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Acute Pneumonia and COVID-19: Problems of Today

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Since the first description of acute pneumonia (AP) to the present day, a huge period of time has passed with the change of generations and epochs, during which the art of healing patients has significantly advanced in many directions, achieving unprecedented success. Significant changes in medicine have not affected only its main task, which remains unchanged at all times, regardless of the depth of scientific knowledge and the range of tools used, as the desire to resolve the disease in the shortest possible time and with minimal consequences.

Especially rapid progress in the care of patients with AP was noted in the last century due to the success of Microbiology and, of course, the discovery of antibiotics. The emergence of new methods of treating acute inflammatory processes has saved millions of lives and has been accepted as a universal method of treating many diseases. However, the disastrous consequences of prolonged use of antibiotics exceeded all the cautious predictions that were made about their side effects.

Unlike drugs of classical pharmacology, which affect various parts of the processes and mechanisms of the body itself, antibiotics are aimed at destroying the biological microworld that accompanies our body. The steady decline in the effectiveness of antibiotics and the need to constantly develop new, more effective forms, the emergence and growth of a group of antibiotic-resistant microorganisms, many of which are already becoming symbionts for us, are the most noticeable consequences of long-term use of this group of drugs.

These well-known side effects, while continuing to deepen and accumulate, have for many years been nature's unequivocal warning that such therapeutic aggression cannot continue indefinitely and without a trace. Prolonged exposure to antibiotics on the human microbiome could not but cause certain changes in it. It is known that our internal microbiological world includes not only bacteria, but also other representatives and, in particular, viruses, which are a very representative species. Reducing the effectiveness of antibacterial therapy forces you to prescribe long-term and repeated courses of antibiotics. Long-term suppression of the symbiotic microflora by antibiotics created favorable

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conditions for increasing the role of viruses.

An additional warning was the appearance and increase in the number of cases of AP of viral etiology. The emergence in the last couple of decades of a number of viral epidemics (SARS, MERS) with severe lung damage and increased mortality has already required a serious revision of the concept of views on the nature of the disease and the principles of its treatment. Time passed, but nothing changed. Antibiotics continue to be considered a "cornerstone" in the treatment of AP [1,2]. At the same time, the use of auxiliary treatment methods continued and continues without taking into account the exceptional specificity of the lungs [3].

Today we no longer hear warning "calls". Today, the world sounds alarm, which is really felt by every person, regardless of their individual characteristics and place of residence. COVID-19 is no longer a warning. This is a big disaster that needs to be leveled with the least losses and consequences. This situation is waiting for radical and non-standard solutions when providing medical care to patients with viral AP. The lack of such solutions and the hope for auxiliary methods of treatment is felt as another consequence of antibacterial therapy. Along with the direct action of antimicrobials, antibiotics have had a negative didactic effect on the formation of views in this field of medicine. Long-term training with an emphasis on the suppression of microflora left no room for other views on the nature of AP. The sudden loss of the usual concepts of "microbe-antibiotic" put many specialists in a very difficult position. The "microbial" concept of disease has lost its relevance, but the long-term education of the principle of etiotropic solution of the problem continues to dominate the search for a way out of this situation.

The etiotropic approach to the treatment of patients with AP, which arose with the advent of antibiotics, was only a selective solution to the problem. An increase in the number of observations with viral lung diseases clearly showed the lack of a treatment strategy for this disease. Despite certain pathoanatomic differences between viral and bacterial inflammation in the lungs, we are talking about the same nosology with acute inflammation of the same tissue structures [4-6]. The defeat of identical anatomical structures of the organ will be accompanied by equivalent violations of its function and the General mechanism of deviations in the body of patients, is not it? However, if the main cause of AP is considered a microbe, and the main goal of therapeutic success is its suppression, then the pathogenetic features of the disease are left out. Current events clearly demonstrate shortcomings in the AP treatment strategy.

The sharp increase in the number of severe AP patients during the current COVID-19 pandemic deprives practical medicine of its main trump card and "cornerstone". The current situation indicates an increased need for methods of maintenance therapy, which are considered the most important in the treatment of patients with viral AP. The list of such methods that determine the fate of patients includes artificial ventilation, positive pressure at the end of exhalation, extracorporeal membrane oxygenation [7]. However, it is well known that all these methods are only means of resuscitation for patients in the later stages of the disease. If the mortality rate among hospitalized patients with COVID-19 is 26% [7], it increases to almost 90% in the subgroup that received ventilators [8].The lack of targeted programs for initial pathogenetic treatment is due to a lack of understanding of the importance of these approaches in solving the problem and a return to the etiotropic direction with the concentration of General efforts on the search for antiviral drugs.

In my view, one version of the pandemic that is being discussed in the media raises serious doubts about the possibility of artificially creating a virus as a variant of biological weapons. Such a variant of the virus must not only have the ability to spread quickly, but also significantly higher morbidity and mortality, otherwise it loses its main significance.

The above version of the role of antibiotics in the growth of viral diseases has no direct and objective evidence, as well as its refutations. This is rather a postulate that can be further confirmed if repeated viral epidemics and pandemics continue and increase. However, the role of antibiotics in changing the body's habitual microflora remains obvious, and the dominant etiotropic approach to AP treatment today makes it difficult to scientifically substantiate and apply pathogenetic approaches to medical care. The search for

specific antiviral drugs is a prospect for the future. However, it is not known when such drugs will be introduced for widespread use and how effective they will be. Real help for patients with viral lung diseases is needed right now, since supportive methods do not correct the situation.

The prospect of further growth of viral lung diseases and the exclusion of "habitual" antibiotics from the treatment of such patients poses a difficult task for medicine to rethink the nature of AP, continue to study the pathogenesis of the disease and use the pathogenetic principles of medical care. Such research and clinical trials were initiated long before the observed viral epidemics [9]. The results of this work correspond to the current situation, in which the priority of suppressing the pathogen does not play a decisive role in achieving overall success.

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