Summary

Polycystic ovarian syndrome (PCOS) is a common condition characterized by chronic anovulation and hyper androgenism.

There is growing consensus that the key features include insulin resistance, androgen excess and abnormal gonadotgropin dynamics. A familial pattern in some cases suggests a genetic component but the candidates genes are yet to be identified. There are links between PCOS and endometrial cancer, obesity, cardiovascular disease and diabetes mellitus with both short-and long-term consequences. Although the adverse health consequences associated with PCOS are substantial, unfortunately, most women are not aware of these risks.

Much has been learned of the pathophysiology of PCOS since its first description in 1935. Yet, despite a better understanding of the disease itself (and the passage of nearly 70 years), it still lacks specific diagnostic criteria making identification of patients difficult. With appreciation of the role IR plays in PCOS, proper identification has become more important than ever before. There are several other disease states that may present in much the same way as PCOS, and evaluation to rule out these is crucial to apply appropriate management options. Further research into proper identification of patients with PCOS and perhaps updated diagnostic criteria are needed.

Management of any three "acute" concerns of the PCOS patient (control of irregular menses and/or hirsutism and/or infertility management) can be a challenge.

If diagnosed early and managed properly with lifestyle modification (and/or insulin sensitizers), the onset of type 2 diabetes mellitus and its resultant risk of coronary artery disease may be delayed or prevented.

PCOS is a varied and complex entity requiring much knowledge and skill both for proper diagnosis and management over time.

This is a cross sectional study conducted at Banha University Hospital. The study included 30 infertile patients in the childbearing age who were diagnosed as PCOS patients were divided according to the BMI into obese (18 patients) and non obese (12 patients) and 20 control.

This study was done to assess the degree of insulin resistance (IR) in PCOS patients and relation of IR to obesity.

All studied women were subjected to full history taking, clinical examination and pelvic ultrasound to diagnose PCOS. They also were subjected to a –Oral glucose tolerance test. b-Fasting serum insulin level.

Mean ± SD fasting blood glucose concentration for obese group was 58.33±10.39mg/dl, while it was79.35±8.38 mg/dl in non obese one and the results showed statistically significant difference. IFG (impaired fasting glucose) was zero in non obese women and control group, while represented 11.1% in obese women, and the results showed statistically significant difference.

Mean ± SD 2-h p.p blood glucose level were 128.38 ± 21.64mg/dl and 114±23.60 mg/dl in obese and non obese groups respectively. It was 100.40 ±23.62mg/dL in control and the results showed statistically non significant difference.

Mean ± SD insulin levels were18.00±14.39 mU/ml and 11.25±8.22 mU/ml in obese and non obese groups respectively, while it was 14.89±12.32mU/I for total PCOS women. And the results showed statistically non significant difference.

The percentage of patients having hyperinsulinemia was 55.56 % in obese women, while represented44.7% in non obese and no one having

hyper insulinemia in control group women. This showed statistically highly significant difference.

The percentage of patients having IR was 55.56% in obese women while represented 26.59% in non obese women and 42% in total PCOS women.

Accordingly, we can suggest that PCOS patients are more IR than normal population, and in turn obese POCS patients are more IR than non-obese POCS patients.