

Clinical and metabolic characteristics of hyperandrogenic girls with non-classic congenital adrenal hyperplasia and polycystic ovary syndrome

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INTRODUCTION

- Non-classic congenital adrenal hyperplasia (NCCAH) and polycystic ovary syndrome (PCOS) present with similar hyperandrogenic signs symptoms in adolescent girls and may be associated with the development of cardiometabolic disorders.

AIM

- To evaluate the prevalence and the association between the clinical and biochemical parameters of hyperandrogenism and metabolic disorders in girls with NCCAH and PCOS at the time of the initial diagnosis.

RESULTS

	NCCAH	PCOS	P-VALUE
Hirsutism	84.7 %	52.7 %	<0.0001
Acne	33.9%	9.1%	0.001
Alopecia	18.6 %	3.6 %	0.012
Overweight/obesity	27.1 %	56.4 %	0.001
Menstrual disorders	60%	94.5%	0.02

	NCCAH	PCOS	P-VALUE
17-OH Progesterone ng/ml	2.1±1.8	0.7±1.4	<0.0001
Testosterone nmol/l	1.5±0.8	1.2±0.7	<0.05
Androstendione nmol/l	15.96±5.9	12.02±6.7	<0.05
LH IU/l	11.3±11.3	5.8±4.1	<0.05

- Mean age 14.7±2.8 years
- NCCAH girls were 51.8% (n=59) vs PCOS 41.9% (n=55)
- DHEAS and FSH levels, showed **no** differences between the groups.
- Testosterone level **correlated significantly** with the presence of menstrual disturbances (r=0.642, p=0.001).
- Polycystic ovarian morphology was observed in 32.5% of all participants, with a **significantly higher prevalence among PCOS patients** (56.4% vs. 10.2%, p<0.0001).
- The parameters of lipid and glucose metabolism between the groups, did not differ **significantly**
- Patients with **PCOS had higher CRP values** (p=0.025).

METHODS

A total of 114 girls (mean age 14.7±2.8 years) newly diagnosed with NCCAH and PCOS between 2016-2020, were included in the study.

Data was collected about:

- Anthropometrics
 - height, weight,
 - BMI (the overweight/obesity was defined according to IOTF scales)
- Physical examination
- Laboratory tests:
 - Metabolic parameters (serum lipids, glucose, insulin, CRP)
 - Hormonal analysis (total testosterone, 17OHProgesterone, DHEAS, androstendione, LH, FSH)
- Pelvic ultrasound

CONCLUSIONS

The current results suggest that:

- hirsutism and acne are the main clinical symptoms in NCCAH girls at diagnosis
- PCOS patients present more often with menstrual disorders and obesity.
- metabolic disorders are not expressed at the diagnosis of both disorders.

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