Summary. Achievements and retaining of control is the primary goal of the Global Initiative on prevention and treatment of bronchial asthma (BA) and conciliatory documents in many countries [1,2], but the questionnaires using for evaluation of control of asthma are subjective, their result depends on psychological state of children and parents. The role of eosinophils in beginning and persistence of airway inflammation in asthma is known. Damaging effect of eosinophils appears indirectly through the production of cytotoxic substances, especially eosinophilic cationic protein (ECP). Therefore, studying of ECP may indicate the degree of activation of eosinophils and the severity of inflammation of the bronchi.

The objective of the study. To explore the clinical features and markers of inflammation in the bronchi depending on the gender features of school age children in order to optimize achievements and retain control of asthma.

Material and methods. There were examined 93 pupils with bronchial asthma: 62 boys - I group, and 31 girls - II observation group. These groups were comparable on the main clinical characteristics. The comprehensive examination, which involved study of cytomorphological consist of induced sputum, study ECP concentrations in sputum supernatant liquid and intracellular ECP in blood eosinophils has been conducted for all children. Controlling of asthma was determined by clinical and instrumental scale and ACT questionnaires at the beginning and the end of a 3-month course of basic anti-inflammatory treatment.

Results and discussion. The results have shown that astha has often appeared in boys of preschool age, predominantly eosinophilic inflammatory disease phenotype AR = 15.64%, RR = 1.34 (95% CI 1,0-1,83) OR = 1.89 (0,77-4,70), in the absence of peripheral blood eosinophilia AR = 32.2%, RR = 1.86 (95% CI 1,0-3,61) OR = 3.86 (95% DI 1,51-9,84). With the prevalence of atopic asthma form among girls, on the frequency of other atopic pathology groups probably were not differed. Statistical confirmation worse controlled asthma in girls compared with boys at the beginning of treatment, we have not received: OR = 2.16 (95% CI 0,34-13,75) RR = 1.74 (95% CI 1,01-3, 07) and AR = 15.0%,
although the rate of response to anti-inflammatory therapy in the past was better: decrease in the relative risk of asthma uncontrolled compared with girls was 15.0% at the minimum required number of patients - 6,67. It may be due to greater migration of eosinophils to the airways, their activation with the release of ECP (2.41 ng /ml in boys and 1.88 ng /ml in girls) or it reflected subjectivity in its self-evaluation condition inherent teenage girls.

Conclusions.

1. The features of asthma in school-age boys compared with girls include: three times more frequent onset of the disease in early childhood, eosinophilic phenotype in 66.13% of cases, the lack of blood eosinophilia (OR = 3.8) at moderate eosinophilia sputum (OR = 1.89) with the extracellular accumulation of eosinophilic cationic protein in sputum that, in general, contributes to a better response to designed anti-inflammatory therapy.

2. Asthma often debut in girls at over 6 years age in comparison with boys at school age ("asthma of late start" - 60.0%), dominated by its atopic form (66,67%), eosinophilia was determined in peripheral blood of each third patient, tendency to intracellular accumulation of eosinophilic cationic protein in peripheral blood leukocytes was observed in girls, and the disease is worse controllable, that is determined mainly by the results of self-appraisal.