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Evaluation of Pulmonary Tuberculosis Treatment in Adult Patients at Poly of Pulmonary Diseases Army Hospital Pematangsiantar City

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ABSTRACT

Tuberculosis is an infectious disease caused by *Mycobacterium tuberculosis* and is a health problem that still needs serious attention from the government and all levels of society because it can cause death. This study aims to determine the rationale for the treatment of pulmonary tuberculosis in adult patients at the Lung Disease Polyclinic at the Siantar City Army Hospital in 2021 which refers to the National Guidelines for Tuberculosis Management of the Indonesian Ministry of Health and treatment standards from WHO. This research is a non-experimental type with a descriptive evaluative design with retrospective data collection. The study was conducted using the medical records of adult pulmonary tuberculosis patients at the outpatient installation at the Pematang Siantar City Army Hospital in 2021. The results showed that the most common cases of pulmonary tuberculosis in adult patients were male patients, namely 61.22%, the diagnosis was for each patient suspected of pulmonary tuberculosis, a chest X-ray examination and smear test were carried out, pulmonary tuberculosis was treated using two anti-tuberculosis drugs, namely OAT-kombipak and OAT-FDC, 1 case was found with a duration of administration of anti-kombipak anti-tuberculosis drugs that did not comply with standard treatment and patients who received treatment received a score recovery of 97.96% and patients who failed treatment by 2.04%.

Keywords:

Pulmonary Tuberculosis, Treatment Evaluation, Standard of Treatment.

1. INTRODUCTION

Pulmonary tuberculosis is an infectious disease caused by *Mycobacterium tuberculosis.* These germs can enter the human body through breathing air in the lungs or other organs, namely bones. oak, the kidneys can even attack the skin (Anonymous, 2003a). This disease is a health problem that still needs more attention from the government and from all levels of society because it can cause death where every year there are 583,000 new cases of tuberculosis with deaths due to pulmonary tuberculosis around 140,000. Pulmonary tuberculosis is the number one cause of death among communicable diseases in Indonesia. Pulmonary tuberculosis can affect anyone, but most people with pulmonary tuberculosis are in the productive age group (15-50 years);

Treatment of pulmonary tuberculosis needs to be carried out with a treatment evaluation which includes an overview of pulmonary tuberculosis cases, diagnostic measures of pulmonary tuberculosis. an overview of the drugs given, the side effects caused, the additional drugs given and the length of treatment in pulmonary tuberculosis therapy, because in cases of tuberculosis drug therapy is given in the long term and if the rationale for pulmonary tuberculosis therapy is not achieved it can increase transmission, accelerate resistance, the cure rate achieved is low, and can increase mortality. Pulmonary tuberculosis treatment is given for 6-9 months and can be extended based on clinical grounds and resistance tests. To achieve therapeutic success, treatment needs to be monitored for pulmonary tuberculosis patients and supervision of the use of anti-tuberculosis drugs, so that the death rate of patients caused by

pulmonary tuberculosis infection will decrease. Rationale of treatment is an important factor that plays a role in achieving therapeutic success and inhibiting the resistance factor of tuberculosis germs.

The role of pharmacists is very much needed in hospital pharmacy installations in monitoring drug use and in the process of evaluating treatment which will assist in monitoring and improving the quality of health services. Through monitoring the use of anti-tuberculosis drugs and evaluating the treatment of pulmonary tuberculosis, the rationale for pulmonary tuberculosis therapy can be identified. Rationality in the use of drugs will greatly determine the quality of health services provided to patients who receive therapy at the Lung Disease Polyclinic, Army Hospital, Pematang Siantar City.

Formulation of the problem

From the description can be formulated some of the problems below.

1. What is the description of pulmonary tuberculosis cases in adult patients at the Lung Disease Polyclinic at the Pematang Siantar City Army Hospital in 2021 which includes the number of cases, gender and comorbidities of pulmonary tuberculosis patients?
2. What is the diagnostic procedure for pulmonary tuberculosis in adult patients at the Pulmonary Disease Polyclinic at the Pematang Siantar City Army Hospital in 2021?
3. What is the pattern of treatment for pulmonary tuberculosis in adult patients at the Pulmonary Disease Polyclinic at the Pematang Siantar City Army Hospital in 2021?
4. How appropriate is the treatment of pulmonary tuberculosis in adult patients at the Pulmonary Disease Polyclinic at the Pematang Siantar City Army Hospital in 2021 with the standards of the Indonesian Ministry of Health's National Tuberculosis Control Guidelines and World Health Organization (WHO) recommendations?
5. What is the final outcome of pulmonary tuberculosis treatment in adult patients at the Pulmonary Disease Polyclinic at the Pematang Siantar City Army Hospital in 2021?

2. METHOD

Types and Research Design

Research on "Evaluation of Pulmonary Tuberculosis Treatment in Adult Patients at the Lung Disease Polyclinic at the Pematang Siantar City Army Hospital in 2021 is a type of non-experimental research with a retrospective evaluative descriptive design. This research is a non-experimental study because there is no treatment on test subjects. The design is non-experimental. descriptive research because this research only aims to conduct a descriptive exploration of the treatment that occurs. This research is retrospective in nature because the data used in this study were taken by searching previous documents, namely patient medical record sheet data.

The researcher only evaluated whether the treatment of pulmonary tuberculosis in adult patients at the Pulmonary Disease Polyclinic at the Siantar City Army Hospital was in accordance with the standards used, namely the National Guidelines for Tuberculosis Control of the Indonesian Ministry of Health and treatment standards from the World Health Organization (WHO).

3. RESULTS AND DISCUSSION

Gender Distribution of Pulmonary Tuberculosis Patients

Patients with a diagnosis of pulmonary tuberculosis who are undergoing treatment at the Pulmonary Disease Polyclinic at the Pematang Siantar City Army Hospital in 2021 are classified based on gender, the aim is to determine the frequency and percentage of male and female sex ratio so that it can be known whether gender has an influence on the occurrence of the disease pulmonary tuberculosis. Based on the results of tracing outpatient medical record data in pulmonary tuberculosis patients, data were obtained with a comparison of 30 men (61.22%) and 19 women (38.78%);

Associated Diseases in Pulmonary Tuberculosis Patients

Concomitant diseases that occur before a diagnosis of pulmonary tuberculosis is a history of the patient's disease, while co-morbidities that occur after clinical symptoms of pulmonary tuberculosis may also arise from side effects of anti-tuberculosis drug therapy.

Diagnosis of Pulmonary Tuberculosis

Pulmonary tuberculosis infection caused by Mycobacterium tuberculosis can be confirmed by laboratory tests such as AFB examination and X-ray examination of the lungs. This examination is used to establish a diagnosis of pulmonary tuberculosis which can then be used to guide treatment considerations.

Diagnosis of Pulmonary Tuberculosis in Adult Patients
Lung Tuberculosis AFB Examination in Adult Patients
BTA examination can be used directly to establish the diagnosis and ensure the type of treatment used, but sometimes several factors become obstacles to determine the success of the smear examination. Several factors that can affect the results of the BTA examination can come from the patient's own factors and germ factors which are difficult to detect. The main cause of the patient's factor is the patient has a non-productive cough or the patient cannot produce sputum. This situation causes the sputum cannot be obtained in large quantities so that in the BTA examination, tuberculosis germs cannot be detected.

Chest X-Ray Examination of Pulmonary Tuberculosis in Adult Patients
X-ray examination needs to be done to support the diagnosis of pulmonary tuberculosis. Positive x-rays show that the patient has active pulmonary tuberculosis, while negative x-rays show that there is no active tuberculosis.

Pulmonary Tuberculosis Treatment
Use of Anti-Tuberculosis Drugs
The anti-tuberculosis drugs used in the Army Hospital are primary anti-tuberculosis drugs, namely isoniazid, rifampicin, pyrazinamide, ethambutol and streptomycin. There are 2 types of treatment regimens, namely:
a. Anti Tuberculosis Drug-kombipak (OAT-Kombipak)
b. Anti-Tuberculosis Drugs-Fixed Dose Combination (OAT-FDC)

Use of Anti-Tuberculosis Drugs Based on Patient Category
Anti-tuberculosis drugs consist of 4 categories, namely category 1, category 2. category 3, and inserts, while OAT-FDC consists of 2 categories, namely category 1 and category 2 [1].

Conformity of Pulmonary Tuberculosis Treatment
Rational medicine is the correct use of drugs based on the criteria for the right indication, the right patient, the right drug, and the right dose (including the route and duration of administration).

Suitability of Types of Anti-Tuberculosis Drugs Based on Pulmonary Tuberculosis Treatment Standards.
Appropriate treatment of pulmonary tuberculosis is intended to prevent recurrence, prevent germ resistance, break the chain of transmission and achieve patient recovery. The anti-tuberculosis drugs used by the Army Hospital are primary antituberculosis drugs because these drugs have the highest effectiveness and lowest toxicity compared to secondary antituberculosis drugs. Anti-tuberculosis drugs are given in 3-4 drugs, namely a combination of isoniazid and rifampicin. pyrazinamide, and ethambutol because when given as a single drug it can cause resistance very quickly.

4. CONCLUSION

From the results of evaluating the treatment of pulmonary tuberculosis in adult patients at the Lung Disease Polyclinic at the Pematang Siantar City Army Hospital in 2021, the following conclusions were obtained.
1. The most common cases of pulmonary tuberculosis in adult patients were male patients, namely 61.22%.
2. Diagnostic measures for pulmonary tuberculosis in adult patients, that is, for each patient suspected of pulmonary tuberculosis, a chest X-ray examination and smear test are performed
3. Treatment of pulmonary tuberculosis uses two OATs, namely OAT-kombipak and OAT-FDC
4. One case was found with a duration of administration of OAT-kombipak that did not comply with standard treatment.
5. Patients who underwent treatment obtained a cure rate of 97.96% and patients who failed treatment were 2.04%.

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