



PREVALENCE OF HYPERANDROGENIC - PERSISTENT OVULATORY DYSFUNCTION SYNDROME IN OBESE INFERTILE WOMEN IN RMMC&H. (HA-PODS)

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ABSTRACT

Women with polycystic ovarian syndrome have abnormalities in the metabolism of androgens and oestrogen. Although the exact etiopathophysiology of this condition is unclear, PCOS or HA-PODS can result from abnormal function of hypothalamic- pituitary- ovarian axis. PCOS is associated with peripheral insulin resistance and hyperinsulinemia, and obesity amplifies the degree of both abnormalities. The prevalence of HA-PODS is more among obese women. We conducted this study in the department of Obstetrics and Gynaecology, RMMC&H, Annamalai University to know the prevalence of PCOS or HA-PODS among obese women attending infertility clinic. 50 obese and 50 lean women with infertility were included in this study and the prevalence calculated in both groups.

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INTRODUCTION

Background

Since its original description in 1935 by Stein and Leventhal, obesity has been recognized as a common feature of PCOS or HA-PODS. The name “Hyper androgenic persistent ovulatory dysfunction syndromes or HA-PODS” has been proposed now to overcome diagnostic pitfalls of previous nomenclature. PCOS is a misnomer as ovaries do not contain epithelial cysts, but they are actually antral follicles. Moreover, the name PCOS neither reflects the hyperandrogenism which is essential for diagnosis nor the metabolic derangements. Although it is well established that obesity increases the severity of the clinical features of PCOS or HA-PODS, data regarding the prevalence of HA-PODS in obese women and the changes in body weight in women with HA-PODS over time are scarce. In our study conducted in RMMC&H, we found out the prevalence of HA-PODS among lean and normal weight women was 8% and the prevalence of HA-PODS in overweight and obese women was 30%.

METHOD

Retrospectively 50 obese & overweight premenopausal women and 50 underweight and normal weight women attending gynaec OPD in RMMC&H for menstrual irregularities with infertility were analysed, and the prevalence of HA-PODS among them estimated. Screening for HA – PODS included menstrual history, clinical and biochemical signs of hyperandrogenism and polycystic ovaries on ultrasound.

Criteria

Inclusion Criteria (Rotterdam criteria 2003)	Exclusion Criteria
1. Oligo / amenorrhea	1. Endocrine disorder
2. Presence of both clinical and / or biochemical hyperandrogenism	2. Pregnancy / breast feeding
a. Hirsutism	3. Climacteric symptoms
b. Acne	4. Oral contraceptives or insulin sensitizers usage
c. Alopecia	
d. Increased testosterone levels	
3. Polycystic ovaries on USG	

BMI was calculated by dividing weight (kg) by height (m²). Underweight was defined as BMI <18.5, Normal as

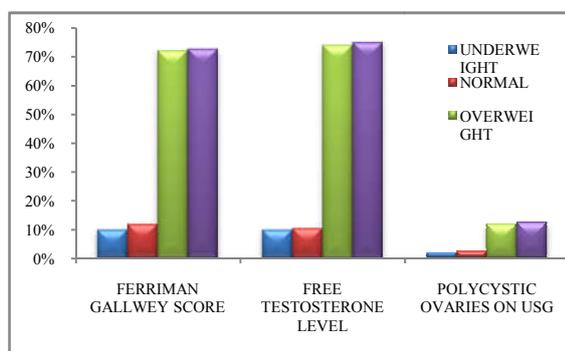
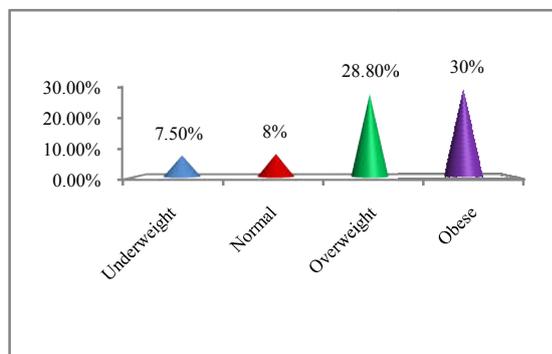
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BMI 18.52-24.99 overweight as BMI 25-29.99 and obesity as BMI \geq 30.

RESULTS

Prevalence of HA-PODS	Underweight	Normal	Overweight	Obese
	7.5%	8%	28.8%	30%



DISCUSSION

In obesity, increased androgen production has been reported especially in women with upper body obesity. Also PCOS can cause central obesity due to increased androgen levels.

The hyper androgenic state of HA-PODS causing android obesity leads to further metabolic derangement. Fasting ghrelin levels are reported to be lower in obese individuals due to chronic positive energy balance and there is less post prandial reduction of ghrelin in HA-PODS leading to decreased satiety and further weight gain. It is still being debated whether weight gain causes HA-PODS or whether HA-PODS causing weight gain. The relationship between obesity and HA-PODS is complex, not well understood, and most likely involves interaction of genetic and environmental factors.

CONCLUSION

In our study conducted in RMMCH, we found out that the prevalence of HA-PODS among lean and normal weight women was 8% and the prevalence of HA-PODS in overweight and obese women was 30%. In a similar study recently conducted in Spain, HA-PODS was 5 – fold more common among premenopausal obese or overweight women compared to general population (28.3% vs 5.5%).

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