

P64. Update of insulin resistance in adolescents with polycystic ovary syndrome and its relationship with hyperandrogenism and obesity in Vall Hebron Hospital population

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Context

Polycystic ovary syndrome (PCOS) is the most common ovarian disorder in women, frequently becomes manifest during adolescence, associated historically with ovulatory dysfunction and hyperandrogenism. That diagnosis has lifelong implications with increased risk for metabolic syndrome, type 2 diabetes mellitus, and possibly cardiovascular disease.

Objective

Evaluate the degree of insulin resistance in patients with PCOS and its relationship with the degree of hyperandrogenism and obesity, in comparison with our series in 2014. And besides classify the different phenotypes of PCOS in our population.

Material and methods. Intervention (s)

A retrospective study of 41 patients diagnosed with PCOS according to Rotterdam criteria between 2015 - 2017 in the children and youth endocrinological gynecology department at our center; and its differences with our PCOS population in 2014.

Main outcome measure(s)

Physical features were studied, including anthropometric examination, presence or absence of acne and the range of hyperandrogenism rated using the semiquantitative scale of Ferriman and Gallwey. Gynecological ultrasound was made in all patients. Blood test analyzing the level of total testosterone, androstendione, dihidroepiandrosterona sulfate, fasting glucose levels, basal insulin and lipid profile were performed. HOMA index and quotient between glucose and insulin were used to evaluate the insulin resistance's degree. PCOS phenotypes are classified according to Rotterdam criteria.

Result(s)

The mean age at diagnosis was 15.8 years.

PCOS phenotypes classification in our population: 46.3% belongs to type I, 19.5% to type II, 9.7% to type III and 24.4% to type IV.

26.8% of patients were overweight and 29.6% obese. 43.8% had a normal weight.

75% had a pathological HOMA index; 61% of patients were classified as severe (HOMA >3) insulin resistance and 14.6% moderate (HOMA between 2 and 3).

75% of patients with insulin resistance were overweight or obese.

38.9% of patients with normal weight had an HOMA > 3 while in obese patients the percentage was 83.3%.

Pathological HOMA was associated with analytical hyperandrogenism in 50% of our patients.

Conclusions

Our results show that insulin resistance is still being more frequent in patients with abnormal weight and majority classified as severe by the HOMA index. Only in a half of our patients, there are a relationship between hyperandrogenism and insulin resistance. The main PCOS phenotype is the type I.

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