P44. Obesity and Insulin resistance in infertile women with polycystic ovary syndrome

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Context: Polycystic ovary syndrome (PCOS) is the most common endocrine disorder, affecting up to 6% to 10% of reproductive-age women. The prevalence of insulin resistance in PCOS patients ranges from 44 to 70%. It is still unclear whether four PCOS phenotypes, defined according to the Rotterdam criteria, have the same metabolic and reproductive consequences as the classic form.

Objective: To compare weight, glucose metabolism abnormality and insulin resistance among different PCOS phenotypes.

Methods: This cross-sectional study was carried out on clinic records of PCOS women referred to infertility clinic of Royan Institute, Tehran, Iran, between January 2014 and April 2017.

Patient(s): 508 infertile women with PCOS were included the study. According to Rotterdam criteria patients divided to four phenotypes: A (oligo-anovulation, hyperandrogenism, polycystic ovary morphology):258 (50.79%), B (olig-anovulation and hyperandrogenism): 15(2.95%), C (hyperandrogenism and polycystic ovary morphology):34(6.69%), D (olig-anovulation and polycystic ovary morphology): 201 (39.56%).

Intervention(s): No Intervention.

Main Outcome Measure(s): Weight (kg), height (cm), Body mass index (BMI) Fasting blood sugar (FBS) mg/dl,blood glucose 2 hour post 75 gr glucose(OGTT) ,fasting insulin(mIU/L) were measured and Homeostatic model assessment of insulin resistance (HOMA-IR) were calculated for each patient.

Result(s): Mean of age in phenotype C were significantly higher than other phenotypes 30.14?4.53 yrs. vs.28.72?4.49 yrs (A), 29.67? 4.77 yrs (B), 27.50?4.89 yrs (D), p=0.024. Weight and BMI were statistically significantly higher in B phenotype, 79.10?15.78 kg and 31.13?4.88 kg/m2 vs. 74.01?12.35 kg and 29.01?4.75 kg/m2 (A), 77.66 ? 10.28 kg and 30.41?4.75 kg/m2 (C), 71.51?13.38 kg and 27.81?4.71 kg/m2 (D) respectively. There was no statistically significant differences in FBS and blood glucose after 2 hour 75 gr glucose between phenotypes. Fasting insulin and HOMA-IR index was highest in B and lowest in C phenotype but these differences were not statistically significant.

Conclusions: Despite older age in C Phenotype, B phenotype were more obese and have highest insulin resistance in comparison other phenotypes. It seems risk of type 2 diabetes are increased in these group of PCOS patients.

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