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OPTIMIZATION OF METHODS OF TREATMENT OF FIBROTIC COMPLICATIONS IN THE LUNGS IN PATIENTS WITH TUBERCULOSIS AND COVID-19

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Summary
Every year the number of patients increases by 25-30% and, which is especially alarming, children, adolescents and adults often become victims.The dissertation work is carried out within the framework of the State scientific and technical program PPI-10 "Protection of public health through the development of new technologies and methods for diagnosing, treating, and preventing diseases."To solve the tasks we have set, it is necessary to conduct a number of relevant studies and activities in order to improve the health status of the population of the Republic of Uzbekistan. Today, in our country, special attention is paid to improving the healthcare system, including early diagnosis, treatment and prevention of tuberculosis.

Keywords: tuberculosis, nonspecific lung diseases, treatment, population diagnostics.

Intraduction

The WHO estimates that TB has claimed the lives of over 1.4 million people in 2019 alone. Infection establishes itself following inhalation of an exhaled droplet from a patient with an active infection. The analysis notes that the disease was 3.3 times more common in rural populations. Incorrect interpretation of the results of diagnostic research methods was found in non-phthisiological hospitals – in 63.5% of cases, and in polyclinics – in 29.5% and in phthisiological hospitals, this indicator was - in 4.5% of cases [3,7,39].

At the end of 2019, an outbreak of a new coronavirus infection occurred in the People's Republic of China with its epicenter in the city of Wuhan (Hubei Province). On February 11, 2020, the World Health Organization (WHO) determined the official name of the infection caused by the new coronavirus - COVID-19 ("Coronavirus disease 2019"). On February 11, 2020, the International Committee on Taxonomy of Viruses assigned the official name of the infectious agent - SARS-CoV-2. Now, the world is fighting the global pandemic of a new coronavirus infection, the international medical organization "Doctors without Borders" / Médecins Sans Frontières is concerned about the situation of vulnerable populations around the world[1,3,4].

Special attention will be needed to ensure continued TB prevention, diagnosis, treatment and care throughout the world. Like tuberculosis, the new coronavirus infection affects the lungs and its symptoms - cough and fever - can resemble tuberculosis [11,17,33]. It is possible that people with lung disease, in particular those with tuberculosis, or people who are immunocompromised, as with a high viral load due to HIV, if infected with COVID-19, will carry a coronavirus infection in a more severe form [2,3,5]. In addition, tuberculosis is common in densely populated areas, which increases the risk of coronavirus infection for TB patients, especially in crowded communities with poor access to clean water and medical care. Together with the global response to the coronavirus epidemic, health authorities, partner organizations and international donor organizations must make every possible effort to maintain essential services and reduce risks for vulnerable groups. We will need innovative health care solutions to reduce the risks of coronavirus infection among TB patients and people living with HIV[6,11,13]. The connection of the dissertation topic with the plan of research work of a higher educational institution. The implementation of this dissertation work is planned according to the plan and topic of research work of the Bukhara State Medical Institute named after Abu Ali ibn Sino for 2021-2024: “Optimization of methods of treatment and rehabilitation of fibrotic complications in the lungs, patients who have undergone tuberculosis and COVID-19”[17;15,19].

Material and Methods

In total, 150 patients with fibrotic complications in the lungs of patients who have undergone tuberculosis and COVID-19, who are hospitalized in the centers of phthisiology and pulmonology of the Bukhara region and the Republican Specialized Scientific and Practical Medical Center for Phthisiology and Pulmonology of the Ministry of Health of the Republic of Uzbekistan, will be examined, modern molecular diagnostics will be carried out. genetic and bacteriological research, complex treatment with the use of immunotherapy and the first, second and third line of anti-tuberculosis drugs, taking into account the sensitivity of mycobacteria to anti-tuberculosis drugs.

Biochemical methods. In blood plasma, the following indicators of the functional state of the hepatobiliary system and pancreas will be determined: alanine aminotransferase, aspartate aminotransferase, alkaline phosphatase, bilirubin and diastase. These analyzes will also be performed in dynamics: before treatment and after treatment. Bacteriological studies: microscopy of pathological material with staining according to the Ziehl-Nielsen method, sputum bacteriological culture, on a liquid medium - MGite / Bactic and a solid medium of Levenshtein-Jensen, with the

determination of the sensitivity of Mycobacterium tuberculosis to anti-tuberculosis drugs, molecular genetic methods, polymerase chain reaction, diagnostics of the device Gene/Xpert, Ultra Gene/Xpert and HAINtest. Bacteriological studies: microscopy of pathological material with staining according to the Ziehl-Nielsen method, sputum bacteriological culture, on a liquid medium - MGite / Bactic and a solid medium of Levenshtein-Jensen, with the determination of the sensitivity of Mycobacterium tuberculosis to anti-tuberculosis drugs, molecular genetic methods, polymerase chain reaction, diagnostics of the device Gene/Xpert, Ultra Gene/Xpert and HAINtest. Histological studies; intraoperative or biopsy material obtained using a bronchoscope or thorocoscope, pathological materials are processed with a solution of chloramine, sulfuric acid and paraffin histological blocks are prepared, after which the structure of cells and tissues is determined in layers. X-ray examination of the patient will include an overview radiograph of the lungs or fluorography of the lungs, X-ray tomograms, computed and magnetic resonance imaging of the lungs. According to the indications, bronchoscopy with a study of bronchoalveolar lavage is performed. In the dynamics of treatment, especially bacteriological and radiological studies are decisive in assessing the outcome of treatment, its effectiveness and results. The effectiveness of treatment is assessed clinically and with X-ray or modern methods of radiation diagnostics (computed tomography, multislice computed tomography of the lungs as indicated).

Multislice computed tomography is the method of choice in the diagnosis of pulmonary tuberculosis, the sensitivity of the method reaches 96%, and the specificity is 92%, and the accuracy is 94%. The picture of pulmonary tuberculosis can be seen in the frontal, sagittal and axial sections and this increases the effectiveness of this method. Bronchoscopy with examination of bronchoalveolar lavage. When identifying the condition of the lumen of the bronchi and to search for mycobacterium tuberculosis, bronchoscopy is performed according to indications. With pulmonary bleeding for diagnosis and treatment, this method is considered more minimally invasive and effective.

Results and Discussion

The use of modern diagnostic methods (molecular genetic methods, polymerase chain reaction, diagnostics using the Gene / Xpert, ultra Gene / Xpert and HAINtest, MGit BACTEC 960 apparatus) and immunological studies (determination of the levels of T - killers - CD4 + cells and viral load per 1 ml of blood) improves the quality of diagnostics, early detection of pulmonary tuberculosis in HIV-infected patients. Data of laboratory analyzes at the moment CT scan of the chest No. 2: C-reactive protein -

179.34 mg/l, D-dimer - 680 ng/ml, ESR - 94 mm/h,leukocytes - 21.97 × 108, interleukin-6 - 978 pg / ml.

Growth of colonies of Klebsiella pneumonia was detected in sputum at a concentration of 104 CFU / ml. Analysis results sputum: acid-fast mycobacteria were not detected, the growth of colonies of Mycobacterium tuberculosis not received. In segment S9 on the right preserved area of consolidation with small foci decay. At the level of the lower and upper lobe of the right lung revealed the presence of partially encapsulated fluid. On the right, at the level of the lower lobe, there was a thickening of the parietal and visceral pleura. In the fluid of the pleural cavity in the direction from destruction cavities traced gas bubbles. During bronchoscopy, it was diagnosed bilateral diffuse catarrhal bronchitis 1st stage, in the lumen of the bronchi, a small amount of mucous discharge, the mouth of the lobar and segmental bronchi of the correct configuration completely passable.

Conclusion

These methods make it possible to treat patients purposefully and adequately, the results of treatment are improved, the mortality and disability of patients is reduced, the period of nailing patients in hospitals is reduced, the ability to treat patients of this category on an outpatient basis is increased.

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