

30.09.2021 — РЕСПІРАТОРНІ ЗАХВОРЮВАННЯ ЛІКУЙ РЕСПІРАТОРНО – ЧИ ВСЕ ТАК ОДНОЗНАЧНО, ЯК ЗДАЄТЬСЯ?



З ІНФУЗІЙНОЇ ТЕРАПІЇ

RESOLUTION OF

Teleconference «Respiratory diseases shall be treated in respiratory organs – Is it as clear as it seems?»

September 30, 2021 Kyiv, Ukraine

Almost 4 000 health care specialists have registered to participate in the Teleconference «Respiratory diseases shall be treated in respiratory organs – Is it as clear as it seems?».

As part of the event the experts in Pediatrics, Allergology and Pulmonology have shared their experience related to management of patients with infectious and allergic diseases of airways, possibilities in causal and symptomatic treatment, and new preventive measures.

Nine main reports were offered to the participants for review and they were dealing with the following issues:

- The role of respiratory cytoprotection in cases of airways diseases.
- The place of proteolysis inhibitors in ARVI treatment.
- How should modern irrigation and elimination aid look like.
- Recurrent obstructive bronchitis in children the opinion of children's pulmonologist.
- Use of inhaled steroids to reduce hospitalization rate in case of COVID-19.

Conclusions and decisions based on discussion of reports:

- 1. Upper airways are the beginning of respiratory tract and inflammation there is the beginning of systemic inflammation. Nasal breathing disturbance results in lack of cleaning, moisturizing, warming up of air while breathing, impact on the nervous system and cognitive functions (headache, fatigability, disturbance of memory, attention and speech), sleep disorders. Elimination and irrigation therapy of nasal cavity with physiological solution is the frontline during upper airways diseases. The innovative procedure Breathering is one of the ways of elimination/irrigation. Breathering is the procedure carried out by breathing the most physiological way for delivery of drugs to the upper airways. In the process of «breathering» procedure an influence is exerted by homogeneous distribution of medical substance over all mucosa of upper airways, so the area of interaction will be larger and it improves the efficiency of treatment of allergic rhinitis. Only complex treatment of allergic rhinitis can improve the quality of life of patients.
- 2. The allergic rhinitis is considered today as a barrier disease which is caused by the influence of allergens. Such chronic disease significantly decreases the quality of patient's life, has a negative impact on his/her social life, and may result in worse academic progress of children at school and impaired productivity of adults at work, especially if patients have severe forms of pathology. That is why a respiratory cytoprotection may play an important role in management of such patients, if there is a chance to use Ectoin to protect and stabilize mucosa cell membranes, preventing negative impact of allergens and improving the quality of life of patients with allergic rhinitis.

- 3. Acute respiratory viral infections dominate among all diseases in the world and place a heavy burden on both the social and the material aspects of human life. Understanding all the pathogenic stages of viral infection, scientists around the world are searching for and developing effective methods for the treatment and prevention of acute respiratory viral infections on a daily basis. Proteolytic activity associated with virus plays an important role in disease progression. Taking into account that respiratory tract mucosa has no specific protease inhibitors, the possibility of using drugs that will inhibit viral activity is considered. Use of protease inhibitors for treatment and prevention of respiratory viral infections is a promising therapeutic option for prevention of use of various proteases by virus to penetrate into human cells. Aminocaproic acid, as a representative of proteolysis inhibitors, may be used efficiently for treatment and prevention of acute respiratory viral infections.
- 4. Acute respiratory viral infections are the most widespread reason for development of bronchitis in children. The treatment of acute bronchitis has several tasks for the physician: influencing the causes of the disease and eliminating the pathological symptom. The inhalation therapy with nebulizer is 20 times more efficient than oral medicines. If target solutions are used properly the treatment with nebulizers does not provoke dysbacteriosis of airways, discourages introduction of infection. It is not recommended to use antibacterial therapy for treatment of acute bronchitis as far as viral infection is the main reason of it. Application of inhaled antiseptic agents based on decametoxinum has a scientific basis, proved efficiency and safety during treatment of bronchitis.
- 5. Any child is born with adenoids being a complex of lymphoid tissue in the nasal pharynx. Adenoid disease is one of the most common ENT pathologies in childhood. Accurate diagnosis and use of modern drugs will help with adenoid disease. Drug treatment is an effective alternative to surgery, so it is worth taking advantage of the chance of high quality and safe nonsurgical treatment. The advent of modern conservative treatments makes it possible to reduce the number of surgical interventions in children. The new direction in the treatment of adenoid diseases is the use of respiratory cytoprotectors, the best representative of which is Ectoin. Ectoin protects airways mucosa cell membrane. The drug can be administered through Breathering procedure and the efficiency of treatment is improved by homogeneous distribution of medical substance over all mucosa of upper airways.
- 6. Application of the respiratory cytoprotector based on Ectoin may become a promising trend in treatment of both allergic and infectious respiratory diseases. Ectoin stabilizes mucosa cell membranes, covers them with Hydro-complex and thereby stops harmful impact of aggressive environmental factors upon respiratory mucous membrane. Today there are data about treatment of inflammatory diseases of airways, such as rhinitis, bronchitis and COPD, with Ectoin the efficiency of which was proved in clinical researches.
- 7. 50% of children under age 6 years have ARVI complicated with broncho-obstructive syndrome, 25% of them often have disease recurrence and face a high risk of asthma development. There is an alternative for term «broncho-obstructive syndrome» which is more modern and widely used in medical books. It is «wheezing syndrome» and its treatment is described in details in international recommendations.
- 8. The first step in treatment of wheezing in children caused by bronchospasm is the use of salbutamol through nebulizer or spacer. Ipratropium bromide is added only in case of heavy wheezing. It is not recommended to use oral bronchial spasmolytics due to the large number of side effects and lower efficiency compared to inhaled bronchial spasmolytics. Episodic use of inhaled corticosteroids may be considered for children with frequent virus-induced wheezing episodes and intermittent symptoms of bronchial asthma. A nebulized fluticasone propionate may be considered as a medicine of choice in case of wheezing. It is recommended to use solutions in single-dose containers for inhalation through nebulizer as far as they contain fewer preservatives in excipients.

- 9. Many countries of the world have noticed lack of high incidence of COVID-19 among patients with asthma. The patients with allergic diseases have a reduced level of expression of ACE-2 receptors in the cells of airways, so it prevents replication of SARS-CoV-2 virus in the respiratory epithelium. Such effect is explained by permanent use of inhaled glucocorticosteroids. The dose-related reduction of expression of ACE-2 receptors caused by use of inhaled glucocorticosteroids was clearly demonstrated. The protective action of inhaled glucocorticosteroids in case of COVID-19 decreasing the viral load is considered. The first study of use of dry powder budesonide 1600 mcg in case of mild COVID-19 demonstrates good clinical effect reduction of hospital admissions by 90%, 2 days shorter period of symptoms, reduction of residual effects of COVID-19 on the 14th and 28th day. From a perception that nosology of COVID-19 has not been properly studied yet, it might be reasonable to add promising drugs and methods with proved clinical efficiency to the treatment pattern. Use of inhaled glucocorticosteroids during COVID-19 for reduced risk of hospital admission and alleviation of symptoms has demonstrated first positive results and is a promising method for reduction of hospital admission and less COVID-19 morbidity. In Ukraine a dry powder budesonide is represented by the Easyhaler inhaler.
- 10. Lung damage is a diagnostic criterion and reason for complicated progression of COVID-19. Pathogenetic processes are based on damaging of respiratory endothelium, extensive discharge of pro-inflammatory mediators, and synthesis of free radicals. Application of parenteral acetylcysteine in patients with community-acquired pneumonia was associated with reduction of pro-inflammatory mediators and patients with ARDS had reduction of inpatient and ALV stay. The results of the clinical researches related to pneumo-protective, mucolytic and anti-oxidant action of parenteral acetylcysteine let us talk about potential efficiency of this drug in treatment of patients with COVID-19. Intramuscular or intravenous acetylcysteine is preferred as far as its concentration in blood is 10 times higher than that of the parenteral acetylcysteine.

С. В. Зайков Президент ВГО «Асоціація алергологів України»

