

DIFFERENCE OF COUNTING NUMBER OF THROMBOCYTES BETWEEN CAPILLARY BLOOD IN MICROTAINER EDTA AND VENOUS BLOOD IN VACUTAINER EDTA

Joko Budiyo¹⁾, Galuh Seruyanti²⁾, Sistiyo²⁾

¹⁾Masters Program in Public Health, Universitas Sebelas Maret

²⁾Health Polytechnics, Ministry of Health, Yogyakarta

ABSTRACT

Background: Platelet counting is essential in both clinical hematology and platelet research laboratories. Accurate and precise enumeration of platelets is not only critical to assist in diagnosis and treatment of various clinical disorders. Obtaining accurate platelet counts in microcytic blood samples is challenging, even with the most reliable automated haematology analysers. This study aims to determine platelet count difference between capillary blood using Microtainer EDTA versus venous blood on Vacutainer EDTA.

Subjects and Method: This was an experimental study carried out at Grhasia psychiatric hospital, Yogyakarta, from March and May 2018. A sample of 38 psychiatric hospital staffs was selected for this study. The dependent variable was thrombocytes level. The independent variables were capillary blood in microtainer EDTA and venous blood in vacutainer EDTA. 3 ml venous blood sampling was performed from median cubital vein, cephalic vein, or basilic vein and collected to using vacutainer EDTA. 3 ml capillary blood sampling was performed from palm-up distal tengah and collected to microtainer EDTA. Thrombocyte level was measured using Haematology Analyser Sysmex KX-21. Mean difference between gorup was tested using independent t test.

Results: Of 0.5 ml capillary blood collected in microtainer EDTA, contains 264.55×10^3 cells/mm³ thrombocyte. Of 3 ml venous blood collected in vacutainer EDTA, contains 271.39×10^3 cells/mm³ thrombocyte. Mean of thrombocyte cells from capillary blood in microtainer EDTA (Mean= 264.55; SD= 67.06) was lower than mean of thrombocyte cells from venous blood in vacutainer EDTA (Mean= 273.26; SD= 68.70), with p= 0.578.

Conclusion: Mean of thrombocyte cells from capillary blood in microtainer EDTA is lower than mean of thrombocyte cells from venous blood in vacutainer EDTA.

Keywords: thrombocytes counts, vacutainer EDTA, microtainer EDTA

Correspondence:

Joko Budiyo. Masters Program in Public Health, Universitas Sebelas Maret. Jl. Ir Sutami 36A, Surakarta, Central Java 57126, Indonesia. Email: jokobudiyo.69@gmail.com. Mobile: 081237695857.