



THE INFLUENCE OF INSULIN RESISTANCE ON SELECTED ANTHROPOMETRIC AND BIOCHEMICAL PARAMETERS IN WOMEN WITH POLYCYSTIC OVARY SYNDROME- PRELIMINARY REPORT

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INTRODUCTION:

Polycystic Ovary Syndrome is the most common recognized endocrinopathy in women. The syndrome is often accompanied by obesity and insulin resistance.

AIM:

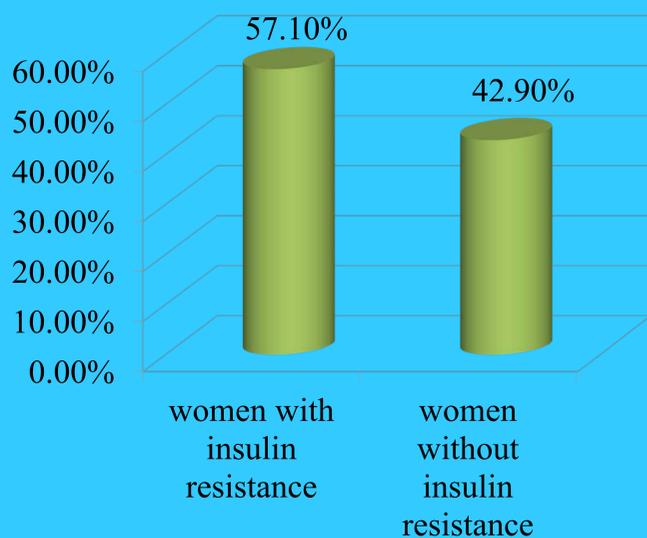
The aim of the study was to assess the differences between the selected anthropometric and biochemical parameters in a group of women with insulin resistance and without insulin resistance.

MATERIALS AND METHODS:

The study included a group of 45 women diagnosed with Polycystic Ovary Syndrome based on of the 2003 Rotterdam criteria. Insulin resistance was assess with HOMA-IR index. In accordance with the guidelines of the European Group for the Study of Insulin Resistance, we adopted HOMA-IR < 2 as the valid values. Body composition was measured with TANITA BC-420 Analyzer.

We assumed a significance level $\alpha = 0.05$.

RESULTS:



Insulin resistance has been recognized in 57.1% of women.

HOMA-IR	Women without insulin resistance	Women with insulin resistance	P-value
Body mass (kg)	64.38±14.66	83.90±17.06	0.0004
BMI (kg/m²)	24.20±5.57	30.62±6.37	0.0015
Body fat (%)	29.64±8.29	39.41±8.15	0.0005
Visceral fat	3.33±2.66	6.63±3.21	0.0011
HDL cholesterol (mg/dl)	66.72±17.56	54.96±13.35	0.0193
SHGB (nmol/l)	71.28±33.48	36.64±21.09	0.0008
Insulin (uU/ml)	6.70±2.68	14.78±6.06	<0.0001
FAI index	3.43±2.85	7.53±4.19	0.0028

Significant differences were found between the group of women with insulin resistance (average value of HOMA-IR=3.37±1.44) and the group of women without insulin resistance (average value of HOMA-IR=1.26±0.44) in terms of average values of: body mass (kg) (83.90±17.06 vs 64.38±14.66; p=0.0004), BMI (kg/m²) (30.62±6.37 vs 24.20±5.57; p=0.0015), body fat (%) (39.41±8.15 vs 29.64±8.29; p=0.0005), visceral fat (6.63±3.21 vs 3.33±2.66; p=0.0011), HDL cholesterol (mg/dl) (54.96±13.35 vs 66.72±17.56; p=0.0193), SHGB (nmol/l) (36.64±21.09 vs 71.28±33.48; p=0.0008), insulin (uU/ml) (14.78±6.06 vs 6.70±2.68; p<0.0001) and FAI index (7.53±4.19 vs 3.43±2.85; p=0.0028).

CONCLUSION:

In the group of insulin resistant patients, the percentage of body fat and visceral fat were higher. Insulin resistance was also associated with differences in the studied biochemical parameters.

