THE EFFECT OF LONG DELAY OF CITRATE BLOOD AT A TEMPERATURE OF 20±1˚C ON THE EXAMINATION OF *ACTIVATED PARTIAL THROMBOPLASTIN TIME* (APTT)

Amri Nafitri, Roosmarinto[2], Budi Martono[3]
[1,2,3]Medical Analyst Poltekkes Kemenkes Yogyakarta
Ngadinegaran MJ III/62 Yogyakarta, 55141
Email : amrinafitri99@gmail.com

ABSTRACT

Background : Activated Partial Thromboplastin Time (APTT) examination is used to test blood clots through intrinsic and joint pathways. APTT examination with citrate and plasma blood samples should be checked immediately. Delay in citric blood specimens can contribute to 68% of pre-analytic errors. Delay of citrate blood before centrifugation occurs because the samples are obtained so much that it must take turns in centrifuging. In addition, the process of sending samples from the ward to a laboratory that requires transportation, so it must be postponed in centrifuging to get plasma citrate.

Objective : To determine the effect of delay of citrate blood at a temperature of 20± 1ºC on the value of Activated Partial Thromboplastin Time (APTT).

Method : Pre experimental design research with static group comparison design. The research sample was all citrate blood of the 6th semester DIII students of the Health Analyst Department of the Polytechnic of the Ministry of Health of the Republic of Indonesia totaling 17 samples. The sample was divided into two groups the control group and the treatment group. The control group was citric blood which was immediately centrifuged while the treatment group was citrate blood which was delayed for 1 hour and 2 hours at a temperature of 20±1ºC. Then measure the Activated Partial Thromboplastin Time (APTT) value. Data were analyzed descriptively and statistically using One-Way ANOVA.

Results: The mean APTT value in citrate blood was immediately checked 33,7 seconds and the average APTT value in citrate blood was delayed for 1 hour at a temperature of 20±1ºC 30, 6 seconds while the citric blood that was delayed for 2 hours at a temperature of 20±1ºC 27, 4 seconds. Based on these results, it can be seen that the longer the delay in citrate blood the Activated Partial Thromboplastin Time (APTT) value decreases.

Conclusion: There is a long delay effect of citrate blood at a temperature of 20±1ºC on the Activated Partial Thromboplastin Time (APTT) examination.

Keywords: Delay, Activated Partial Thromboplastin Time (APTT), citric blood.

PENGARUH LAMA PENUNDAAN DARAH SITRAT PADA SUHU 20±1˚C TERHADAP PEMERIKSAAN *ACTIVATED PARTIAL THROMBOPLASTIN TIME* (APTT)

Amri Nafitri, Roosmarinto[2], Budi Martono[3]
[1,2,3]Jurusan Analis Kesehatan Poltekkes Kemenkes Yogyakarta
Jl. Ngadinegaran MJ III/62 Yogyakarta, 55141
Email : amrinafitri99@gmail.com

ABSTRAK

Latar Belakang : Pemeriksaan *Activated Partial Thromboplastin Time* (APTT) digunakan untuk menguji pembekuan darah melalui jalur intrinsik dan jalur bersama. Pemeriksaan APTT dengan sampel darah sitrat dan plasma harus segera diperiksa. Adanya penundaan spesimen darah sitrat dapat menyumbang kesalahan pra analitik mencapai 68%. Penundaan darah sitrat sebelum disentrifugasi terjadi karena sampel yang didapatkan banyak sehingga harus bergiliran dalam mensentrifugasi. Selain itu, proses pengiriman sampel dari bangsal ke laboratorium yang membutuhkan transportasi sehingga harus dilakukan penundan dalam mensentrifugasi untuk mendapatkan plasma sitrat.
Tujuan : Mengetahui pengaruh lama penundaan darah sitrat pada suhu 20±1°C terhadap nilai *Activated Partial Thromboplastin Time* (APTT).
Metode : Penelitian *pre experimental design* dengan desain *static group comparison.* Sampel penelitian adalah darah sitrat seluruh Mahasiswa DIII Semester 6 Jurusan Analis Kesehatan Politeknik Kementerian Kesehatan Republik Indonesia sebanyak 17 sampel. Sampel dibagi menjadi dua kelompok yaitu kelompok kontrol dan kelompok perlakuan. Kelompok kontrol yaitu darah sitrat yang segera disentrifugasi sedangkan kelompok perlakuan yaitu darah sitrat yang ditunda selama 1 jam dan 2 jam pada suhu 20±1ºC. Kemudian dilakukan pengukuran nilai *Activated Partial Thromboplastin Time* (APTT). Data dianalisis secara deskriptif dan statistik menggunakan *One-Way ANOVA.*
Hasil : Rerata nilai APTT pada darah sitrat yang segera diperiksa 33, 7 detik dan rerata nilai APTT pada darah sitrat yang ditunda 1 jam pada suhu 20±1ºC 30, 6 detik sedangkan darah sitrat yang ditunda 2 jam pada suhu 20±1ºC 27, 4 detik. Berdasarkan hasil tersebut, dapat diketahui bahwa semakin lama penundaan darah sitrat maka nilai *Activated Partial Thromboplastin Time* (APTT) semakin menurun.
Kesimpulan : Ada pengaruh lama penundaan darah sitrat pada suhu 20±1°C terhadap pemeriksaan *Activated Partial Thromboplastin Time* (APTT).

Kata kunci : Penundaan, *Activated Partial Thromboplastin Time* (APTT), darah sitrat