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SPECIFIC FEATURES OF COURSE OF ATTACK PERIOD OF BRONCHIAL ASTHMA ON THE BACKGROUND OF CHRONIC INFECTIOUS FOCI IN THE NASOPHARYNX IN CHILDREN

Relevancy. Bronchial asthma is a serious global medical-social problem of the humanity. People of all ages, suffering from this chronic disease of the airways in case of insufficiently adequate treatment suffer from significant limitations in everyday life, this disease often leads to disability and even premature death. [5,17]. Bronchial asthma (BA) is a chronic inflammatory disease of the airways with extensive but variable bronchial obstruction and growing hypersensitivity to different stimuli, accompanied by attacks of difficulty breathing, suffocation, breathlessness, cough. Already at child age bronchial asthma may worsen life quality and lead to child's invalidity. Herewith in prediction of disease course it is difficult to differ severe bronchial asthma from partially controlled asthma, this is linked with usage of adequate diagnostics and therapy not in full range. [3,22].

Impact of risk factors of asthma development on the child's organism may both cause the disease and provoke its exacerbation or impede successful therapy; that is why identification of risk factors of bronchial asthma development is important at any stage of patient's supervision for the maximally possible decrease of their impact on the organism. [1,56;6,1934]. Hereditary susceptibility is among risk factors worsening bronchial asthma course in children. It is established that risk of bronchial asthma development is 2,6 times higher in children whose mothers have the same pathology, 2,5 times higher in case of father's disease and 6,6 times higher in case of both parents' disease. Atopic dermatitis and other allergic diseases in early childhood with the course of time may transform into asthma. Mother's smoking during pregnancy increases the risk of child's asthma by 25%. Prediction is worsened in case when adults smoke in the presence of an infant after the birth. Herewith asthma severity directly depends on the number of cigarettes smoked daily. In such children first attacks of difficulty breathing often develop already in the first months of life. Unfavorable ecologic situation, polluted atmospheric air provoke recurrent respiratory diseases in children [6,1935]. Investigations of the recent years [2,117] testify that upper airways infections play an important role in the pathogenesis of bronchial asthma, being trigger mechanism of the disease, especially in early childhood, provoking recurrent exacerbations in future. Investigation performed earlier [7,7420;4,540] showed that on the mucous

membrane of the respiratory ways of bronchial asthma children there are revealed persistence of the influenza viruses, coronaviruses, rhinoviruses, adenoviruses associated with pathogenic microorganisms, coccus flora (beta-hemolytic streptococcus, staphylococcus aureus, etc.). Every fourth child with bronchial obstruction caused by viral infection developed bronchial asthma in future. [6,1935].

Aim of the work was defining peculiarities of course of attack period of bronchial asthma on the background of chronic infectious foci in the nasopharynx of children.

Material and methods. There have been analyzed 80 clinical cases of bronchial asthma exacerbation in children aged 5 -15 years treated at pulmonology unit of Dnipropetrovsk regional children clinical hospital of Dnipropetrovsk city over 2014-2015 years period. The first group included 40 children in the attack period of bronchial asthma without chronic infectious focus in the nasopharynx, normal microflora was inoculated from fauces and nose. The second group included 40 children in the attack period of bronchial asthma, carriers of pathogenic microflora and chronic infectious focus in the nasopharynx. All children under supervision presented persistent course of moderately severe and severe bronchial asthma. Clinical findings of attack period of asthma have been analyzed: period of hospital stay, necessity for administering antibacterial therapy, degree of right ventricle insufficiency on hospitalization, terms of attack elimination and clinical improvement of child's state. Degree of respiratory insufficiency and ventilation disorders was assessed by means of pulse oximetry and spirography. Echocardiography method was used to assess cardiac insufficiency severity.

Results. On bacteriologic investigation of nasal and fauces sputum in all children from the 2-nd group there has been isolated pathogenic microflora. The most often there has been revealed carrier state of St. aureus – 47,5% of cases, Streptococcus hemolyticus – 42,5%, mixed-infections (two and more causative agents) - 12,5% of cases, Candida fungi - 2,5% of cases. Children of the 2-d group needed more prolonged in-patient care in the attack period of asthma as compared with patients of the 1-st group: 12,4±1,6 and 8,7±1,3 days correspondingly ($p<0,05$). Need for receiving antibacterial therapy more often appeared in children of the 2-d group also: 40% and 25%, correspondingly ($p>0,05$). Phenomena of respiratory insufficiency of moderate severity in the attack period of asthma in children's hospital was observed reliably more often in children of the 2-d group: 80% and 47,5%, correspondingly ($p<0,01$). Right ventricle insufficiency of the 2-d degree in the attack period of asthma also more often was accompanied by phenomena of respiratory insufficiency in children of the 2-d group: 57,5% and 37,5%, correspondingly ($p<0,05$). Herewith in children of the 1-st group symptoms of a mild right ventricle insufficiency of the 1-st degree were observed more often - 62,7% of cases. Improvement of patients' clinical state, which manifested in elimination of suffocation symptoms,

respiratory and cardiac insufficiency on the background of carried out treatment in children's hospital came on average 3 days later in children of the 2-d group as compared with patients of the 1-st group.

Conclusion. In children with chronic infectious focus in the nasopharynx in presence of pathogenic microflora in the upper airways (staphylococcus aureus, beta-hemolytic streptococcus) duration of attack period of asthma and hospital stay increased, herewith elimination of attack and improvement of child's clinical state came 2-3 days later. Such patients more often needed antibacterial therapy. In the attack period of asthma these patients had a more severe respiratory insufficiency and more expressed clinical and echocardiographic signs of a right ventricle insufficiency. Whereas bacterial sensitization and multiple allergy to bacterial allergens worsened attack period of asthma course, obtained observation results turn attention of pediatricians and general practitioners to timely revealing and sanitation of chronic infectious foci of the upper airways in children with obstruction in the past history and while establishing bronchial asthma diagnosis.

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