

INTISARI

FIRDAUSI, N., 2017, PENGUKURAN KADAR ISONIAZID DALAM PLASMA DARAH PASIEN TBC DI BEBERAPA PUSKESMAS KABUPATEN X, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Isoniazid adalah obat tuberkulosis yang paling poten dalam hal membunuh bakteri *Mycobacterium tuberculosis*. Terapi dengan INH selama 6-12 bulan digunakan sebagai rejimen standar dalam pengobatan tuberkulosis. Penggunaan yang lama dapat menimbulkan resistensi bakteri terhadap INH, sehingga penanganan tuberkulosis semakin sulit. Isoniazid secara *in vivo* akan mencapai kadar plasma puncak dalam 1-2 jam sesudah pemberian dosis peroral 300 mg menghasilkan konsentrasi plasma puncak 3-5 µg/ml. Penelitian ini bertujuan untuk mengukur kadar Isoniazid dalam plasma darah pasien tuberkulosis di beberapa Puskesmas di Kabupaten X.

Dalam penelitian ini dilakukan pengukuran kadar INH dalam plasma darah pasien tuberkulosis dengan Kromatografi Cair Kinerja Tinggi(KCKT) metode fase terbalik menggunakan kolom Shimpack C₁₈ dan sistem elusi isokratik, fase gerak yang digunakan Kalium Dihidrogen Fosfat 15 mmol pH 6,2-asetonitril (99:1) dengan laju alir 1,0 ml/menit. Larutan baku INH dideteksi pada panjang gelombang 230 nm.

Hasil pengukuran Kadar INH dalam plasma darah pasien tuberkulosis setelah 2 jam minum obat adalah tidak semua sampel mencapai kadar puncak yang dibutuhkan berdasar teori, dengan rata-rata kadar INH dalam plasma darah pasien TBC adalah 6,221 µg/ml. Hasil analisa statistik menunjukkan bahwa terdapat perbedaan antara kadar INH target dengan kadar INH terukur pada plasma pasien TBC.

Kata kunci: Isoniazid, Plasma, Tuberkulosis, KCKT

ABSTRACT

FIRDAUSI, N., 2017, MEASUREMENT OF ISONIAZID LEVELS IN BLOOD PLASMA ON THE EFICATION OF TBC PATIENS IN SOME OF PUSKEMAS X CITY, ESSAY, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Isoniazid is the most potent tuberculosis drug in terms of killing the bacterium *Mycobacterium tuberculosis*. Treatment with INH for 6-12 months was used as a standard regimen in the treatment of tuberculosis. Prolonged use may lead to bacterial resistance to INH, making handling of tuberculosis more difficult. Isoniazid in vivo will reach peak plasma levels within 1-2 hours after administering 300 mg peroral doses resulting in peak plasma concentrations of 3-5 µg / ml. This study aims to measure Isoniazid levels in blood plasma of tuberculosis patients in some Puskesmas in Kabupaten X.

In this research, measurement levels of INH in blood plasma tuberculosis patients by High Performance Liquid Chromatography (HPLC) method using a reversed phase Shimpack C₁₈ colomn and an isocratic solvent programme, mobile phase was the mixture of Kalium Dihidrogen Fosfat 15 mmol pH 6,2 : acetonitril (99:1) with a flow rate 1,0 ml/min and measurement were done at a wavelength of 230 nm.

The measurement of INH levels in the blood plasma of tuberculosis patients after 2 hours of taking the drug was that not all samples reached the required peak level by theory, with mean INH levels in blood plasma of TB patients was 6,221 µg / ml. The results of statistical analysis showed that there was a difference between target INH levels and measured INH levels in plasma of TB patients.

Keywords: Isoniazid, Plasma, Tuberculosis, HPLC