

## ABSTRAK

**Latar Belakang:** Pengobatan tuberkulosis saat ini menggunakan Obat Anti Tuberkulosis (OAT). Namun jika digunakan dalam jangka waktu lama obat ini memiliki efek samping yaitu menyebabkan gangguan pada ginjal. Untuk mendeteksi gangguan ginjal tersebut diperlukan tes fungsi ginjal yaitu pemeriksaan kadar asam urat. Pemeriksaan ini menggunakan metode enzimatis kalorimetri (uricase). Bahan pemeriksaan yang digunakan berupa serum, dimana serum tidak boleh lipemik karena dapat mengganggu pembacaan hasil pada alat spektrofotometer. Serum lipemik mengakibatkan nilai absorbansi tinggi sehingga dapat terjadi penyimpangan hukum Lambert beer. Penyimpangan ini berupa hubungan absorbansi tidak linear lagi. Salah satu penanganan serum lipemik adalah dengan perlakuan pengenceran. Pengenceran dilakukan dengan penambahan NaCl fisiologis perbandingan 1:1 dengan harapan dapat menurunkan tingkat kekeruhan dan memperkecil tingkat kesalahan selama pengukuran sampel.

**Tujuan Penelitian:** Mengetahui adanya perbedaan kadar asam urat pada serum pasien tuberkulosis dengan dan tanpa pengenceran.

**Metode Penelitian:** Jenis Penelitian adalah *Pre Experimental Design (non design)*. dengan desain penelitian *One-Group Pretest-Posttest design*. Sampel yang digunakan sebanyak 30 serum. Data yang diperoleh kemudian dianalisis secara deskriptif dan uji *Wilcoxon* jika data tidak berdistribusi normal.

**Hasil Penelitian:** Hasil penelitian menunjukkan bahwa rerata hasil pemeriksaan asam urat serum pasien tuberkulosis dengan dan tanpa pengenceran yaitu 10,72 mg/dl dan 9,20 mg/dl dengan selisih rerata kadar 1,52 mg/dl serta persentase 16,52 %. Hasil ini dianalisis secara deskriptif menunjukkan peningkatan rerata kadar asam urat dengan pengenceran Hasil uji *Wilcoxon* menunjukkan  $p(0,004) < 0,05$ .

**Kesimpulan:** Ada perbedaan kadar asam urat pada serum pasien tuberkulosis dengan dan tanpa pengenceran.

**Kata Kunci:** Kadar asam urat, serum pasien tuberkulosis, pengenceran

## ABSTRACT

**Background:** The current treatment for tuberculosis uses Anti Tuberculosis Drugs (OAT). However, if used for a long time this drug has side effects, namely causing kidney problems. To detect these disorders, kidney function tests are needed, namely checking uric acid levels. This examination uses the enzymatic calorimetric method (uricase). The examination material used is in the form of serum, where the serum should not be lipemic because it can interfere with reading the results on the spectrophotometer. Lipemic serum results in high absorbance values so that Lambert beer law deviations can occur. This deviation is in the form of a non-linear absorbance relationship. One of the treatments for lipemic serum is dilution treatment. The dilution was carried out with the addition of NaCL comparing the ratio of 1:1 in the hope of reducing the level of turbidity and reducing the error rate during sample measurement.

**Research Objective:** To determine differences in uric acid levels in serum of tuberculosis patients with and without dilution.

**Research Methods:** The type of research is Pre Experimental Design (non design). with the research design of One-Group Pretest-Posttest design. The samples used were 30 serum. The data obtained were then analyzed descriptively and Wilcox test if the data were not normally distributed.

**Research Results:** The results showed that the average results of serum uric acid examination of tuberculosis patients and without dilution were 10.72 mg/dl and 9.20 mg/dl with a difference in mean levels of 1.52 mg/dl and a percentage of 16.52%. These results were analyzed descriptively showing an increase in the mean uric acid with dilution Wilcoxon test results showed  $p(0.004) < 0.05$ .

**Conclusion:** There are differences in uric acid levels in the serum of tuberculosis patients with and without dilution.

**Keywords:** uric acid level, serum of tuberculosis patients, dilution