



PREVALENCE OF METABOLIC SYNDROME IN A SAMPLE OF HISPANIC PATIENTS WITH POLYCYSTIC OVARY SYNDROME

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ABSTRACT

PURPOSE: Polycystic ovary syndrome (PCOS), an endocrinopathy affecting women of reproductive age, confers an increased risk of comorbidities such as metabolic syndrome (MetS), cardiovascular (CV) disease, and diabetes. There is limited knowledge about how this association impacts Hispanic women, a high-risk group for cardiometabolic disease. This study aimed to evaluate the association between PCOS and MetS in a sample of Hispanic patients **METHODS:** This is a cross-sectional study of female patients between 21-45 years of age who underwent evaluation for PCOS and MetS. Patients underwent clinical, laboratory, and imaging studies. PCOS was diagnosed by Rotterdam criteria and MetS was diagnosed using ATP III criteria. Prevalence of MetS and associated variables were compared between groups. **RESULTS:** Seventy-eight patients were included in this study (63 patients with PCOS+ and 15 patients with PCOS-). Mean age was 31 ± 6 years. PCOS+ patients were younger. MetS were observed in 52.4% of patients PCOS+ vs 40% of patients PCOS- (p>0.05). No significant differences were found in BMI, waist circumference, blood pressures, triglycerides, HDL, fasting glucose levels, insulin levels, and A1c among groups (p>0.05). **CONCLUSION:** Our study found a prevalence of 52.4% of MetS in a sample of patients with PCOS+. Previous studies have shown a 41% prevalence of MetS among Puerto Rican women and 44% prevalence in women with PCOS. PCOS is associated with an increased risk of CV disease, cancer, and diabetes, the leading causes of death in PR. Strategies to decrease this and avoid its complications in our population are imperative.

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PURPOSE

Polycystic ovary syndrome (PCOS) is one of the most common endocrinopathies that affects women of reproductive age, with an estimated prevalence of 5% to 20%. It confers an increased risk of comorbidities such as **metabolic syndrome (MetS), cardiovascular (CV) disease, and diabetes.** There is limited knowledge about how this association impacts **Hispanic women, a high-risk group for cardiometabolic disease.** This study aimed to evaluate the association between PCOS and MetS in a sample of Hispanic patients.

METHODS

This is a cross-sectional study of female patients between 21-45 years of age who underwent evaluation for **PCOS and MetS.** Patients underwent medical evaluation, laboratory testing, and imaging studies to confirm the diagnosis. PCOS was diagnosed by Rotterdam Criteria (Table 1) and MetS was diagnosed using ATP III Criteria (Table 2). Prevalence of MetS, BMI, waist circumference, blood pressure, triglycerides, HDL, fasting glucose levels, insulin levels, and A1c were compared between groups.

Rotterdam Criteria: PCOS diagnosed with ≥ 2

- Oligo or anovulation
- Clinical and/or biochemical signs of hyperandrogenism
- Polycystic ovaries
- Exclusion of other etiologies

ATP III Criteria: MetS diagnosed with ≥ 3

- Glucose ≥ 100 mg/dL or treated
- HDL Cholesterol < 50 mg/dL ≥or treated
- Triglycerides ≥ 150 mg/dL or treated
- Waist circumference ≥ 88 cm
- Blood pressure ≥ 130/85 mmHg or treated

RESULTS

Table 1. Demographic characteristics

Characteristics	PCOS + (n= 63)	PCOS - (n= 15)	p-value
Age	29.9 (21, 43)	37 (22, 42)	0.03
Civil Status			0.05
Single	35(55%)	4 (27%)	
In a relationship	25 (40%)	10 (66%)	
Divorced	3 (5%)	1 (7%)	
BMI	32.9 (19, 52)	34.1 (21, 47)	0.91
Normal	8 (13%)	1 (7%)	
Overweight	13 (21%)	2 (13%)	
Obese	41 (65%)	12 (80%)	

Figure 1. Prevalence of MetS in PCOS + patients versus PCOS- patients.

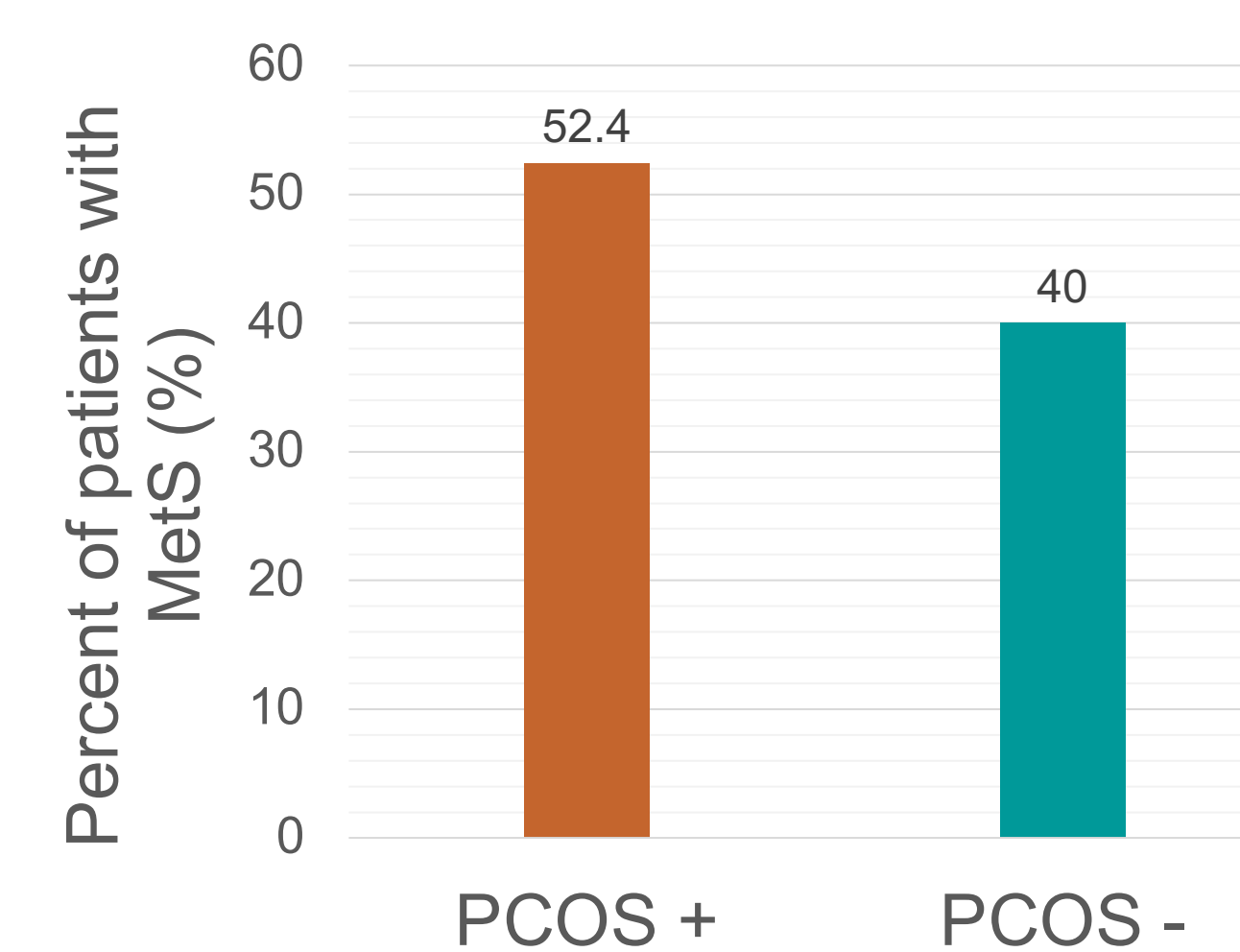
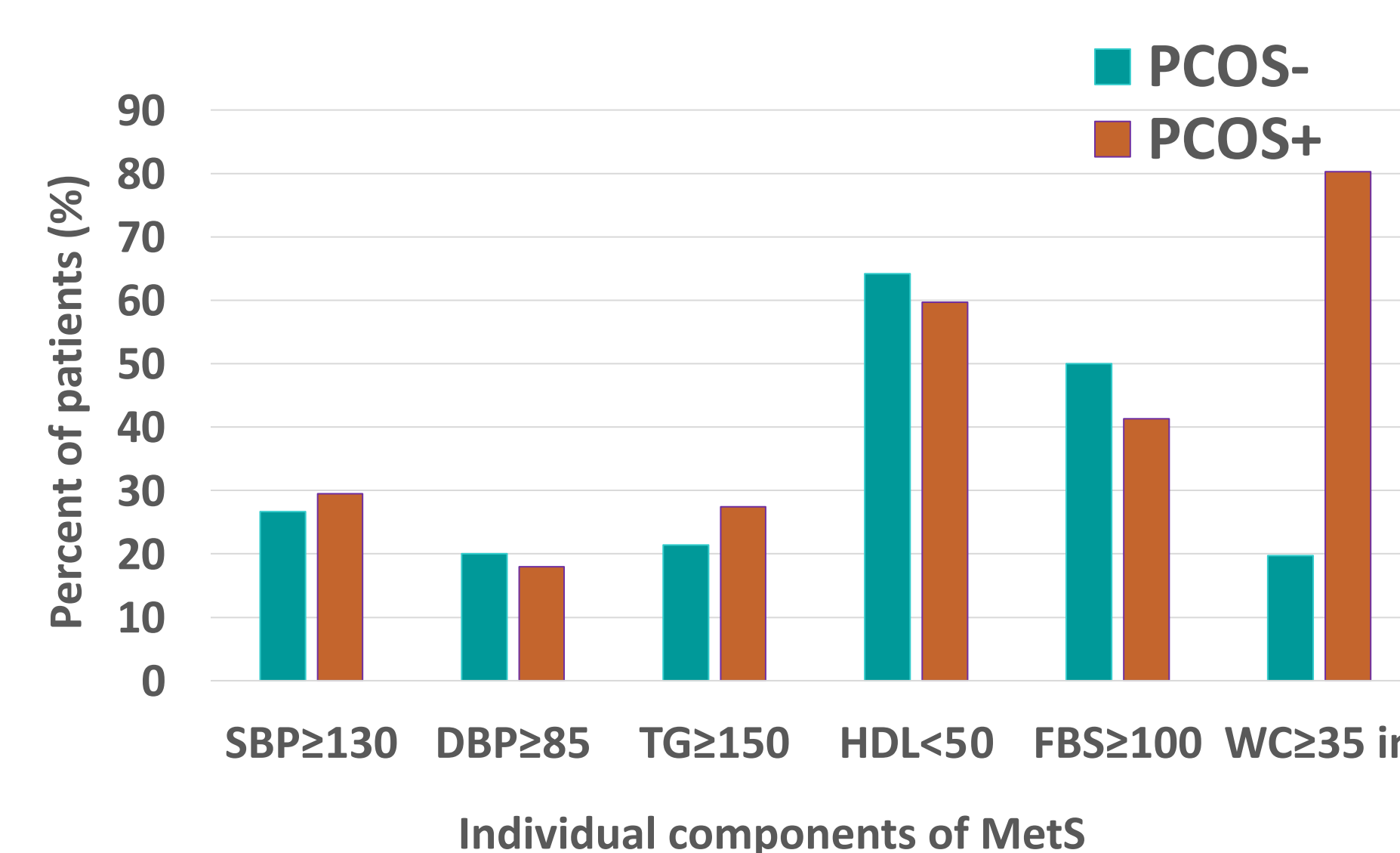


Figure 2. Prevalence of individual components of MetS in PCOS + patients versus PCOS- patients.



CONCLUSION

- Our study found a prevalence of **52.4% of MetS in a sample of patients with PCOS+.** Previous studies have shown a **41% prevalence of MetS among Puerto Rican women** and **44% prevalence in women with PCOS.**
- PCOS is associated with an increased risk of CV disease, cancer, and diabetes, the leading causes of death in PR. Strategies to decrease this prevalence and avoid its complications in our population are imperative.
- Our study emphasizes the need to create comprehensive clinical algorithms that encompasses both endocrinology and gynecologic care. This would help address health disparities, as these female patients lack appropriate care for PCOS.

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