

Acute pneumonia and antibiotic therapy: the limits of the possible are determined by the results, not by modern directives (open letter to the editorial office)

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The problem of treatment of community-acquired pneumonia (CAP) for many years remains an urgent health issue worldwide, and the disease itself is dangerous for a healthy person at any age, especially for children and the elderly. All publications on this topic reflect anxiety and dissatisfaction with the current situation, but no one anywhere offers a radical real solution.

All observed proposals to improve the results of treatment of CAP are repeated for many years and declare the acceleration of bacteriological diagnosis combined with the development of more effective antimicrobial drugs. The ineffectiveness of solving the problem in this way has only begun to fix the attention of specialists. *"Despite advances in antimicrobial therapy, CAP continues to be a significant cause of morbidity and mortality in adults" (1). "Despite the advancements in supportive care, severe CAP remains a common reason for critical care admission that is associated with a high mortality (2). "Complications regarding pneumonia occur in children during hospitalization and treatment (3). "Despite the advances in medicine, the administration of antimicrobials, and the overall better care, there are still patients with CAP dying due to systemic complications all over the world (4)".*

At the same time, it is quite obvious that in practice, the determination of the true pathogen CAP is possible only in a small number of patients. We are talking about patients with purulent complications of CAP, which can provide material for the diagnosis directly from the inflammation zone. However, at this stage of the disease, the natural question of the prevention of possible complications is no longer worth it, and the maximum task is to eliminate the incident.

Continuing the hard work to solve the problem of CAP only by suppressing microflora will only support the stagnation in this section and hinder the possibility of a different understanding of the nature of the disease. Today there is no need to argue the meaning of new views on the nature of acute pneumonia.

Substantiation of the new doctrine of acute pneumonia and the resulting approaches to treatment, the results of clinical testing of the changed principles of care and even a significant reduction in the cost of treatment were described by me in numerous publications. All these data are presented in the most detailed way in the monograph (5).

In this presentation I would like to focus the attention of readers on two leading misconceptions in the interpretation of the concept of CAP, the elimination of which will greatly facilitate the process of understanding the essence of the problem and its solution.

First, the causative agents of acute pneumonia should be regarded as one (!) of the factors of its etiology, and not as the main and leading cause of the disease. From ancient times came postulate - "pneumonia - not infection, pneumonia-disease". The current attitude to this disease is fully consistent with previous views: CAP is not considered as an infectious form of inflammation and does not require special quarantine conditions. Moreover, it is well known that pathogens of CAP belong to representatives of symbiotic microflora of healthy people. It is no secret that among the healthy population there are a sufficient number of latent carriers of the most virulent and antibiotic-resistant non-specific microorganisms.

However, additional conditions are necessary for the emergence of CAP, which allow microbes to start the process of inflammation. But this is the next question. Despite the evidence of the above-mentioned facts, CAP in modern interpretation is considered and even classified as an infectious disease.

Secondly, the severe and aggressive development of CAP is mistakenly regarded as a respiratory disaster rather than a circulatory one. It is logical to assume that acute inflammation in the lung is accompanied by pronounced respiratory disorders. However, in reality, heavy violations of system circulation come to the fore. If the disease develops relatively slowly, the patient's body has time to adapt to new conditions. In this situation, even large areas of inflammation are not accompanied by significant changes in respiratory function. Therefore, the fact of switching off a certain area of alveoli from gas exchange does not lead to any catastrophic consequences. Experienced specialists are familiar with this picture of the disease.

Aggressive the disease is, first and foremost, manifestation of individual response of the body, which does not have time to adapt to rapidly changing conditions. The clinic of this condition corresponds to the picture of shock. This critical condition is not uncommon in patients with CAP in recent years, but is seen as a manifestation of sepsis. *"CAP is one of the most common causes of severe sepsis and infectious causes of death in adults in the United States, with a mortality rate of 30% to 40% (6)". "Severe community-acquired pneumonia (CAP) remains a frequent reason for admission to hospital. It is the most common cause of septic shock requiring escalation to treatment within an intensive care unit (2)".* That is, we again return to virulent infection as the main cause of severe complications.

The following important details should be noted in this regard. First, shock is already a vascular disaster, not a respiratory one. Secondly, you need to keep in mind that the CAP is developing not just in the pulmonary parenchyma and in the vessels of the pulmonary circulation. Reflex influence of the inflammation focus on the pulmonary blood flow causes restructuring and disruption of the entire systemic circulation. This form of shock was previously described by us as a **pulmonary shock**.

One-sided and narrowly focused interpretation of the nature of the disease does not even imply the need for other types of first aid. The way out of this deadlock is possible only after the revision of the whole doctrine of the disease and justification of pathogenetic approaches to treatment.

The pilot stage of such a project was implemented in 1976-1985 in Novokuznetsk state Institute for advanced training of doctors (USSR, Russia). The basis of the new doctrine of AP were already known and scientifically based medical axioms. Following private studies were additionally performed: 1. Experimental model of AP (4 series of experiments, 44 animals) obtaining a model of pleural complications (certificate for invention No 1631574, A1, 1 November 1990, USSR). 2. X-ray examination 56 lung anatomical preparations with different forms of the AP, taken from the dead patients. 3. Record comparative rheopulmonography before and after performing medical procedures (36 patients). 4. Analysis of the observation and treatment of 994 children with AP and its various destructive and pleural complications.

The revised treatment guidelines were applied in 101 patients in the initial period of aggressive forms of AP. The received results allow to speak about possibility of the guaranteed prevention of suppurative and destructive complications of the disease.

The results of this work were first published in Russian (7). A year ago, these materials were translated and published in English (5).

Another view of the causal mechanisms of acute pneumonia points to the need for other approaches to its treatment. But in order to proceed to the justification of the pathogenetic complex of therapeutic measures, it is necessary to look at the nature of the disease from a different angle and use the already known scientific facts and axioms.

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