HIRSUTISM IN CHILDREN: PITFALLS AND DIAGNOSTIC CHALLENGES

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Abstract

Introduction: Hirsutism is a condition defined as excessive male-pattern hair growth in females most commonly caused by hyperandrogenism. Polycystic ovary syndrome (PCOS), non-classic adrenal hyperplasia (NCAH) due to 21-hydroxylase deficiency and androgen-secreting tumors represent causes of androgen excess. Common features such as hirsutism, polycystic ovaries, oligomenorrhea or amenorrhea, and insulin resistance make it hard to distinguish between the first two conditions.

Material and methods: A retrospective study was conducted at “Louis Turcanu” Children’s Clinical and Emergency Hospital over two years. Twenty-three female patients admitted to the Endocrinology Department for hirsutism were included. Patient history and physical examination, blood sampling, ovarian sonography, oral glucose tolerance tests were performed in all patients. Insulin resistance (IR) was assessed by the homeostasis model assessment (HOMA).

Results and discussions: Sixteen patients were diagnosed with PCOS according to the Rotterdam criteria, and seven patients were diagnosed with NCAH. Obesity, defined as a BMI at or above the 95th percentile, had a higher prevalence among PCOS patients compared to NCAH patients; 52.9% obese PCOS patients compared to 33.3% obese NCAH patients. IR was diagnosed in 52.6% of PCOS patients. Oligomenorrhea was more frequent among pubertal patients with PCOS (31.2%) compared to NCAH (14.2%). The highest mean DHEA levels were found in NCAH patients, 15.5 ± 7.81 mg/mL, compared to 12.74 ± 6.027 mg/mL in PCOS patients. Basal 17-hydroxyprogesterone levels >2 ng/mL were more prevalent in the NCAH group, whereas an LH/FSH ratio > 2 was predominant among PCOS patients.

Conclusions: Differentiating between PCOS and NCAH remains a diagnostic challenge. Basal 17-hydroxyprogesterone levels >2 ng/mL and LH/FSH ratio > 2 are useful markers in diagnosing the cause of androgen excess. Further, more extensive studies and genetic testing are needed.

Bibliography: