

RINGKASAN

Tuberkulosis Paru merupakan masalah Global, menurut laporan WHO setiap tahun 8,47 juta penduduk dunia terinfeksi TB paru, 2 juta meninggal. Di Indonesia jumlah penderita TB paru menduduki peringkat ketiga terbanyak di dunia. Tujuh puluh lima persen TB paru terjadi pada usia produktif (15 – 49 tahun), 60% adalah penduduk miskin.

Sejak tahun 1995 Indonesia mengadopsi strategi DOTS (*Directly Observed Treatment Short – course*) dengan panduan Obat Anti Tuberculosis (OAT) jangka pendek selama 6 bulan dan Pengawas Menelan Obat (PMO). Indikator keberhasilan pengobatan DOTS dinyatakan dengan konversi BTA sputum pada akhir pengobatan intensif lebih dari 80% dan angka kesembuhan pada akhir pengobatan lebih dari 85% dengan angka kesalahan laborat kurang dari 5 %.

Data penderita TB paru dari Dinas Kesehatan Kota Surabaya pada tahun 2000 angka konversi setelah pengobatan fase intensif 85%, angka kesembuhan 57,1%, dan pada tahun 2001 angka konversi setelah pengobatan fase intensif 51,9%, angka kesembuhan lebih dari 85%, sehingga rata-rata angka konversi penderita TB paru setelah pengobatan fase intensif di Wilayah Dinas Kesehatan Kota Surabaya masih di bawah standart yang ditetapkan.

Konversi sputum BTA penderita TB paru sangat ditentukan oleh faktor penderita TB paru, petugas kesehatan dan lingkungan penderita. Penelitian ini bertujuan untuk menganalisis pengaruh kepatuhan berobat, status gizi, asupan makanan yang seimbang, adanya penyakit penyerta, kebiasaan merokok, kebiasaan tidur, pengetahuan tentang penyakit TB paru, jumlah BTA dalam dahak serta peran keluarga sebagai pengawas menelan obat terhadap terjadinya gagal konversi setelah menjalani program pengobatan fase intensif di RSUD Dr. Soetomo Surabaya dan BP4 Karang Tembok Surabaya.

Rancangan penelitian ini menggunakan *Case Control Study*, sebagai kasus adalah penderita TB paru kategori I setelah pengobatan DOTS fase intensif tidak terjadi konversi BTA pada sputum penderita TB paru sejumlah 33 responden dan sebagai kontrol adalah penderita TB paru kategori I setelah pengobatan DOTS fase intensif terjadi konversi BTA pada sputum penderita TB paru sejumlah 33 responden. Pengumpulan data dilakukan wawancara dengan menggunakan kuesioner dan dianalisis secara diskriptif dan analisis regresi logistik ganda dengan tingkat signifikansi 0,05.

Hasil penelitian menunjukkan bahwa status gizi penderita, jenis makanan yang dikonsumsi dan penyakit penyerta merupakan faktor risiko terjadinya gagal konversi BTA sputum penderita TB paru setelah pengobatan DOTS fase intensif dengan $p < 0,05$. Penderita TB paru dengan status gizi kurus (BMI : 17 – 18,5) akan berisiko terjadi gagal konversi 8.861 kali lebih besar dari pada penderita TB paru dengan status gizi normal (BMI : > 18,5 – 25,0) dan penderita TB paru dengan status gizi kurus sekali (BMI < 17) akan berisiko terjadi gagal konversi

30.918 kali lebih besar dari pada penderita TB paru dengan status gizi normal (BMI : > 18,5 – 25,0). Penderita TB paru dengan jenis makanan kurang (2 – 3 jenis makanan) akan berisiko terjadi gagal konversi 11.184 kali lebih besar dari pada penderita TB paru dengan jenis makanan baik (5 jenis makanan). Penderita TB paru dengan penyakit penyerta (DM, Asma, Typhoid) akan berisiko terjadi gagal konversi 5.866 kali lebih besar dari pada penderita TB paru tidak ada penyakit penyerta.

Probabilitas gagal konversi sputum BTA pada penderita TB paru dengan status gizi kurus (BMI = 17.0 – 18.5), jenis makanan kurang (2 – 3 jenis makanan) dan adanya penyakit penyerta sebesar 53%. Sedangkan probabilitas gagal konversi pada penderita TB paru tanpa disertai status gizi kurus, jenis makanan kurang dan tidak adanya penyakit penyerta sebesar 42%.

Berdasarkan hasil penelitian di atas, peningkatan dan perbaikan status gizi dengan memberikan asupan makanan yang seimbang pada penderita TB paru yang sedang menjalani pengobatan DOTS merupakan faktor penentu keberhasilan konversi sputum BTA penderita TB paru. Deteksi dini pada penderita TB paru terhadap adanya penyakit penyerta merupakan salah satu upaya untuk mencegah bertambah beratnya penyakit yang dialami oleh penderita TB paru yang akan berdampak terjadinya gagal konversi..

SUMMARY

Pulmonary tuberculosis (PT) is a global problem. According to WHO reports, a total of 8.47 million world population are infected with pulmonary tuberculosis, 2 million of which died. In Indonesia, the total number of patients with pulmonary tuberculosis is the third largest in the world. Seventy-five percent of pulmonary tuberculosis occurs among patients in productive age (15 - 49 years), 60% of which are poor population.

Since 1995 Indonesia has adopted Pulmonary Tuberculosis DOTS (Directly Observed Treatment, short-course) strategy, with Anti Tuberculosis Drugs (*Obat Anti Tuberculosis*, OAT) short-term guidelines for 6 months and Directly Observed Treatment (PMO). The indicator of the success of DOTS treatment is expressed as the sputum acid-fast bacillus (BTA) conversion at the end of intensive treatment of more than 80%, recovery rate at the end of treatment of more than 85%, and the laboratory inaccuracy rate of less than 5%.

Data on TB patients from Health Office, Surabaya, in 2000 the conversion rate after intensive phase treatment was 85%, recovery rate 57.1%, and in 2001 the conversion rate after intensive phase treatment was 51.9% and recovery rate of more than 85%. It is apparent that the average conversion rate of pulmonary tuberculosis patients after intensive treatment in Surabaya remained below the standard.

The sputum BTA conversion among pulmonary tuberculosis patients depends largely on the factors of the patients, health care providers, and environment. This study was aimed to analyze the influence of compliance to treatment, nutritional status, balanced diet intake, presence of accompanying diseases, cigarette smoking, sleeping habit, knowledge on pulmonary tuberculosis, total sputum BTA, and the role of the family as PMO on the occurrence of conversion failure after undertaking intensive phase treatment program in Dr Soetomo Hospital Surabaya and BP4 Karang Tembok Surabaya.

This study used case control design. The case was TB patients category I, in whom no conversion in BTA sputum was not found, comprising 33 respondents; and the control was TB patients category I, in whom no conversion in BTA sputum was found, comprising 33 respondents. Data collection was carried out by interview and questionnaire, and analyzed descriptively Pulmonary Tuberculosis using multiple logistic regression analysis with significance level of 0.05.

Results showed that patients' nutritional status, type of diet consumed, and accompanying diseases are the risk factors affecting the failure of BTA sputum conversion in pulmonary tuberculosis patients after intensive phase DOT treatment with $p < 0.05$. pulmonary tuberculosis patients with low nutritional status (BMI: 17 - 18.5) had a risk of conversion failure 8.861 times higher than those with normal nutritional status (BMI: 18.5 - 25.0), and pulmonary tuberculosis patients with very low nutritional status (BMI: < 17) had a risk of conversion failure 30.918 times higher than those with normal nutritional status (BMI: 18.5 - 25.0). pulmonary tuberculosis patients with insufficient diet types (2 -3 types) had a risk of conversion failure 11.184 times higher than those with sufficient diet types (5 types). pulmonary

tuberculosis patients with accompanying diseases (DM, asthma, typhoid) had a risk of conversion failure 5.866 times higher than those without accompanying diseases.

The probability of BTA sputum conversion failure in pulmonary tuberculosis patients with low nutritional status (BMI = 17.0 - 18.5), insufficient diet types (2 - 3 types), and the presence of accompanying diseases was 53%. The probability of conversion failure in pulmonary tuberculosis patients without low nutritional status, insufficient diet types, and the presence of accompanying diseases was 42%.

Based on those results, the increase and improvement of nutritional status by providing balanced diet for pulmonary tuberculosis patients undergoing DOT treatment was a determinant factor in the success of BTA sputum conversion in those patients. Early detection in pulmonary tuberculosis patients for the presence of accompanying diseases is one effort to prevent the exacerbation of the disease that may lead to conversion failure.

**THE RISK FACTOR OF CONVERSION FAILURE IN
PULMONARY TUBERCULOSIS PATIENTS UNDERGOING INTENSIVE
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AND DISEASE PREVENTION AND CONTROL AGENCY (BP4) KARANG
TEMBOK SURABAYA**

ABSTRACT

The indicator of the success of DOTS treatment is expressed as the sputum BTA conversion at the end of intensive treatment of more than 80%, recovery rate at the end of treatment of more than 85%, and the laboratory inaccuracy rate of less than 5%. Data on TB patients from Health Office, Surabaya, showed that the average conversion rate of Pulmonary Tuberculosis patients after intensive treatment in Surabaya remained below the standard.

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This study used case control design. The case was TB patients category I, in whom no conversion in BTA sputum was not found after intensive phase DOTS treatment, and the control was TB patients category I, in whom no conversion in BTA sputum was found after intensive phase DOTS treatment. Total respondents was 66 individuals, with 1 : 1 proportion (33 : 33 respondents). Data collection was carried out by interview and questionnaire, and analyzed descriptively Pulmonary Tuberculosis using multiple logistic regression analysis with significance level of 0.05.

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The probability of BTA sputum conversion failure in pulmonary tuberculosis patients with low nutritional status (BMI = 17.0 - 18.5), insufficient diet types (2 - 3 types), and the presence of accompanying diseases was 53%. The probability of

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Based on those results, the increase and improvement of nutritional status by providing balanced diet for pulmonary tuberculosis patients undergoing DOT treatment was a determinant factor in the success of BTA sputum conversion in those patients. Early detection in pulmonary tuberculosis patients for the presence of accompanying diseases is one effort to prevent the exacerbation of the disease that may lead to conversion failure.

Keywords: *pulmonary TB, conversion failure, risk factors, intensive phase, treatment*