

PERBANDINGAN NILAI HASIL TES GLUKOSA DARAH MENGGUNAKAN
POINT-OF-CARE TESTING (POCT) ACCU CHEK DAN METODE
HEKSOKINASE PADA PASIEN HIPERURISEMIA DI RSUP DR.
SARDJITO

INTISARI

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Latar Belakang : Pemeriksaan glukosa darah adalah pemeriksaan yang sering dilakukan di laboratorium. Pada beberapa kondisi pemeriksaan glukosa harus dilakukan dengan segera. Pengukuran glukosa yang dilakukan di laboratorium menggunakan metode enzimatis heksokinase, akan tetapi metode ini memerlukan waktu lama. Alternatif pemeriksaan glukosa darah menggunakan *Point-of-care Testing (POCT)* memerlukan waktu yang lebih cepat, akan tetapi terdapat kondisi yang dapat mempengaruhi hasil pemeriksaan, seperti hiperurisemia.

Tujuan : Penelitian ini bertujuan untuk mengetahui kesesuaian dan perbedaan nilai glukosa darah menggunakan POCT Accu Chek dan metode heksokinase pada pasien hiperurisemia

Metode : Penelitian ini membandingkan hasil pemeriksaan glukosa darah menggunakan POCT Accu Chek dan metode heksokinase pada pasien hiperurisemia. Sampel yang digunakan adalah darah utuh untuk POCT Accu Chek dan plasma darah untuk metode heksokinase. Dilakukan analisis korelasi *Spearman*, *Bland-Altman*, dan *Wilcoxon Sign Rank*.

Hasil : Hasil uji korelasi *Spearman* menunjukkan adanya hubungan yang sangat kuat antara nilai glukosa POCT Accu Chek dan metode heksokinase ($p=0,00$; $r=0,979$). Analisis *Bland-Altman* menunjukkan nilai kesesuaian kedua metode buruk ($d=3,25$ mg/dL; $sb=10,05$; $LoA=-16,36-22,96$). Hasil uji *Wilcoxon Sign Rank* menunjukkan adanya perbedaan bermakna antara nilai glukosa POCT Accu Chek dan metode heksokinase pada pasien hiperurisemia di RSUP Dr. Sardjito ($p=0,026$).

Kesimpulan : Terdapat perbedaan bermakna antara nilai glukosa darah POCT Accu Chek dengan metode heksokinase pada pasien hiperurisemia di RSUP Dr. Sardjito dan terdapat nilai kesesuaian yang buruk diantara keduanya.

Kata Kunci : glukosa darah; POCT Accu Chek; metode heksokinase; hiperurisemia

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COMPARISON OF THE VALUE OF BLOOD GLUCOSE TEST RESULTS USING POINT-OF-CARE TESTING (POCT) ACCU CHEK AND HEXOKINASE METHOD ON HYPERURICEMIA PATIENTS IN RSUP DR. SARDJITO

ABSTRACT

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Background : Blood glucose testing is an examination that mostly done in a laboratory. In several conditions, blood glucose measurement must be done immediately. In laboratory, blood glucose measurements using enzymatic hexokinase method done in relatively long time. Point-of-care Testing (POCT) is an alternative tool that can make blood glucose measurement become faster, however several conditions can affect results of tests, such as hyperuricemia.

Objective : This study aims to determine the agreement and the differences between the value of blood glucose measurement using POCT Accu Chek and hexokinase method in hyperuricemia patients.

Methods : This study compare the results of blood glucose measurement using POCT Accu Chek and hexokinase method in hyperuricemia patients. The sample used in this study is whole blood for POCT Accu Chek and blood plasma for hexokinase method. Analyses were done by Spearman correlation, Bland-Altman, and Wilcoxon Sign Rank

Results : Spearman correlation results showed very strong relationship between the blood glucose values POCT Accu Chek and hexokinase method ($p=0,00$; $r=0,979$). The Bland-Altman analysis showed a poor agreement of both method ($d=3,25$ mg/dL; $sb=10,05$; $LoA=-16,36-22,96$). The Wilcoxon Sign Rank test result showed a significant difference between the blood glucose values using POCT Accu Chek with hexokinase method on hyperuricemia patients in RSUP Dr. Sardjito ($p=0,026$).

Conclusion : There is a significant difference between the result of blood glucose measurements that using POCT Accu Chek and hexokinase method on hyperuricemia patients in RSUP Dr. Sardjito and there is a poor agreement between them.

Key Word : blood glucose; POCT Accu Chek; hexokinase method; hyperuricemia

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