONCLUSION

Our study found a high prevalence of MetS in this sample of Hispanic patients with PCOS.

- Phenotypes affected by menstrual dysregulation had a higher prevalence of MetS.

Less than half of patients with PCOS were previously diagnosed.

- Emphasizes the importance of an early diagnosis to avoid cardiometabolic complications.

Metabolic characteristics differ according to phenotype.

- Identifying the phenotypes allows us to provide targeted-care and improve our patient's overall-health and quality of life.

ACKNOWLEDGMENT

Supported in part by Hispanic Center of Excellence - University of Puerto Rico School of Medicine- U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Workforce Grant Number: D34HP24463 and by The Hispanic Alliance for Clinical and Translational Research (Alliance) which is supported by the National Institute of General Medical Sciences (NIGMS) National Institutes of Health under the Award Number U54GM133807.

IRB

IRB approval number: B0790117.

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Table 2. Definitions of PCOS according to available criteria

| NIH | Rotterdam | AE & PCOS Society |
|--|--|--|
| Both the criteria below: | ≥ 2 of the following: | • Hyperandrogenism: hirsutism and/or hyperandrogenemia |
| • Chronic anovulation | • Chronic anovulation | • Ovarian dysfunction defined as oligo-anovulation and/or polycystic ovaries on ultrasound |
| • Clinical and/or biochemical hyperandrogenism | • Clinical and/or biochemical signs of hyperandrogenism | |
| | • Polycystic ovaries on ultrasound | |
| | With the exclusion of other androgen excess or related disorders | |

Patients were classified according to phenotypes:

- A** Hyperandrogenism
Oligoovulation/menstrual dysfunction
Polycystic ovarian morphology
- B** Hyperandrogenism
oligoovulation/menstrual dysfunction
- C** Hyperandrogenism
Polycystic ovarian morphology
- D** oligoovulation/menstrual dysfunction
Polycystic ovarian morphology

Metabolic syndrome (MetS) was diagnosed using ATP III criteria and metabolic characteristics were compared between groups.

Fig.1 Prevalence of individual components of Metabolic Syndrome according to PCOS-phenotypes

