THE INFLUENCE OF BRONCHIAL ASTHMA ON SEXUAL MATURATION OF GIRLS: PRELIMINARY STUDY

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Introduction: Chronic systemic diseases, such as bronchial asthma, resulting in oxygen insufficiency may lead to disturbances in growth, nutritional status, and the sexual maturation process.
Aim: The aim of this study was to evaluate the effect of bronchial asthma and its severity on sexual maturation of girls.
Material and methods: 111 girls aged 8-17 years from the Upper Silesia Region were qualified to the study as the research population. The study group consisted of 58 girls treated for bronchial asthma; the control group - 53 healthy girls. In the research part, socio-demographic factors, somatic development, birth parameters, severity of bronchial asthma, secondary sex characters development (Tanner-Marshall scale), and the age of menarche were analyzed. The mean differences between parameters were tested using U Mann-Whitney, Fisher tests, and multiple regression models.
Results: The mean age of the research population was 13.17 ±2.74 years. The mean duration of bronchial asthma in the studied girls was 8.84 ±3.17 years. The first symptoms of puberty among asthmatic girls started at 11.83 ±2.37 years (Th2) and 12.85 ±1.87 years (P2); they achieved the last stadium, on average, at 15 (Th5) and 17 years (P5). The ages of Th2 and P2 were comparable amongst healthy girls but the ages of Th4 and P5 were statistically younger. Asthmatic girls started to menstruate earlier (10.84 ±1.93 years) than healthy girls (12.24 ±1.16 years) (P=0.0004). The severity of bronchial asthma (P=0.0096) and its clinical control stage (P=0.0005) correlated with the age of menarche.
Conclusions: The first symptoms of sexual maturation start among asthmatic and healthy girls at a comparable age. However, asthmatic girls achieve the last stage of secondary sex characters later than healthy controls. Menarche appears more than one year earlier in girls with bronchial asthma compared with controls; the mean age of menarche depends on asthma severity and its clinical control.