

PENGARUH LAMA PENUNDAAN CENTRIFUGASI PLASMA HEPARIN TERHADAP KADAR KALIUM

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ABSTRAK

Latar belakang : Salah satu pemeriksaan laboratorium klinik adalah pemeriksaan kalium yang banyak di laboratorium menggunakan tabung vakum dengan antikoagulan heparin. Kadar kalium dalam plasma heparin harus segera dilakukan centrifugasi dan pemeriksaan dalam rentang 1 jam untuk mencegah penurunan kadar kalium dikarenakan semakin lama penundaan maka akan terjadi proses perubahan morfologi sel darah merah yang menyebabkan perkembangan bakteri dalam darah sehingga kalium akan diserap sebagai nutrisi bakteri, namun hal tersebut tidak diteliti apakah ada peningkatan aktivitas mikroba terhadap waktu penundaan selama penelitian.

Tujuan Penelitian : Mengetahui pengaruh lama penundaan centrifugasi plasma heparin terhadap hasil pemeriksaan kadar kalium

Metode Penelitian : Penelitian ini menggunakan sampel plasma heparin yang dibagi menjadi 3 kelompok berdasarkan lama waktu penundaan, yaitu segera diperiksa, ditunda 1 jam dan 2 jam. Data hasil pemeriksaan kadar kalium sebanyak 45 data. Data dianalisis secara deskriptif dan statistik, untuk analisis statistik menggunakan uji *Repeated Measures Anova*.

Hasil penelitian : Analisis deskriptif menunjukkan penurunan kadar kalium pada plasma heparin yang telah dilakukan penundaan pemeriksaan. Analisis statistik juga menunjukkan adanya perbedaan. Uji *Repeated Measured Anova* menunjukkan adanya perbedaan kadar kalium dalam plasma yang segera diperiksa, ditunda selama 1 jam dan 2 jam. Rata-rata perbedaan antara pemeriksaan kadar kalium segera diperiksa dengan ditunda selama 1 jam terjadi penurunan kadar sebesar 0,05 mmol/L. Sedangkan pemeriksaan kadar kalium segera diperiksa dengan ditunda selama 2 jam terjadi penurunan sebesar 0,42 mmol/L serta kadar kalium ditunda selama 1 jam dengan ditunda selama 2 jam terjadi penurunan sebesar 0,38 mmol/L.

Kesimpulan : Ada pengaruh lama penundaan centrifugasi plasma heparin terhadap kadar kalium. Semakin lama waktu penundaan maka kadar kalium semakin turun.

Kata Kunci : penundaan, plasma heparin, kalium

THE EFFECT OF DELAYED HEPARIN PLASMA CENTRIFUGATION ON POTASSIUM LEVELS

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ABSTRACT

Background : *One of the clinical laboratory tests is the laboratory examination of potassium using a vacuum tube with the anticoagulant heparin. The level of potassium in heparin plasma must be immediately carried out centrifugation and examination within a span of 1 hour to prevent a decrease in potassium levels because the longer the delay, a process of changes in the morphology of red blood cells will occur which causes the development of bacteria in the blood so that the potassium will be absorbed as bacterial nutrition, but it was not investigated whether there was an increase in microbial activity with respect to the time delay during the study.*

Research Objective : *To determine the effect of heparin plasma centrifugation delay on the results of potassium levels*

Research Methods: *This study used heparin plasma samples divided into 3 groups based on the length of time delay, namely immediately checked, delayed 1 hour and 2 hours. Data on the results of the examination of potassium levels were 45 data. Data were analyzed descriptively and statistically, for statistical analysis using the test Repeated Measures Anova.*

Results: *Descriptive analysis showed a decrease in potassium levels in heparin plasma which had been postponed. Statistical analysis also shows some differences. test Repeated Measured Anova showed that there was a difference in potassium level in plasma which was immediately checked, delayed for 1 hour and 2 hours. The average difference between the examination of potassium levels immediately checked with a delay for 1 hour, there was a decrease in levels of 0.05 mmol / L. While the examination of potassium levels was immediately checked with a delay for 2 hours, there was a decrease of 0.42 mmol / L and potassium levels were delayed for 1 hour with a delay of 2 hours there was a decrease of 0.38 mmol / L.*

Conclusion: *There was a long delayed effect of heparin plasma centrifugation on potassium levels. The longer the delayed, the lower the potassium level.*

Keywords: *delayed, plasma heparin, potassium*