

Differences of Clinical and Laboratory Presentation in Positive and Negative Acid Fast Bacilli Pulmonary Tuberculosis Patients

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Abstract

Background: Based on bacteria status, tuberculosis is classified into positive and negative acid fast bacilli. This study was conducted to determine the differences of clinical and laboratory presentation in positive and negative acid fast bacilli pulmonary tuberculosis patients.

Methods: This study was an observational analytic study with a cross-sectional approach which used 338 medical records of patients with pulmonary tuberculosis at Direct Observational Treatment Short-course (DOTS) clinic Dr. Hasan Sadikin General Hospital from January to December 2012. Data collected were clinical and laboratory presentation for analytic study. Data about comorbid were collected for descriptive data.

Results: From 338 medical records, 223 were medical records of patients with pulmonary tuberculosis and 105 medical records of patients with comorbid. Twenty (18.01%) comorbid were Human Immunodeficiency Virus (HIV). Acid fast bacilli negative was more (121, 51.9%) than acid fast bacilli positive (112, 48.1%). Differences of laboratory presentation were found in hemoglobin count ($p=0.037$), red blood cell count ($p=0.022$), and erythrocyte sedimentation rate ($p=0.006$) and not found in white blood cell count ($p=0.073$), thrombocyte count ($p=0.766$), serum glutamic oxaloacetic transaminase ($p=0.169$), and serum glutamic-pyruvic transaminase ($p=0.309$). Difference of clinical manifestation was not found in fever ($p=1$), cough ($p=0.608$), night sweats ($p=0.09$), dyspnea ($p=0.210$), and weight loss ($p=0.269$).

Conclusions: Differences between acid fast bacilli positive and negative are found in hemoglobin, red blood cell, and erythrocyte sedimentation rate laboratory examination. The highest comorbid of pulmonary tuberculosis patient is HIV. [AMJ.2016;3(2):286-91]

Keywords: Acid fast bacilli, clinical presentation, comorbid, laboratory presentation, tuberculosis

Introduction

The World Health Organization (WHO) reported in 2011 that there were more than 8.7 million new cases of tuberculosis, 75 % which occurred in Asia, including Indonesia. Increasing case and problem have made tuberculosis global emergencies since 1993. Tuberculosis is diagnosed by finding acid fast bacilli in sputum specimen and classified into positive and negative acid fast bacilli.¹ The amount of mycobacterium tuberculosis in pulmonary tuberculosis influences lesion condition. Wide lesion area gives worse signs and symptoms, including the clinical and laboratory presentation.²

In several region, sputum examination

could not be performed due to lack of facility or patient has a difficulty in generating sputum.^{1,3} Data about clinical and laboratory presentation can be used as predictive value when sputum examination is not performed. These data can help physician to determine diagnosis and give appropriate treatment to reduce progression and transmission of diseases. Another factor that influences the sputum examination is comorbid diseases. These data also help in as predictive value. Recently, Dr. Hasan Sadikin General Hospital, a central referral hospital in West Java, does not have data about the clinical and laboratory diagnosis of negative acid fast bacilli. This study was conducted to determine the differences of clinical and laboratory diagnosis in positive and negative acid fast

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