

8. ENDOCRINE CHANGES AND MENSTRUAL DYSFUNCTIONS IN ADOLESCENT GIRLS WITH OBESITY



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Introduction. In recent decades, there has been a significant increase in the obesity rate among adolescent girls. According to the specialized literature, obesity induces hormonal changes that have consequences on sexual development during puberty and menstrual function. Among the most common endocrine changes are thyroid dysfunction, hyperprolactinemia, and insulin resistance.

Aim of study. To determine endocrine disorders and menstrual cycle dysfunctions in adolescent girls with obesity.

Methods and materials. The current research is a non-experimental, descriptive study. The overall research sample consisted of 150 adolescent girls with obesity. The research was conducted based on the medical records of inpatients at the Institute of Mother and Child, during 2018-2023.

Results. The average age of the study participants was 14.87 ± 1.78 years. The impact of obesity on menstrual function and the occurrence of hormonal imbalances is well known in the medical literature. In our study, 7 patients (4.67%) were overweight, 132 patients (88%) were diagnosed with grade I obesity, 8 patients (5.34%) with grade II obesity, and 3 patients (2%) with morbid obesity. The majority of the adolescent girls in the study were diagnosed with Polycystic Ovary Syndrome 35 (23.3%), with 22 (62.8%) of them presenting hyperandrogenism, manifested by elevated serum levels of testosterone, and 14 (40%) of them also showing clinical hyperandrogenism - hirsutism and acne. Oligomenorrhea affected 23 patients (15.3%), and secondary amenorrhea had affected 21 patients (14%), representing menstrual dysfunctions observed in the study participants with PCOS and obesity. Other hormonal imbalances were hyperprolactinemia in 12 patients (27.27%), hypoestrogenemia in 9 patients (20.45%), and hypothyroidism in 19 patients (43.18%). In 10 patients (52.63%), hypothyroidism was associated with hyperprolactinemia. The mechanism of menstrual dysfunction in the studied adolescents can be explained by the effects of thyroid function, hyperandrogenemia, and hyperprolactinemia on gonadotropic hormones, resulting in anovulation and prolonged menstrual cycles for over 45 days.

Conclusion. Obesity in adolescent girls is associated with a series of hormonal disorders and menstrual cycle dysfunctions, including hyperandrogenemia, hypothyroidism, hyperprolactinemia, oligomenorrhea, and secondary amenorrhea. Understanding these associations can be crucial for developing management strategies and appropriate interventions in treating reproductive health issues in these patients.