The Effect of Covid 19 on Tbc Patient Visits

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Pulmonary tuberculosis is a disease that is of concern to the world, especially Indonesia which is in the third-highest rank after India and China. Some studies have reported that patients living with tuberculosis and who are undergoing anti-tuberculosis drug therapy have a significant impact on their quality of life. TB patients who are undergoing treatment, both obedient and non-compliant can experience a decrease in various physical, social, psychological, and environmental functions which will have an impact on decreasing quality of life. However, since 2019, there has been a Covid-19 pandemic which is highly contagious and can cause severe illness, causing people to be afraid to come to health facilities. Because people are afraid to come to health facilities, it is feared that there will be an explosion of TB disease because of the risk of dropping out of drugs which causes an increase in the death rate due to TB. In addition, without treatment for TB patients, it can cause the spread of TB disease to become more widespread. So if a TB patient suffers from Covid-19, it can make his illness worse. During the COVID-19 pandemic, WHO estimates that there will be a 25% reduction in TB case detection.

Keywords: Pulmonary Tuberculosis, Covid-19, Patient Visits
INTRODUCTION

This research is caused by a curiosity about patients receiving treatment for TB during the COVID19 pandemic, whether there is a decrease or is it still the same as the previous year before the COVID19 pandemic. The existence of the COVID19 pandemic has made people afraid to come to health facilities, especially for TB patients, which is a contagious disease, long treatment and causes many deaths.

It is estimated that a third of the world's population has been infected by Mycobacterium Tuberculosis (TB), TB is a disease that has become a global concern with various control efforts. WHO data in 2018 showed that in 2016 there were 10.4 million cases of pulmonary TB in the world, 56% of cases of pulmonary TB were in India, Indonesia, China, the Philippines, and Pakistan. In 2016, around 1.3 million people in the world died due to pulmonary TB. Meanwhile, in Indonesia in 2016 there were 298,000 cases of pulmonary TB and 156,000 cases of positive smear findings based on the results of the coverage of cases of pulmonary TB disease (WHO, 2018). Tuberculosis (TB) is still a burden of health problems in Indonesia today. At the same time, Indonesia is also facing an outbreak of coronavirus (Covid-19) and TB patients must be more vigilant. These two diseases are respiratory pandemics that are transmitted through droplets, affecting a wide age range such as the elderly and people with special health conditions such as those with chronic lung disorders, even in children. Some of the symptoms of TB such as cough, fever, and feeling weak are also experienced by COVID-19 patients, making us aware of how vulnerable they are if TB patients do not seek treatment, because their immune system and lung conditions are also more susceptible to infection (Kemenkes, 2020).

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One of the efforts to control tuberculosis is by treatment. The indicator used to evaluate tuberculosis treatment is the success rate of treatment (Success Rate). Success Rate is the number of all cured tuberculosis cases and complete treatment among all treated and reported tuberculosis cases. The success rate of this treatment describes the quality of tuberculosis treatment. Although the cure rate has reached, other treatment outcomes still need to be considered, including cases of death, failure, losing treatment (lost to follow-up), and not being evaluated (Dinkes, 2020).

A literature study on the measurement of quality of life conducted by Guo et al. obtained the results that tuberculosis substantially affects the quality of life of the sufferer, anti-tuberculosis therapy has a positive effect first, followed by the physical condition, and then the mental state of the tuberculosis patient. Another result obtained was that after the tuberculosis patient had finished treatment and was microbiologically declared cured, the quality of life of the tuberculosis patient was significantly worse than the healthy population. This is in line with the results of Rajeswari's research in India which stated that only 54% of patients with pulmonary TB who were declared cured microbiologically had happy mental status at the end of therapy. Although there was a significant improvement in the health status of pulmonary TB patients (less than 7% stated at the beginning of therapy to be more than 78% at the end of therapy) there was no change in social status (stigma) when compared between the beginning and the end of therapy (Tinartayu & Riyanto, 2015).

The duration of the tuberculosis healing process which takes at least 6 months can cause changes in the patient's health status. Physical and psychological changes can affect the quality of life of tuberculosis patients. TB patients who undergo treatment both obediently and non-compliantly can experience a decrease in various physical, social, psychological, and environmental functions which will have an impact on decreasing quality of life. In addition to the treatment aspects that are emphasized in TB management programs, social, psychological, and environmental aspects must also be developed so that the quality of life of TB patients can be improved (Linggani & Muflihatin, 2018).

Factors that allow people to be easily infected with pulmonary TB disease are residents who have a greater risk of getting pulmonary TB than others. Socio-economic status in the form of work, education, income, individual/household social class, and relationships in the community will affect access to health care, food security, living and working conditions, knowledge of health attitudes and behavior will affect the risk of contact with TB sufferers, exposure to high rates of Mycobacterium Tuberculosis, infection,
disease progression, delayed diagnosis, and adverse outcomes such as poor TB treatment outcomes, poor health outcomes, unexpected costs, and adverse social consequences (Sari et al., 2019).

Improving the quality of life is very important as treatment and is the key to healing TB patients. People with chronic diseases can survive for a long time even if they carry the burden of chronic disease or disability, so the quality of life must receive attention from health services (Linggani & Muflihatin, 2018).

Based on the results of Sari & Lismayanti's research (2017) on the quality of life of tuberculosis patients at PKM Tamansari, Tasikmalaya City, it was found that 58.70% of TB patients were categorized as the moderate quality of life and 41.30% TB patients were in the high quality of life category. According to the research of Hariadi et al. (2019) that most of the quality of life of TB sufferers in Selebar Subdistrict, Bengkulu City are of high quality both on a physical and mental scale and there is a significant relationship between family support and quality of life of TB sufferers in Selebar Subdistrict, Bengkulu City. Meanwhile, according to Marchiella (2018), there is a significant (meaning) correlation (correlation) between the level of compliance with the quality of life of pulmonary tuberculosis patients, with a strong correlation strength and a positive or unidirectional relationship.

Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). SARS-CoV-2 is a new type of coronavirus that has never been previously identified in humans. There are at least two types of coronavirus that are known to cause diseases that can cause severe symptoms such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). Common signs and symptoms of COVID-19 infection include symptoms of acute respiratory distress such as fever, cough, and shortness of breath. The incubation period (symptoms appear) is on average 5-6 days with the longest incubation period being 14 days. In severe cases of COVID-19, it can cause pneumonia, acute respiratory syndrome, kidney failure, and even death. On December 31, 2019, the WHO China Country Office reported a case of pneumonia of unknown etiology in the city of Wuhan, Hubei Province, China. On January 7, 2020, China identified the case as a new type of coronavirus. On January 30, 2020, WHO designated the incident as KKMMD/PHEIC, and on March 11, 2020, WHO had declared COVID-19 as a pandemic.

Concerning policies for controlling infectious disease outbreaks, Indonesia has Law Number 4 of 1984 concerning Outbreaks of Infectious Diseases, Government Regulation Number 40 of 1991 concerning Overcoming Outbreaks of Infectious Diseases, and Regulation of the Minister of Health Number 1501/Menkes/Per/X/2010 concerning Certain Types of Infectious Diseases That Can Cause Outbreaks and Countermeasures. For this reason, in the context of efforts to prevent the COVID-19
outbreak early, the Minister of Health has issued a Decree of the Minister of Health Number HK.01.07/MENKES/104/2020 concerning the Determination of Novel Coronavirus Infection (2019-nCoV Infection) as a Type of Disease That Can Cause Outbreaks and Efforts to Overcome it. The determination is based on the consideration that the Novel Coronavirus Infection (2019-nCoV infection) has been declared by WHO as KKMMD/PHEIC. In addition, the widespread of COVID-19 to various countries with the risk of spreading to Indonesia related to population mobility requires efforts to overcome the disease.

The increase in the number of cases took place quite quickly and spread to various countries in a short time. As of July 9, 2020, WHO reported 11,84,226 confirmed cases with 545,481 deaths worldwide (Case Fatality Rate/CFR 4.6%). Indonesia reported its first case on March 2, 2020. As of February 12, 2021, the number of confirmed patients according to the website covid19.go.id was 1,191,990 cases.

The number of cases and/or the number of deaths is increasing and has an impact on the political, economic, social, cultural, def and security aspects, as well as the welfare of the people in Indonesia, the Government of Indonesia has stipulated Presidential Decree No. 11 of 2020 concerning the Determination of the Coronavirus Disease 2019 Emergency COVID-19). The Presidential Decree stipulates that COVID-19 is a type of disease that causing a Public Health Emergency (KKM) and establishing the COVID-19 KKM in Indonesia, which must be carried out in response to the provisions of laws and regulations. In addition, considering that the spread of COVID-19 has an impact on increasing the number of victims and loss of property, expanding the coverage of the affected area, as well as having implications for broad socio-economic aspects in Indonesia, Presidential Decree No. COVID-19 as a National Disaster.

The handling of KKM is carried out through the implementation of a health quarantine both at the entrance and in the area. In implementing health quarantine in the region, after a fairly comprehensive study was conducted, Indonesia adopted a policy to implement Large-Scale Social Restrictions (PSBB), which in principle were implemented to suppress the spread of COVID-19 from expanding, based on epidemiological considerations, the magnitude of the threat, effectiveness, and resource support. The PSBB regulation is stipulated through Government Regulation Number 21 of 2020 concerning Large-Scale Social Restrictions in the Context of Accelerating the Handling of COVID-19, and technically it is described in the Regulation of the Minister of Health Number 9 of 2020 concerning Guidelines for Large-Scale Social Restrictions in the Context of Accelerating the Handling of COVID-19.
Until now, the COVID-19 situation at the global and national levels is still at very high risk. While vaccine development is still in progress, the world is faced with the reality of preparing to coexist with COVID-19. Therefore, guidelines are needed in efforts to prevent and control COVID-19 to guide for health workers to stay healthy, safe, and productive, and that all Indonesians receive services that meet standards. Guidelines for the prevention and control of COVID-19 are prepared based on WHO recommendations that are adapted to the development of the COVID-19 pandemic, and the provisions of applicable laws and regulations. Guidelines for Handling TB Disease during the COVID-19 pandemic are recent modeling indicates that if the COVID-19 pandemic resulted in a 25% decrease in TB case finding over 3 months – which is likely to occur based on the level of TB service interruptions occurring in different countries – there would be an increase in mortality of 13%, so the TB mortality rate returns to what it was 5 years ago. An additional 1.4 million deaths could occur between 2020 and 2025 from the COVID-19 pandemic (74).

The similarity of clinical symptom characteristics between COVID-19 and TB – such as cough, fever, and difficulty breathing – has an impact on the screening and evaluation of these two diseases. Both of these diseases attack mainly the lungs and the two biological agents are generally transmitted by close contact. People who are sick with TB and COVID-19 are expected to experience worse treatment outcomes, especially if TB treatment is stopped. In areas with TB transmission, health workers must always consider whether people who come with complaints of cough, fever, or difficulty breathing need to be tested for COVID-19 and TB. Even in someone who has been diagnosed with COVID-19 or TB, the possibility of co-infection should always be considered and tests should always be carried out if clinically indicated. Home treatment for all TB patients should be facilitated, including the provision of all-oral drug-resistant TB treatment, for both MDR TB and XDR TB.

The use of digital health technology needs to be intensified to support TB patients and TB programs to ensure improved communication, counseling, care, and information delivery. Appropriate planning and monitoring are essential to prevent disruption to the procurement and provision of drugs and TB diagnostic tools. As many countries prepare to share the use of existing molecular diagnostic tools for COVID-19 testing, current TB molecular diagnostic services must be maintained, and diagnostic equipment should not be removed from current TB laboratories in response to the need for COVID-19 screening.

Take advantage of existing TB contact tracing mechanisms to run COVID-19 contact tracing. Provide an adequate stock of drugs for TB Prevention Therapy (TPT) to minimize visits to health care facilities. Monitor the number of patients referred and the number who started TPT, yield of TB
investigation contact activities carried out. Follow up on all pending contact and TPT investigation results. Maintain TB molecular diagnostic services and do not move equipment from the TB laboratory to respond to the need for COVID-19 testing. In areas with TB transmission, always carry out COVID-19 and TB tests if clinically indicated:

1. Special care is required for the collection and transportation of sputum specimens and bronchoalveolar rinse fluids and when samples are received and opened in the laboratory.
2. Perform sputum collection in an open well-ventilated area, away from other people and if possible outdoors
3. Suggest collecting sputum at home by giving specific and detailed instructions as described in the previous item.

Monitor the number of requests for TB testing or the number of confirmed TB patients (TB notifications) to assess disruption to the TB program during the pandemic. Maintain thorough biological safety precautions; restart sputum collection in health care facilities.

Provide sufficient stock of anti-TB drugs (OAT) for patients to take home to ensure their availability until completion of treatment to reduce visits to health care facilities Establish alternative arrangements to reduce follow-up visits for TB in health care facilities. Use innovative communication technologies to continue to provide treatment support.

Monitor the use of digital technology to encourage medication adherence. Follow up if any TB treatment or care is delayed (e.g., visit MDR-TB patients who have not started treatment) Restart the delayed epidemiological survey.

METHODS

The study was conducted at the Dompet Duafa Hospital from 2019 to 2020 in the pulmonary polysection of the TB patient registration data, and data from all new patients seeking treatment at RDTDD during that period.

RESULTS AND DISCUSSIONS

Tabel 1. Number of patient visits for TB treatment

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<thead>
<tr>
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<td>February</td>
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<td>May</td>
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<tr>
<td>June</td>
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Table 1. Patients' visits to Pulmonary Polyclinic for TB treatment during COVID-19 pandemic.

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<th>Month</th>
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<td>TOTAL</td>
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<td>411</td>
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**Figure 1. Graph of patient visits for TB treatment**

From the data above, it was found that the number of patient visits who came for treatment at the Pulmonary Polyclinic decreased during the COVID-19 pandemic, which was 172 patients.

**CONCLUSIONS AND SUGGESTIONS**

1. According to WHO guidelines, the COVID-19 pandemic resulted in a 25% reduction in TB case finding.
2. From the results of patient visit data, there is a possibility of a reduction in patients suffering from tuberculosis.
3. The decrease in visits is thought to be due to the fear of patients seeking treatment at the hospital.
4. With the decrease, it is feared that the incidence of TB pain will increase.
5. It is feared that it will increase the death rate due to TB disease.

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