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EFFECTIVENESS OF DIAGNOSTICS AND TREATMENT OF TUBERCULOSIS IN PATIENTS WITH COVID-19.

Dauran O.Ongarbayev
Assistant of the Department of Phthisiology and Pulmonology, Tashkent Medical Academy,
ongarbayevdawran@gmail.com;
Nargiza N. Parpiyeva
Director of the Republican Specialized Scientific and Practical Medical Center for Phthisiology and Pulmonology, Head of the Department of Phthisiology and Pulmonology of the Tashkent Medical Academy,
nargizanusratovna@gmail.com;
Kozim S.Mukhamedov
Associate Professor of the Department of Phthisiology and Pulmonology of the Tashkent Medical Academy,
muxamedovkozim@gmail.com;
Mavluda I.Xodjaeva
Associate Professor of the Department of Phthisiology and Pulmonology of the Tashkent Medical Academy,
khodjaevamavlyuda@gmail.com;
Sherali Sh. Massavirov
Scientific Secretary of the Republican Specialized Scientific and Practical Medical Center for Phthisiology and Pulmonology, dr.sherali1977@gmail.com;
Sabina S. Kayumova
Senior Lecturer, Department of Phthisiology and Pulmonology, Tashkent Medical Academy,
sabinakayumova77@gmail.com.

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Abstract:

The problem of peritoneal adhesions and surgical treatment of associated acute small bowel adhesionsOTKHand today it remains one of the most relevant and complex. Objective: to study and evaluate the results of surgical treatment of acute adhesive obstruction of the small intestine.
83.7% of 49 patients with OSNTK underwent one operation in the past, 14.3% - 2.
After laparotomy, 75.5% of patients had adhesive extrudes crossed, 4.1% had a small bowel + double-barrelled terminal ileostomy, 18.4% had small bowel resection, 2%had ileotransverzoanastomosis,and 1 had simultaneous operations. Intubation of the small intestine according to indications Iatrogenic injuries occurred in 12.2% of patients, postoperative complications - in 18.4%. 3 patients (6.1%) died: sepsis (1), multiple organ failure (1), COVID-19 associated with pneumonia (1).
Conclusions. Thus,acute adhesive small bowel obstruction accounts for 3.8 % of all acute surgical diseases of the abdominal cavity. The scope of the operation depended on the viability of the small intestine, the possibility of separation of the conglomerate or infiltrate, the choice of the method of intestinal incubation, and the presence of simultaneous pathology. This surgical approach resulted in 18.4% of postoperative complications, 4.1% - relaparotomy, 6.1% - mortality.

Keywords: Small intestine, acute obstruction, adhesions, surgical treatment.

INTRODUCTION:

WHO experts note that the incidence of tuberculosis has decreased in different countries of the world due to Covid-19. This situation is not true, because due to the self-isolation regime, anti-epidemic measures during the Covid-19 pandemic led to underdiagnosis of TB patients [1]. It is predicted that in this situation the number of deaths from tuberculosis should increase against the background of an objective decrease in the number of infected people and late detection [2].

The spread of tuberculosis infection has become an urgent problem in the context of the new coronavirus pandemic - COVID-19 [3,4]. In many countries, there was a need for epidemic measures, there were restrictions on screening for tuberculosis (TB) infection. This situation affected the activities of anti-tuberculosis programs in all countries of the world and limited the assistance provided to patients with tuberculosis [4,5].

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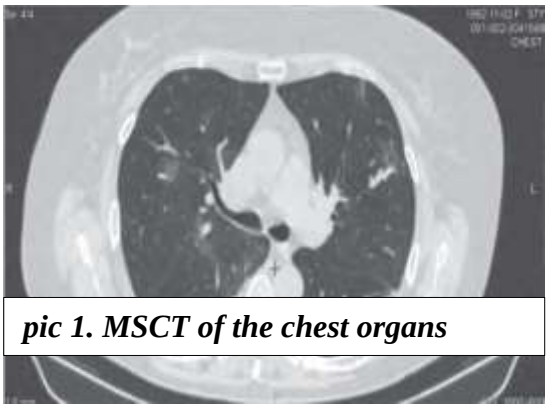
Currently, the hospitalization of patients with coexistence of tuberculosis and Covid-19 in the diagnostic departments of hospitals of the general medical network is questionable [5]. Under such conditions, it is necessary to use bacteriological and molecular genetic diagnostic methods in special laboratories of anti-tuberculosis institutions in order to thoroughly examine for the detection of Mycobacterium tuberculosis (MBT). This need is often associated with the difficulty of identifying MBT in TB patients and referral to TB facilities. This conclusion was reached by Chinese authors in their study [9].



pic 1. MSCT of the chest organs

According to the WHO, some authors state difficulties in diagnosing tuberculosis even under standard conditions, and confirmation of the diagnosis of tuberculosis occurs only in 48% of cases [7,8]. According to them, during a pandemic, the situation with tuberculosis worsens. In many cases, both Covid-19 infection and tuberculosis manifest as a reaction in the form of low-grade fever, cough, decreased appetite, and shortness of breath [9]. Using existing tests, SARS-CoV-2 virus DNA can be isolated only in 60–70% of cases, which is associated with the low diagnostic sensitivity of these PCR tests [10]. In such cases, the diagnosis of Covid-19 using multislice computed tomography (MSCT) and differential diagnosis with other pathological conditions can serve as a more accurate method [11]. It should be taken into account that if TB is suspected, the correct diagnosis of TB can only be made after MSCT and laboratory confirmation of the presence of MBT. It is necessary to obtain and use histological material for the diagnosis of tuberculosis in conditions where bacteria are not detected in sputum [8]. However, often they are hesitant to use this method. There are few scientific articles in the literature covering the coexistence of TB and Covid-19 (Fakihi F), the authors only point out the possible difficulties in diagnosing specific changes against the background of Covid-19 [12]. The authors presented the need for timely diagnosis of tuberculosis against the background of Covid-19.

CLINICAL CASE: Patient A. (58 years old), retired, applied to the family polyclinic (FP) about subfebrile fever, weakness, weight loss, malaise, loss of appetite, shortness of breath, chest pain.

From the epidemiological anamnesis: he denies contact with tuberculosis patients, he has not had tuberculosis before, he was not registered at the dispensary. He did not receive blood products, did not undergo surgical manipulations. I have not visited a dentist in the last 6 months. Didn't go abroad.

In the general blood test, an ESR acceleration up to 16 mm/h was noted. Other data of general and biochemical blood tests are normal. The patient underwent a digital chest radiograph, which revealed pathological opacification in the upper lobe of the left lung. Based on the examination data, the patient was referred (form No. 025) to the interdistrict phthisiatric dispensary (IPD), because on the basis of order No. 200 dated 05.08.2020 of the Ministry of Health of the Republic of Uzbekistan, IPDs were retrained into specialized polyclinics to provide outpatient care to coronavirus patients.

pic 2. MSCT of the chest organs in dynamics

On June 13, 2020, based on complaints and the result of X-ray diagnostics at the IPD, a bacterioscopy was performed for MBT and PCR for Covid-19, the results of both analyzes were negative.

The patient was prescribed outpatient treatment at the place of residence with a diagnosis of mild Covid-19. The joint venture issued a Covid-box with the necessary drugs for symptomatic and antiviral treatment. Within 8 days of complex treatment, there was a lack of positive dynamics.

Considering the absence of significant positive dynamics in the patient on the 8th day of illness, a second PCR test for Covid-19 and MSCT of the chest organs was scheduled for June 21. A laboratory test for Covid-19 dated 06/21/2020 showed a positive result (13th day of illness).

On MSCT of the chest organs (pic.1) in the upper lobe of the left lung there is a large-focal shadow, around

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the areas of interstitial changes of the "frosted glass" type. The patient was hospitalized at the Zangiata Infectious Diseases Clinical Hospital No. 1 with a diagnosis of:

Primary: U07.1 Coronavirus infection COVID-19 (confirmed), moderate course

Associated: Bilateral interstitial pneumonia (CT 1). Tuberculoma S3 of the left lung in the consolidation phase.

In the hospital, the patient underwent symptomatic and pathogenetic therapy (hydroxychloroquine sulfate, azithromycin, ascorbic acid (solution for injection), ambroxol hydrochloride and paracetamol) in accordance with the recommendations of clinical protocol No. 5 [13]. In a hospital setting, MSCT of the chest organs was not monitored. After improvement of the patient's condition, he was discharged under the supervision of a therapist at the place of residence. A month later, on July 16, 2020, a control MSCT was performed in a private clinic.

Based on MSCT data (pic.2), an increase in the focal shadow up to the size of a focal shadow with uneven contours in the upper part of the left lung and significant resorption of interstitial changes were found.

The patient was on 07/16/2020. sent to an oncologist to determine tumor markers. The results of oncomarkers are negative.

On the basis of a consultation with an oncologist, taking into account the results of oncomarkers and the presence of characteristic clinical and radiological changes for the tuberculosis process, it was recommended to undergo an examination by a phthisiatrician. On July 20, 2020, he was examined by a phthisiatrician of the district tuberculosis dispensary at the place of residence on an outpatient basis.

Data from the clinical examination of the patient.

When examining a patient in a dispensary, no symptoms of intoxication were found. Complains of cough with difficulty in expectoration of sputum, severe night sweats and, during exercise, a feeling of tightness in the chest.

General condition satisfactory symptoms. On examination, the skin is of normal color, dry, clean. Peripheral lymph nodes are not enlarged. Pulse 76 per minute, rhythmic. Saturation - 98%. AKV, 130/90 mm. Heart sounds are clear. There are no noises. Respiration rate 18 per minute. In the upper sections, against the background of weakened breathing, single dry rales are heard. The abdomen is soft, painless on palpation. The liver at the edge of the costal arch, painless, with a smooth edge. The spleen is not palpable. Pasternatsky's symptom is negative.

RESULTS OF A COMPREHENSIVE EXAMINATION:

During a stage examination in a tuberculosis dispensary, retrained into specialized clinics for providing outpatient care to coronovirus patients, the DNA of the SARS-CoV-2 virus was detected from a swab of the nasal and oropharyngeal mucosa by PCR:

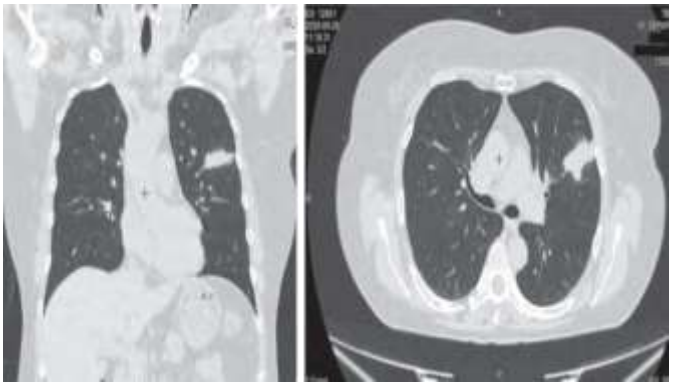
- 13.06.2020 (5th day of illness) - negative result,
- June 21, 2020 (13th day) of illness) - a positive result,
- 20.07.2020 (42nd day of illness) - a negative result.

According to laboratory studies, there were no abnormalities in the general blood test. In a biochemical blood test, the level of total bilirubin was normal (29.9 μmol/l), but increased unbound bilirubin (6.3 μmol/l), elevated cholesterol (7.09 mmol/l) attracted attention. The rest of the parameters were within the normal range. Bacterioscopic examinations of sputum by the Ziel-Nilson method (dated June 13-14, 2020, July 24-25, 2020) MBT were not detected. On 07/25/2020, when examining sputum using the GeneXpert method, MBT DNA was not detected.

On MSCT of the chest organs dated July 16, 2020, the presence of a focal shadow with uneven contours in the upper part of the left lung was determined.

In order to clarify the tuberculosis process on 28.07.2020. Diaskintest was performed, which gave a positive result and confirmed the presence of an active tuberculosis infection.

Considering the clinical, laboratory and radiological data, the patient was diagnosed with Tuberculoma of the upper lobe of S3 of the left lung in the infiltration phase, VK-.



pic 2. MSCT of the chest organs in dynamics

The patient was treated with 4 anti-TB drugs (Isoniazid, Rifampicin, Ethambutol, Pyrazinamide). During treatment, there was a negative trend. The patient developed shortness of breath, weakness, malaise. A repeat X-ray examination was performed. According to the MSCT examination of the chest organs (pic.3) dated August 26, 2020: in the 3rd segment of the left lung in the subpleural region, there

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is a significant increase in the focal shadow of an irregular shape.

A patient diagnosed with progressive tuberculoma was referred to the Department of Thoracic Surgery of the RIF and PIATM for surgical treatment. 09/15/2020 performed "Wide upper lobectomy on the left with systemic lymph node dissection". The results of a histological examination dated September 16, 2020 confirmed the tuberculous process in the lungs. The patient was diagnosed with: Condition after the operation of the left upper wide lobectomy (09/15/2020) for tuberculoma, diagnosed for the first time, MBT(-).

DISCUSSION:

Scientific research on the convergence of tuberculosis and Covid-19 is currently insufficient. Based on our experience, we have tried to show the consequences of a number of diagnostic problems when a patient has combined symptoms characteristic of Covid-19 and tuberculosis.

In addition, in the context of the Covid-19 pandemic, the need for epidemic measures has significantly reduced the possibility of screening for tuberculosis infection. This situation has led to the deterioration of national programs to support TB patients. According to WHO, in countries with a high incidence of tuberculosis, due to the late detection of the disease, the incidence rate has decreased against the background of an expected increase in the number of deaths from it. Some researchers suggest endogenous reactivation of tuberculosis infection and a more severe course of COVID-19 in patients with tuberculosis due to the development of immunosuppression.

CONCLUSION

Today, the entire world community is faced with the spread of the Covid-19 infection, which has exacerbated the problems that existed before the pandemic in all areas, including the tuberculosis process, which still continues to threaten people's lives. Current scientific research suggests that the TB epidemic is likely to worsen as Covid-19 spreads. During the Covid-19 pandemic, it becomes necessary to apply the isolation regime, which leads to a disruption in the process of detecting tuberculosis, and there is also a risk of reactivation of both the tuberculosis process and in the presence of a latent tuberculosis infection, in addition, it is accompanied by a severe course of Covid-19 in patients with tuberculosis.

REFERENCE

1. Glaziou P. Projected impact of the COVID-19 pandemic on global TB mortality in 2020. medRxiv and bioRxiv. DOI: 10.1101/2020.04.28.20079582 3. Guidelines for the prevention and control of tuberculosis infection. – Geneva: WHO (2019) 265.
2. WHO summary recommendations for the treatment of drug-resistant tuberculosis. - 2019. - 96 p. ISBN 978-92-4-155052-9.
3. Stochino S., Villa S., Zucchi P., Parravicini P., Gori A., Raviglione M.S. Clinical characteristics of co-infection with COVID-19 and active tuberculosis in the Italian reference hospital. Eur Respir J. 2020;56(1):2001708. doi: 10.1183/13993003.01708-2020.
4. Starshinova A.A., Dovgalyk I., Malkova A.M., Zinchenko Yu.S., Pavlova M.V., Belyaeva E., Basantsova N.Yu., Nazarenko M., Kudlay D.A., Yablonsky P. Recombinant tuberculosis allergen (Diaskintest®) in tuberculosis diagnosis in Russia (meta-analysis). International Journal of Mycobacteriology. 2020. V. 9. No. 4. S. 335-346.
5. World Health Organization. Global Tuberculosis Report 2018 - Geneva: WHO (2018) 270.
6. Guglielmetti L, Veziris N, Aubry A, Brossier F, Bernard C, Sougakoff W, Jarlier V, Robert J. Risk factors for extensive drug resistance in cases of multidrug-resistant tuberculosis: a case study. Int Jay Tuber. and pulmonary dysplasia. 2018; 22(1):54–59. DOI: 10.5588/ijtld.17.0387.
7. World Health Organization. Global Tuberculosis Report 2017. - Geneva: WHO, 2017. - 250 p.
8. Al-Omari A., Alhukbani V.N., Zaidi Z.R.A., Al-Subaye F.M., Alaud M., Hindi A.M., Abogosh K.A. and others. Clinical characteristics of non-ICU patients with COVID-19 in Saudi Arabia: a descriptive cross-sectional study. Journal of Infections and Public Health. 2020; 1876-0341. doi.org/10.1016/j. gif. 2020.09.003
9. Cantini F, Niccoli L, Matarrese D, Nicastri E, Stobbione P, Goletti D. Baricitinib therapy for COVID-19: a safety and clinical impact pilot study. J infect. 2020. doi: 10.1016/j. General 2020.04.017
10. Hilda JN, Das S, Tripathi SP, Hanna LE The role of neutrophils in tuberculosis: a bird's eye view. innate immunity. 2020;26(4):240-247. doi: 10.1177/1753425919881176
11. Huang X, Wang Yi, Li X, Ren L, Zhao J, Hu Yu, Zhang L, Fang G, Xu J, Gu X, Cheng Z, Yu T, Xia J, Wei Y, Wu W, Xie X, Yin W, Li H, Liu M, Xiao Y, Gao H, Guo L, Xie J, Wang G, Jiang R, Gao Z, Jin Q, Wang J, Cao B. Clinical features of patients infected with 2019 novel

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coronavirus in Wuhan ., China. Lancet. 2020;395(10223):497-506. doi: 10.1016/S0140-6736(20)30183-5.
12. Fakihi F, Alharti A, Noor A, Balshi A, Balhamar A, Karakitsos D. COVID-19 in a patient with active tuberculosis: a rare case of RSS. Respiratory Medicine Case Reports 2020; 31: https://doi.org/10.1016/j.rmcr.2020.101146).
13. Interim guidelines "Prevention, diagnosis and treatment of a new coronavirus infection (COVID-19)" (version 6 of 04/24/2020).