Okwuwolu Chimakarum Sarema, Gradil Oksana

**MANAGING INSULIN RESISTANCE IN WOMEN WITH POLYCYSTIC OVARIAN SYNDROME**

Kharkiv National Medical University

Department of Obstretics and Gynecology No.2

Kharkiv, Ukraine

Scientific advisor: professor Lazurenko V.V.

Polycystic ovarian syndrome (PCOS) is one of the most common endocrine disorders of women of reproductive age. PCOS manifests gynecologically as amenorrhea, irregular uterine bleeding, infertility: with hyper-androgenism as hirsutism, acne, alopecia or baldness and metabolically as dyslipidemia, obesity, acanthosis nigricans. Hyperinsulinemia is common in women with PCOS which leads to increase GnRH pulse frequency, ovarian androgen production, decreased follicular maturation and decreased steroid hormone binding globulin concentration. It also up-regulates 17 αhydroxylase activity.

**Aim of research:** Insulin resistance and inflammation are involved in both the syndrome of PCOS and the relationship of PCOS to other metabolic conditions like type 2 diabetes, non-alcoholic fatty-liver disease and thus our aim, managing insulin resistance in women with PCOS.

**Method and material:** 40 women with PCOS were divided into 2 equal groups A & B. Each group had 20 women. Women in group A were placed on an insulin- sensitizing agent Metformin or Pioglitazone, strict diet and exercise while women in group B were placed on oral contraceptives, strict diet and exercise.

**Result:** In both groups total androgens levels were reduced however in group B percentage of free circulating androgen was higher than in group A. Women in group A experienced weight loss in the 6 month period and the general symptoms of PCOS were reduced i.e acne, regular menstrual cycle.

**Conclusion:** In the pathophysiology of PCOS, the role of insulin resistance cannot be overemphasized. To this effect, It is our opinion that managing the insulin resistance is the best pathogenetic means of treating chronic PCOS as it has gynecologic and metabolic benefits.