

EFFECT OF ANTITUBERCULOSIS ON LEVELS OF URIC ACID IN BLOOD IN PATIENTS TUBERCULOSIS

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ABSTRACT

Background: Tuberculosis ranks as the second leading cause of death after stroke in Indonesia. Indonesia ranks as the second tuberculosis incidence. Treatment of tuberculosis (TB) takes six to nine months and sometimes longer. That can cause side effects. Hyperuricemia is one of side effects antituberculosis. Hyperurecemia is caused by pyrazinamide and ethambutol.

Objective: This research was aimed to investigate increased levels of uric acid in the blood

Method: This study was prospective analytic research with cross sectional study design. This study was conducted at Pulmonary Respira Special Hospital Yogyakarta and Puskesmas Adiwerna. Patients who were diagnosed new tuberculosis were selected for the study. Informed consent was obtained, collecting data on age, sex, education level, smoking status. Blood was with to check the uric acid levels at before therapy, 2nd month, and 4th month. And conducted 24-hr recall interviews at before therapy, 2nd month, and 4th month.

Results: There is no significant association between age, sex, education level, smoking status, doses of antituberculosis with level of uric acid in blood at before therapy, 2nd month, and 4th month. And there is no correlation between variation of nutrient intake (protein, fat, dietary fiber, water, fructose, purin, vitamin C, vitamin B12, and folic acid) with level of uric acid in blood at before therapy, 2nd month, and 4th month. There was significant difference in level uric acid ($P > 0,5$) of patients at before therapy and at 2nd month, the mean level of uric acid were significantly high when at 2nd month compared before therapy. Uric acid levels in blood increased in the 2nd month. There was significant difference in level uric acid ($P > 0,5$) of patients at 2nd mounths and at 4st months, the mean level of uric acid were significantly high when at 2nd month compared 4st month

Conclusion: Anti-tuberculosis can increase uric acid levels in the blood at 2nd month. And Level of uric acid in blood will decrease return at 4th month.

Keywords: Antituberculosis, Pyrazinamide, Ethambutol, Uric Acid

PENGARUH ANTITUBERKULOSIS TERHADAP KADAR ASAM URAT DALAM DARAH PASIEN TUBERKULOSIS

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ABSTRAK

Latar belakang: Tuberkulosis merupakan penyakit penyebab kematian kedua di Indonesia setelah stroke dan Indonesia menempati peringkat ke-2 insidensi tuberkulosis di dunia. Pengobatan tuberkulosis paling tidak dilakukan 6 bulan, dapat memunculkan berbagai efek samping. Salah satunya adalah hiperuresemia yang disebabkan pirazinamid dan etambutol.

Tujuan: Tujuan dari penelitian ini adalah untuk melihat peningkatan kadar asam urat dalam darah pasien karena pemberian antituberkulosis.

Metode: Penelitian ini merupakan jenis penelitian prospektif analitik dengan disain penelitian *cross sectional*. Penelitian dilakukan pada RKP Respira Yogyakarta dan Puskesmas Adiwerna. Pasien baru yang didignosa tuberkulosis yang telah menyetujui *informed consent* dikumpulkan data mengenai umur, jenis kelamin pendidikan, dan status merokok. Kemudian diambil darahnya untuk diperiksa kadar asam urat dalam darahnya pada bulan ke-0, ke-2, dan ke-4 pengobatan. Dan dilakukan wawancara dengan recall 24 jam pada waktu yang sama untuk mengetahui asupan makanan

Hasil: Tidak ada hubungan yang signifikan antara usia, jenis kelamin, tingkat pendidikan, status merokok dan dosis antituberkulosis yang diterima pasien terhadap kadar asam urat dalam darah pasien. Dan tidak ada korelasi antar variasi nutrisi (protein, lemak, serat, air, fruktosa, purin, vitamin C, vitamin B12, dan asam folat) yang diterima pasien terhadap kadar asam urat dalam darah. Ada peningkatan yang signifikan kadar asam urat dalam darah pasien sebelum terapi dengan setelah 2 bulan terapi. Dan terjadi penurunan yang signifikan antara 2 bulan bulan terapi dengan 4 bulan terapi.

Kesimpulan: Antituberkulosis dapat meningkatkan kadar asam urat dalam darah pasien pada bulan ke-2 pengobatan. Dan akan menurun kembali pada bulan ke-4 pengobatan.

Keywords: Antituberkulosis, Pirazinamid, Etambutol, Asam urat