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Level of proinflammatory cytokines in induced sputum bronchopulmonary dysplasia
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**Relevance.** With the development of technology nursing and respiratory support in preterm infants simultaneously with a reduction in mortality observed increase in the development of bronchopulmonary dysplasia (BPD). The disease is a variant of chronic inflammation on the background of morphologically altered structures of the bronchopulmonary system. A key role in the development of the inflammatory response are interleukin-1β, tumor necrosis factor-α. However, the data for the level of these cytokines in induced sputum, given the postnatal development of the bronchopulmonary system, are absent. In addition, long-term circulation and cytokine hyperproduction has adverse prognostic significance.

**Purpose.** To assess the level of IL-1ß and TNF-α in induced sputum in children with bronchopulmonary dysplasia.
**Material and methods.** The study involved 68 children from 1 month to 3 years, including 33 patients diagnosed with the classical form of the disease (group 1-a), 18 - a new form of (2-a group), 17 - BPD term (third group). The control group comprised 19 apparently healthy children. Sampling of 0.5 ml of induced sputum was performed in all patients with BPD on an empty stomach after inhalation of saline outside the main activity of the disease. Statistical processing was performed using the statistical software package Statistica 7.0.
**Results.** During the analysis of variance Kraskla-Wallis statistical characteristics of these cytokines in the surveyed children was found that the criterion Kraskla-Wallis test is significant for both levels of interleukin-1β, and for the level of TNF-α. In assessing the pairwise comparison - U-Mann-Whitney non-significant. This entitles you to claim that the statistical characteristics of indicators of various groups was not statistically different among themselves, and the level of activity of the investigated pro-inflammatory cytokines was significantly increased compared with the control group and did not depend on the affiliation of the child with BPD to a particular group. The lack of statistically significant differences of levels IL-1ß and TNF-α in children with various forms of BPD emphasizes that the disease is chronic in nature, due to morphological changes in the bronchopulmonary system are superimposed chronic inflammatory process.
**Conclusions.** In children with bronchopulmonary dysplasia is a significant increase in the levels of proinflammatory cytokines in induced sputum, indicating a chronic inflammatory airway disease, regardless of form.