

ABSTRACT

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Differences in the number of leukocytes in venous blood by damming for 50 seconds and 80 seconds

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Background: *the pre-analytical stage is one of the stages in sample examination. Tourniquet blocking is one of the pre-analytical stages that can affect the results of the leukocyte count examination. According to CLSI, the tourniquet should not be held for more than 1 minute. In the laboratory, it often takes too long to apply a tourniquet which is caused by several factors. In this study, researchers conducted research on differences in the number of leukocytes in venous blood with 50 seconds and 80 seconds of damming. The results of this study concluded that there was no difference in the number of leukocytes with 50 second and 80 second containment.*

Purpose: *Knowing the difference in the results of venous blood leukocyte counts with damming for 50 seconds and 80 seconds*

Methods: *This research is an analytic observational study with a cross-sectional approach using a total sampling technique. There were 32 subjects in this study who met the inclusion and exclusion criteria. Venous blood was dammed using a tourniquet for 50 seconds and 80 seconds, then collected in a K2EDTA tube, then the number of leukocytes was checked using a Hematology tool – Sysmex XP-100 Analyzer. Data from the measurement of the number of leukocytes obtained were then tested using the Paired Sample T-test.*

Results: *The average leukocyte count with 50 second containment was $7.34 \times 10^3/\mu\text{L}$ and the average leukocyte count with 80 second containment was $7.30 \times 10^3/\mu\text{L}$.*

Conclusion: *There is no difference in the results of examination of the leukocyte count of venous blood with damming for 50 seconds and 80 seconds with a value (sig 2 tailed) $0.211 > 0.05$.*

Suggestion: *80 second dam can still be used because it does not affect the results of the leukocyte examination*

Keywords: *Leukocytes, Dam, Venous blood*