

ABSTRAK

KORELASI LAMA PENGGUNAAN OBAT ANTI TUBERUKULOSIS DENGAN KADAR UREUM, KREATININ DAN GFR PADA PENDERITA TUBERKULOSIS PARU DEWASA DI RS RESPIRA D. I. YOGYAKARTA

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Latar belakang: Secara global, tuberkulosis masih merupakan masalah kesehatan utama yang menjadi beban di negara-negara berkembang. Pada tahun 2010, prevalensi tuberkulosis di Indonesia mencapai 4,3% dengan angka kematian mencapai 41 per 100.000 penduduk. Walaupun berbagai usaha pencegahan dan pengobatan telah dilakukan, akan tetapi tingkat kematian akibat tuberkulosis dilaporkan masih cukup tinggi. Selain itu, lamanya durasi pemberian obat anti tuberkulosis dapat memberikan efek samping terhadap fungsi organ terkait yang dapat memperberat morbiditas dan mortalitas penyakit tuberkulosis. Sampai saat ini belum ada studi spesifik yang mengamati pengaruh pengobatan tuberkulosis terhadap fungsi ginjal.

Tujuan: Untuk melihat pengaruh lama pemberian obat anti tuberkulosis terhadap kadar ureum, kreatinin dan GFR.

Metode: Dilakukan studi longitudinal terhadap penderita tuberkulosis paru primer non komplikasi di RS Respira Yogyakarta melalui pengukuran kadar ureum dan kreatinin darah secara berkala setiap dua bulan selama masa pengobatan dengan obat anti tuberkulosis (OAT). Faktor perancu dalam studi ini adalah jenis kelamin, status gizi, riwayat merokok, kategori usia, riwayat penyakit dan dosis OAT. Penyajian data dilakukan dengan *trend analysis* dan *time series*.

Hasil: Karakteristik dasar sampel 62% adalah laki-laki; 36% berusia >40 tahun; 44% memiliki riwayat merokok; 34% memiliki status gizi *underweight* dan 14% memiliki riwayat hipertensi. Tren perubahan kadar rata rata kreatinin secara signifikan terjadi pada bulan ke-2 ($0,69 \pm 0,15$ mg/dl) dan kadar e-GFR pada bulan ke-2 ($100,80 \pm 26,29$ ml/min/ $1,73m^2$) & bulan ke-4 ($93,18 \pm 24,72$ ml/min/ $1,73m^2$).

Kesimpulan: Tidak terdapat korelasi antara kadar ureum, kreatinin dan GFR dengan lama penggunaan OAT selama 6 bulan. Perlu adanya pertimbangan klinis untuk melakukan monitoring fungsi ginjal selama pengobatan tuberkulosis.

Kata kunci: tuberkulosis, obat, ginjal

CORRELATION BETWEEN THE DURATION OF TUBERCULOSIS TREATMENT AND THE LEVEL OF UREA, CREATININE AND GFR ON THE ADULT PATIENTS IN RESPIRA HOSPITAL, YOGYAKARTA

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ABSTRACT

Background: Globally, tuberculosis is still considered as the burden disease to many developing countries. In 2010, tuberculosis prevalence in Indonesia is 4,3% with mortality rate 41 per 100.000 population. Even though the effort for early prevention and treatment for tuberculosis had been implemented widely, the mortality rate is still raising. In addition, the long duration of tuberculosis treatment is a potential factor for the morbidity and mortality. In contrary, there is still no specific current research to observe the association of tuberculosis drug and kidney function.

Objective: To observe the effect of duration in tuberculosis therapy course to the level of urea, creatinine and GFR

Method: A longitudinal study was conducted to the selected and informed patients during the therapy course in Respira Hospital, Yogyakarta. Every two month a regular blood testing was conducted with additional examination on urea and creatinine level. Lifestyle factor included was smoking. Another confounding factors considered were the drug dosage, body mass index and past illness.

Results: Baseline characteristics were found on the sample: 62% were male; 36% were >40 years old; 44% were smoker; 34% were underweight and 14% had hypertension respectively. Significant trend analysis result was shown on the mean of creatinine on the second month ($0,69 \pm 0,15$ mg/dl). The e-GFR mean were proven significant on the second ($100,80 \pm 26,29$ ml/min/ $1,73m^2$) and fourth month ($93,18 \pm 24,72$ ml/min/ $1,73m^2$) of tuberculosis treatment.

Conclusion: There is no significant correlation between the duration of tuberculosis treatment and the level of urea, creatinine and GFR. It is important in the future to develop clinical guideline and monitoring for the renal function during the therapy.

Keywords: tuberculosis, drug, kidney