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FEATURES OF A NIGHT ATTACK IN CHILDREN WITH BRONCHIAL ASTHMA

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Annotation: This article discusses possible variants of etiological factors in the development of nocturnal asthma астмы y attack in children.
Key words:allergy, etiology, bronchial asthma, children, night attacks

Bronchial asthma (BA) is one of the most common diseases in the world. This pathology affects 5% of the world's population, and two-thirds of BA patients have nocturnal attacks of bronchospasm, which significantly worsens the quality of sleep and, as a result, makes the course of the disease more difficult [4]. These nocturnal attacks are commonly referred to as nocturnal asthma. It is characterized by a significant decrease in the daily rhythm of bronchial patency during the night's sleep. Naturally, providing effective assistance during the night hours is very difficult. Currently, this pathology affects 10-20 % of the children 's population, and y 33-35 % of children больных with asthma отмечено have nocturnal attacks of bronchospasm, which significantly worsens the quality of sleep and, as a result, worsens the course of the disease [1, 2]. These nocturnal attacks are commonly referred to as nocturnal asthma. Restless sleep with severe hypoxemia, as a rule, is важнейшее crucial in reducing the development of mental and physical activity in children. Despite на много- numerous studies, the pathogenetic mechanisms and treatment of this AD manifestation БА are controversial and have not been fully studied. An important part of the understanding of nocturnal asthma (NA) is the development of the inflammatory process during the night hours [3, 4]. However, it would be insufficient to explain nocturnal bronchoconstriction only byo- bronchoalveolar cell infiltration observed in patients with AD, было бы недостаточным, так since it also has a great affinity with circadian physiological rhythms. Таким Thus, the urgent need to study the features of the occurrence of clinical manifestations of pathological conditions occurring during sleep, served as an impetus for the formation of a new directionin medicine - sleep medicine, and opened a new page in the study of the pathogenesis of AD [1].
Bronchial asthma y in children is characterized by a significant decrease in the daily rhythm of bronchial patency during the nighttime sleep. At этом the same time, providing effective assistance during night hours
It is very difficult for young children, as in some cases it may be a variant of the norm or may cause nocturnal apnea or sudden death syndrome. [3, 4].

Currently, the causes of a nocturnal asthma attack are not fully understood, but there are several predisposing factors that can lead to this condition. These include hypothermia, hormonal disorders, being in a horizontal position, violation of the air temperature regime, exposure to household allergens, etc. [5, 6].

The following factors are the most common causes of nocturnal asthma attacks:

1. In a horizontal position, children often have a buildup of mucus in the airways, which leads tobronchospasm. In addition, a horizontal position helps to increase blood circulation in the pulmonary system and reduce lung volume, which provokes an increase in respiratory resistance.

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However, the role of body position in the occurrence of nocturnal seizures is ambiguous and controversial.

2. Airway inflammation is considered by some authors to be a fundamental factor in the occurrence of nocturnal asthma attacks. In particular, with sinusitis, there is an increase in the amount of mucosal discharge. During sleep, the airways are significantly narrowed, which helps to reduce the flow of oxygen. There is a sharp cough, which leads to an additional narrowing of the airway and a gradual increase in asthma.

3. Nocturnal asthma attacks can occur as a result of circadian hormonal fluctuations in the blood. This disorder is associated with the release of adrenaline, which can significantly affect the maintenance of muscle bronchial tissues during rest, which maximizes the expansion of the airway. In addition, epinephrine prevents the release of histamine, which is the cause of mucus and bronchospasm. The maximum amount of adrenaline and, accordingly, the maximum speed during exhalation, has the lowest values at 4 am due to the degranulation of mast cells, which cause an increase in histamine levels. At this time, the histamine level reaches its peak. Low epinephrine levels and increased histamine levels are one of the causes of nocturnal asthma symptoms.

4. Гастроэзофагальная Gastroesophageal reflux disease (GERD). Children with gastritis often experience heartburn and reflux (ingestion of stomach acid from the stomach area to the larynx and esophagus),

which can lead to bronchospasm. Often, the exacerbation of reflux occurs in a horizontal position, as well as the use of certain medications for asthma, which lead to relaxation of the cardiac sphincter of the stomach [3, 4].

1. Hydrochloric acid irritates the esophagus, which leads to activation ofthe- зациvagus nerve. It can provoke a narrowing of the bronchial lumen. Acid ingestion in the bronchopulmonary system can provoke a nighttime asthma attack.

2. In children with asthma, bronchospasm can also be caused by cold and dry air [21]. It is assumed that nocturnal asthma is associated with inhaling cooler air at night or with cooling the bronchial wall as a result of a decrease in body surface temperature during the night. In addition, the air currents produced by air conditioners contribute to drying дыха-out the respiratory tract, which exacerbates the symptoms of the disease. Daily variations in barometric pressure, relative humidity, and air temperature also have values. The airways of patients with bronchial asthma are hypersensitive to a decrease in ambient air temperature at night [5].

3. It is obvious that exposure to household allergens значsignificantly-increases the degree of bronchial reactivity in children with a corresponding predisposition, and can lead to the onset of nocturnal bronchospasm. Increased contact of a patient with bronchial asthma with aggressive allergens in the evening and at night (high concentration of spore fungi in the air on warm summer nights; contact with bedding containing allergens-feather pillows, mites-dermatophagoids in mattresses, etc.) can cause nocturnal asthma attacks [6].

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