

ABSTRACT

Background : Serum storage of tuberculosis patients is carried out due to additional examination requests. It is often found that patients with tuberculosis have an increase in the enzyme Aspartate Aminotransferase (AST) due to the side effects of taking Anti-Tuberculosis Drugs (OAT).

Objective: To determine whether serum of tuberculosis patients stored at 2-8°C can be used for examination of AST enzyme activity?

Methods: This type of research was a pre-experimental design with a one group pretest posttest research design. The sample used was serum of tuberculosis patients which was divided into 2 groups, namely the immediate examination treatment group and the treatment stored 4 hours at a temperature of 2-8°C. The data used in this study were primary data. The examination data were analyzed using SPS 25.0 for windows.

Results: The results of this study showed a difference in the mean results of the AST enzyme activity examination which was examined immediately was 25.725 U/L and at 4 hours storage at 2-8 ° C was 25.825 U/L. There was an increase in AST enzyme activity with 4 hours of storage at 2-8°C. Statistical analysis of the Wilcoxon test showed $p (0.297) > 0.05$, which means there was no difference in AST enzyme activity in the serum of tuberculosis patients examined immediately and stored for 4 hours at 2-8°C. The difference was not significant and not clinically meaningful.

Conclusion: Serum of tuberculosis patients stored for 4 hours at 2 -8°C can be used for testing.

Keywords: *Aspartate Aminotransferase*, serum storage, temperature 2-8°C

ABSTRAK

Latar Belakang : Penyimpanan serum penderita tuberkulosis dilakukan karena adanya permintaan tambahan pemeriksaan. Sering dijumpai penderita tuberkulosis mengalami peningkatan enzim *Aspartate Aminotransferase* (AST) karena efek samping dari pengonsumsi Obat Anti Tuberkulosis (OAT).

Tujuan: Untuk mengetahui apakah serum pasien tuberkulosis yang disimpan pada suhu 2-8°C dapat digunakan untuk pemeriksaan aktivitas enzim AST?

Metode: Jenis Penelitian ini adalah pre – eksperimental *design* dengan desain penelitian nya *one group pretest posttest*. Sampel yang digunakan berupa serum penderita tuberkulosis yang dibagi menjadi 2 kelompok yaitu kelompok perlakuan pemeriksaan segera dan perlakuan disimpan 4 jam pada suhu 2-8°C. Data yang digunakan dalam penelitian ini adalah data primer. Data hasil pemeriksaan dianalisis menggunakan SPS 25.0 *for windows*.

Hasil: Hasil penelitian ini menunjukkan adanya perbedaan rerata hasil pemeriksaan aktivitas enzim AST yang diperiksa segera adalah 25,725 U/L dan pada penyimpanan 4 jam suhu 2-8°C adalah 25,825 U/L. Terjadi peningkatan pada aktivitas enzim AST dengan lama penyimpanan 4 jam suhu 2-8°C. Analisa statistik uji *wilcoxon* menunjukkan $p (0.297) > 0,05$ yang artinya tidak ada perbedaan aktivitas enzim AST pada serum penderita tuberkulosis yang diperiksa segera dan disimpan 4 jam suhu 2-8°C. Perbedaan tidak signifikan dan tidak bermakna secara klinis.

Kesimpulan: Serum penderita tuberkulosis yang disimpan 4 jam pada suhu 2 -8°C dapat digunakan untuk tamnahan pemeriksaan.

Kata kunci: *Aspartae Aminotransferase* , penyimpanan serum, suhu 2-8°C