

POLYCYSTIC OVARY SYNDROME (PCOS) IN FEMALE TO MALE (FTM) TRANSSEXUAL PERSONS

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INTRODUCTION

PCOS is one of the most common reproductive abnormalities in premenopausal women¹. Women with PCOS are known to be at increased risk for insulin resistance, impaired glucose tolerance and type 2 diabetes mellitus². Female-to male transsexuals (FTM) receive long-term testosterone (T) treatment to induce virilization. Saito found a prevalence of 58% of PCOS in 69 trans men before cross-sex hormone treatment. Insulin resistance was diagnosed in 15 of the 49 FTM transsexual persons with PCOS (30.6%).³ On the other hand, the incidence of type 2 diabetes during hormone therapy was found to be higher in transsexual men than in control men and women.⁴ The prevalence of PCOS has not been completely assessed in FTM transsexual persons.

OBJECTIVES

This study was conducted to evaluate the frequency of PCOS in a group of FTM transsexual persons and its relationship between clinical, hormonal and metabolic characteristics.

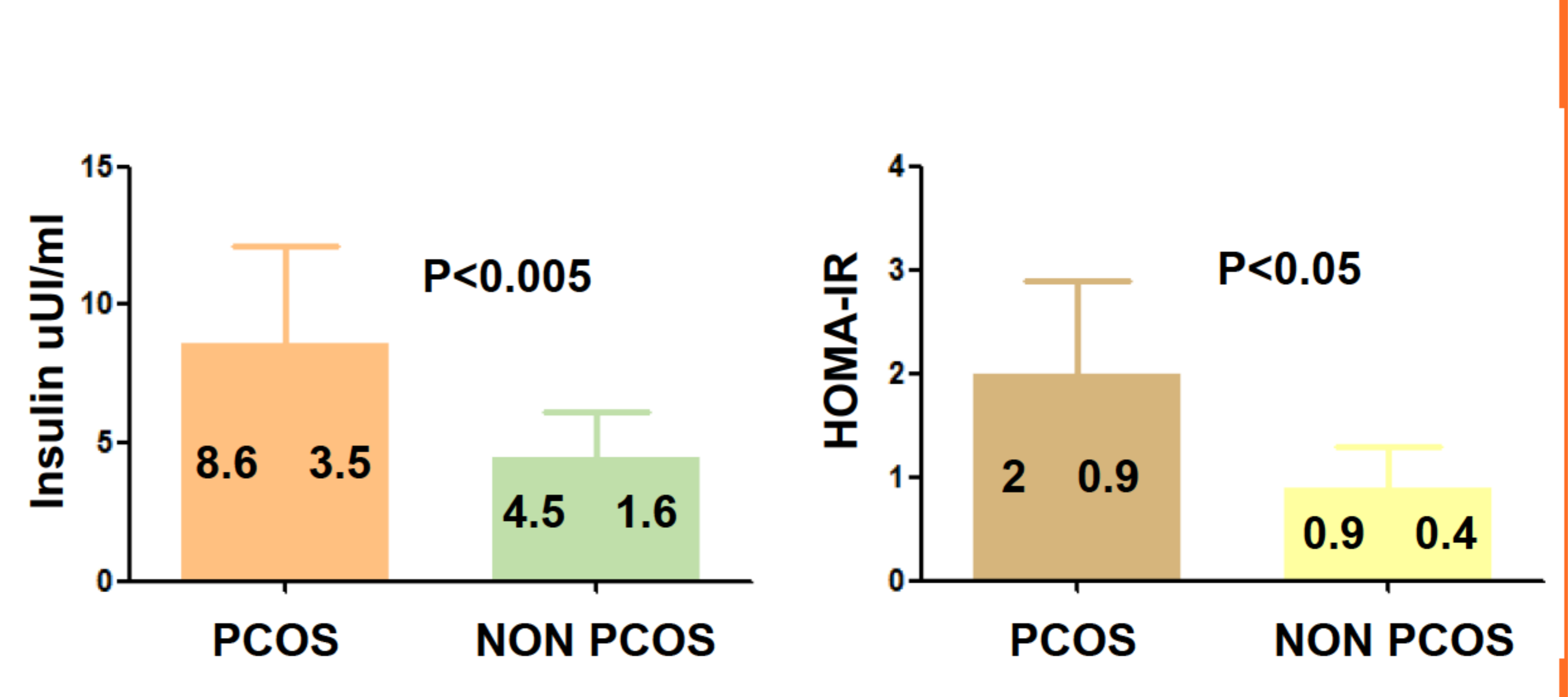
METHODS

We studied 21 FTM cases, aged 17–37 years, BMI 24.6 ± 5.2 , assisted at the Endocrine unit of Fernández hospital between October 2013 and December 2015. No patient reported previous hormonal treatment or sex re-assignment surgery. After 12-hour fasting, blood samples were drawn. Fasting plasma LH, FSH, estradiol, prolactin, TSH, FT4, total and free testosterone, androstenedione, 17-hydroxy-progesterone, dehydroepiandrosterone sulfate, glucose, insulin (INS) and cholesterol were determined. Insulin resistance was evaluated using the homeostasis model assessment of insulin resistance (HOMA-IR). PCOS was diagnosed according to the Rotterdam ESHRE/ASRM-sponsored PCOS Consensus Workshop Group, 2004. World Health Organization's criteria for metabolic syndrome (MBS) was used. Statistical difference between groups were evaluated with ANOVA and Mann-Whitney U-test when appropriate.

RESULTS

Twelve out of 21 FTM trans participants (57.1%) were diagnosed as PCOS. None of the PCOS patients had MBS. No significant differences in BMI nor plasmatic levels of free and total testosterone, LH, FSH, estradiol, cholesterol and triglycerides were found between PCOS and non PCOS trans patients. See Table. PCOS trans patients had higher plasmatic INS levels and HOMA-IR compared to non PCOS FTMs. See Figs.

	PCOS	NON PCOS
BMI	26.2 ± 5.9	22.5 ± 3.1
FSH	5.8 ± 1.7	5.9 ± 2.4
LH	7.4 ± 5.5	4.8 ± 3.4
Total Testosterone	0.71 ± 0.52	0.72 ± 0.32
Free Testosterone	10.2 ± 5.2	6.3 ± 3.8
Cholesterol	188.4 ± 24.9	155.2 ± 28.9
LDL	97.5 ± 27.6	81 ± 25.9
HDL	55.1 ± 14.6	60 ± 10.8
Triglycerides	79.2 ± 30.3	71.5 ± 21.4



CONCLUSIONS

In our study we found more than half of FTM individuals with PCOS, which was associated with elevated levels of plasmatic INS and HOMA-IR. Our data suggest that transsexual men should be screened for PCOS and parameters of insulin resistance, as PCOS and cross sex androgen treatment have been reported as predisposing factors for the development of diabetes. A larger study is ongoing in order to confirm these preliminary results.

References

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