



PECULIARITIES OF CLINICAL PICTURE, STATE OF CARDIOVASCULAR AND RESPIRATORY SYSTEMS AND SOME LINKS OF HUMORAL REGULATION IN PATIENTS WITH COVID PNEUMONIA

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Abstract: The COVID-19 pandemic is an ongoing global pandemic of COVID-19 coronavirus infection caused by SARS-CoV-2 coronavirus. The outbreak was first reported in Wuhan, China, in December 2019. On 30 January 2020, the World Health Organization declared the outbreak a public health emergency of international concern on 30 January 2020 and a pandemic on 11 March. As of 20 December 2020, more than 77.1 million cases have been reported worldwide during the pandemic; more than 1.698 million people have died and more than 54.02 million have recovered.

Key words: COVID-19 pandemic, SARS-CoV-2 coronavirus, viral pneumonia, cardiovascular and respiratory system.

INTRODUCTION: The COVID-19 pandemic in Uzbekistan is part of the COVID-19 pandemic caused by SARS-CoV-2 coronavirus. It has been confirmed that the first case was identified in an Uzbek national who returned from France on 15 March 2020. The Uzbek Ministry of Health has a list of people who were in contact with the victim, with plans to isolate them. The SARS-CoV-2 virus is mainly transmitted through close contact, most often through small droplets[produced by coughing, sneezing and talking[1]. The droplets usually fall to the ground or on surfaces rather than travelling long distances through the air. Transmission can also occur through smaller droplets that are able to remain suspended in the air for longer periods of time[3]. Less commonly, infection may occur after touching

a contaminated surface and then the face. The infected person is most infectious during the first three days after the onset of symptoms, although spread is possible before symptoms appear and through people who do not show symptoms[5].

The most common symptoms include fever, cough, fatigue, shortness of breath and anosmia (loss of sense of smell), and in some cases ear stuffiness may occur. Complications can include acute respiratory distress syndrome (ARDS) and pneumonia (inflammation of the lungs). Researchers have previously pointed out that with COVID-19, patients develop not only pneumonia but also strokes or kidney failure, including in young adults. In the first paper published in Nature Medicine, Chinese experts from the University of Hong Kong used

organoids (artificially grown organs) of humans and bats to study the virus. The authors of the work expect that further research using organoids will allow to learn more about both the features of the virus and its transmission routes, as well as its origin. German researchers from the University Hospital Hamburg-Eppendorf reported in an article in the New England Journal of Medicine about the results of autopsies on 27 patients[4].

It turned out that many of them developed renal failure on the background of coronavirus infection. In this regard, scientists say that the virus has a high organotropism (ability to affect certain organs). Doctors fear that the ability of the virus to affect so many organs will aggravate chronic conditions. People with heart disease and diabetes are particularly vulnerable to the coronavirus, and given that the virus "settles" in different organs, it poses an additional threat to the health of such patients[6].

The German researchers' findings show that "SARS-CoV-2 has organotropism beyond the respiratory tract, including the heart, and we hypothesise that organotropism influences the course of the disease and possibly exacerbates pre-existing conditions."

It can be stated that respiratory diseases are one of the most pressing problems both for the health care system in general and for the medical service in the hot climate of the Republic of Uzbekistan (RUz). Covid pneumonia causes tension of all regulatory systems of the organism. In addition, complex non-invasive dynamic study of functional regulation of cardiovascular and respiratory systems in covid pneumonia allows to assess the effectiveness of the course of treatment, to predict the further course of the underlying disease[2].

The relevance of pneumonia remains at the forefront and has recently attracted the attention not only of the entire medical community, but also of all political and economic institutions of most states of the planet. This nosology continues to be in the

centre of attention, determining one of the key causes in the frequency of mortality of the population. The presented article accumulates the most up-to-date theses regarding viral pneumonias based on the review of a large amount of scientific literature, domestic and foreign studies[7]. Although the term "viral pneumonia" has been used in medical practice for more than a century, nevertheless, there is no definitive diagnostic algorithm and no established definitive concept. The article reflects special historical medical and attitudinal aspects in the study of pneumonia from the time of Hippocrates to the present day. Epidemiological peculiarities, etiology, as well as the terminological base of viral pneumonias are given, thus fixing the concept of viral pneumonia in medical categories. A prospective classification of viral pneumonias according to ICD-XI is presented. Attention is paid to autopsy morphological characteristics of bronchopulmonary organocomplex in viral pneumonias, postmortem descriptions with references to authoritative research sources are given[8].

The main modern diagnostic capabilities of the scientific medical community in the detection of pneumonias are described, the issues of the formation of new diagnostic algorithms are reflected. The clinical picture of viral pneumonias is described in detail, the clinical concept of phase course of the disease based on pathomorphological data is presented for the first time. The main modern groups of drugs of etiotropic and pathogenetic treatment of the disease are considered. The conclusion reflects the main problem postulates and prospects for further study of the disease. Pneumonia has long belonged to the number of common diseases, but the doctrine of it cannot be considered as complete and logically finished [9]. Today there is no definitive scientific explanation defining unambiguous risk factors and the cause of pneumonia. Despite the progress achieved in the treatment of pneumonia (expansion of diagnostic capabilities, improvement of vaccine prophylaxis, reduction of mortality with the

discovery of antibacterial therapy, approval of the basics of resuscitation algorithm, which contributes to the maintenance of vital functions during the critical period of the disease), the causes and pathophysiological mechanisms that lead to the increase in severe complications and, at present, lethal outcomes have not yet been fully established [12]. One of the ways out of this situation is further scientific development of methods of diagnostics and treatment of pneumonias depending on the etiology of the disease.

Overcoming these negative trends lies, among other things, in the study of the historical heritage about the nature of pneumonia in different periods of development of medicine in general and therapy, in particular. Explanations of lung pathology in the works of our predecessors contain rational grains, which should not be neglected in order not to repeat the mistakes of the passed path. Applying the structural-functional approach to the study of any object, it should be remembered that the isolated study of function or structure is unpromising. When applying the functional approach to the study of a system, it is necessary to conduct its structural analysis at the same time [10].

Conclusions: Thus, the relevance of covid pneumonia for R.Uz. is one of the most urgent problems in pulmonology today. Therefore, it seemed very important to us to study the influence and interrelations of the current etiological structure of covid pneumonia with clinical picture and severity of the course of the disease, to evaluate the reaction of the leading regulatory and homeostatic systems of the organism, to develop additional approaches to the prevention and treatment of complications.

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