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Why does vaccination not solve and will not be able to solve the problem of acute pneumonia?

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Abstract

Vaccination is one of the revolutionary discoveries in the history of medicine, which allowed saving millions of lives. The use of vaccines can prevent the development of diseases and thereby eliminate the further need for medical care. However, achieving the desired success after applying this technique, as well as after any other medical exposure, depends on certain initial conditions.

To date, it is known that optimal results were achieved after vaccination against infectious diseases that can be transmitted through contact with an already sick person, and the most striking example of such success is a complete victory over such a centuries-old scourge of humanity as smallpox [1]. At the same time, it should be recalled and clarified that such infectious processes they are the result of the presence of only one specific pathogen and the introduction of the vaccine to an individual recipient provides him with either lifelong or long-term resistance to this disease.

Keywords: *vaccination, Covid-19*

Introduction

Vaccination is one of the revolutionary discoveries in the history of medicine, which allowed saving millions of lives. The use of vaccines can prevent the development of diseases and thereby eliminate the further need for medical care. However, achieving the desired success after applying this technique, as well as after any other medical exposure, depends on certain initial conditions.

To date, it is known that optimal results were achieved after vaccination against infectious diseases that can be transmitted through contact with an already sick person, and the most striking example of such success is a complete victory over such a centuries-old scourge of humanity as smallpox [1]. At the same time, it should be recalled and clarified that such infectious processes they are the result of the presence of only one specific pathogen and the introduction of the vaccine to an individual recipient provides him with either lifelong or long-term resistance to this disease.

The mentioned initial circumstances and the final results of the previous successful use of vaccines in some infectious diseases force us to critically assess the potential prospects of vaccination in acute inflammation of the lung tissue, which has been widely carried out in many countries over the past decades. The results of such an analysis show that the modern use of so-called "pneumonia vaccinations" has quite a lot of fundamental features that cast doubt on the expected success of continuing such an action.

Firstly, acute pneumonia (AP) has never been classified as an infectious process before. The ancient postulate that people do not get infected with pneumonia, but get sick, remains in force at the present time, and modern medicine has no arguments to refute it. Even now, during the SARS-CoV-2 pandemic, in which there is a clear predominance of lung damage by coronavirus, we can talk about the contact spread of the pathogen, but not about pneumonia, right? Current pandemic statistics show that 80% of infected people avoid the stage of lung damage, while 20% of them learn about the presence of infection only on the basis of special tests [2-4].

Secondly, since the inception and development of microbiology, it has become known about the

absence of one specific pathogen in AP. Streptococcus pneumoniae, discovered in the 19th century and given its name due to its leadership among the pathogens of AP, although it accounted for 90% to 95% of the etiology of AP on the eve of the appearance of antibiotics [5-7], but this disease was quite reasonably interpreted as acute nonspecific inflammation.

Thirdly, one of the noticeable phenomena that arose after the start of the use of antibiotics was the constant change in the list and priority among the pathogens of AP. Today, few people remember the period of the 60-70s of the last century, when the superiority of pneumococcus among the pathogens of the disease was completely lost, and staphylococcus began to play a leading role in almost 100% of observations, especially in severe forms. Further events showed that pneumococcus gradually became the leader of this list again, however, the frequency of its presence in the etiology of AP has already significantly differed from previous indicators and in recent years, among the positive results of bacteriological studies in this category of patients, it ranges from 10.9% to 22.5% [8].

Fourth, when, at the end of the 20th century, pneumococcus regained its role as a leader among the pathogens of AP, its advantage was no longer as unconditional as in the pre-antibiotic period, but it was at this time that the widespread use of pneumococcal vaccine began, mainly for the prevention of pneumonia. And although the disadvantages of such vaccination should have been expected, the summing up of this work caused experts difficulties in their assessment. For example, in pneumococcal meningitis of monovalent etiology, a significant decrease in morbidity was noted, while the frequency of AP decreased slightly, but the number of complications, such as pleural empyema, increased significantly [9,10].

Fifthly, in recent decades, experts have expressed concern about the growing number of cases of viral pneumonia. Almost two decades ago, the number of these forms of the disease was determined by almost half of the cases of AP in the world [11-13]. Moreover, the beginning of the current SARS-CoV-2 pandemic was preceded by at least two major coronavirus epidemics - SARS and MERS. However, in addition to concerns, these events and facts did not entail real actions. The continuation of pneumococcal vaccination in these conditions cannot be considered as a reasonable and rational step in solving the problem of AP, but today, on the contrary, due to the lack of the expected effect, the spectrum of action of the original vaccine on pneumococcal strains continues to expand.

Sixth, in recent decades, acute pneumonia, as a single nosological form, has lost its former classical definition and appears today under a variety of terms reflecting the place and conditions of the inflammatory process, which involve the participation of various pathogens and only emphasize the non-specificity of this disease. In this regard, the question should naturally arise about what task in this situation is intended to solve a large-scale specific pneumococcal vaccination of the population, which does not cover most of the spectrum of modern pathogens of AP?

Seventh, the onset of the SARS-CoV-2 pandemic contributed to the emergence of another type of AP, which is designated as COVID-19 pneumonia. However, the principles of medical care for the latter category of patients remained the same, and attempts to distinguish between coronavirus and bacterial lung damage did not bring convincing results [14-16]. The latter circumstance once again emphasizes that the features of inflammatory processes are determined by their localization and violation of the function of the corresponding organ and to a much lesser extent by the characteristics of the pathogen.

Seventh, during the SARS-CoV-2 pandemic, another one was added to the previous versions of AP, which is designated by the term "COVID-19 pneumonia". Although this term reflects the new etiology of the disease, it has not affected therapeutic approaches in which antibiotics remain the main therapeutic agent, which, as is known, does not affect the coronavirus [14-16]. At the same time, unsuccessful attempts to distinguish between coronavirus and bacterial lung lesions in clinical settings remain without proper conclusions [17-19]. The latter circumstance brings us back to the classic signs of inflammation, among which a violation of the function of the affected organ determines the features of clinical symptoms, emphasizing the more important role of localization of the inflammatory process than the characteristics of the pathogen.

In this regard, it should be noted that the modern strategy for solving the problem of AP remains focused on the previous goals. On the one hand, the pathogen continues to be considered as the main factor in the development and course of the disease, and, on the other hand, the aggressive development of the pandemic with the rapid spread of the virus, which is still unusual for the population of the globe, was the reason for the start of specific vaccination.

The first results of this campaign already give rise to assessments and reflections.

By now it is already known that the current vaccination to reduce the effects of coronavirus infection does not guarantee the likelihood of infection and subsequent illness. At the same time, the effect of vaccination is very short-term and requires the introduction of repeated doses of the vaccine to preserve it. Moreover, it has already been noted that the pathogen is able to mutate within a short time, which forces us to constantly improve vaccine preparations. As a result, leaving the final conclusions to the discretion of specialists in the field of immunology and infectious diseases, today we can say that vaccination against coronavirus (as well as pneumococcal vaccination) does not have a direct and decisive significance for solving the problem of AP.

If we now summarize the essence of the above information, then vaccination for the prevention of pneumonia should be considered as a false way to solve the problem, which creates additional illusions and leads away from understanding the real causes of what is happening. The psychological perception of the AP problem, which arose and formed under the didactic influence of the temptation about the exceptional therapeutic qualities and indispensability of antibiotics, is currently the main obstacle in its solution.

A more detailed analysis with objective evidence of the misconceptions that have existed for many years in the perception of the AP problem and the direction of efforts to solve it was carried out in a series of studies and clinical trials. The results of this work, including its summary version [20], are currently available for free review, which in case of remaining doubts allows you to get additional information for study and reflection.

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