HUBUNGAN JUMLAH RETIKULOSIT PADA PENDERITA DIABETES MELITUS TIPE 2 DI PUSKESMAS KALIBARU

Oleh :

RAHMATIKA SOFIANA
201703005

Abstrak

Diabetes melitus tipe 2 (DMT2) merupakan gangguan metabolisme yang ditandai dengan peningkatan kadar glukosa darah yang disebabkan resistensi insulin. *International Diabetes Federation* (IDF) Atlas 2017 melaporkan bahwa prevalensi diabetes di Indonesia masih menunjukan kecenderungan meningkat. Indonesia menempati peringkat ke-6 di dunia setelah Tiongkok, India, Amerika Serikat, Brazil, dan Meksiko dengan jumlah penyandang diabetes usia 20-79 tahun sekitar 10.3 juta jiwa. Penelitian ini bertujuan untuk mengetahui hubungan jumlah retikulosit terhadap kadar glukosa penderita DMT2 dan mengetahui faktor yang menyebabkan penurunan atau peningkatan jumlah retikulosit terhadap kadar glukosa penderita DMT2. Sampel pada penelitian ini adalah penderita diabetes mellitus tipe 2 di Puskesmas Kalibaru. Analisis jumlah retikulosit dalam darah dilakukan dengan metode mikroskopis di Laboratorium Hematologi STIKes Mitra Keluarga menggunakan reagen Brilliant Cresyl Blue (BCB) dengan masa inkubasi 30 menit dan suhu 37°C. Hasil glukosa yang didapat dinyatakan bahwa dari 46 responden memiliki rata-rata kadar glukosa sebesar 185.41 mg/dl. Kadar glukosa terendah sebesar 56 mg/dl, tertinggi sebesar 408 mg/dl, dan terbanyak sebesar 119 mg/dl. Hasil retikulosit yang didapat dinyatakan bahwa dari 46 responden memiliki rata-rata Hitung Retikulosit Relatif (HRR) sebesar 1.561% dan Hitung Retikulosit Absolut (HRA) sebesar 60869.57/ ul darah. Hitung Retikulosit Relatif (HRR) terendah sebesar 0.3%, tertinggi sebesar 3.0%, dan terbanyak sebesar 1.0% sedangkan Hitung Retikulosit Absolut (HRA) terendah sebesar 8.000/ul, tertinggi sebesar 120.000/ul, dan terbanyak sebesar 40.000/ul. Berdasarkan hasil uji *correlation* menunjukkan bahwa tidak terdapat hubungan yang signifikan antara kadar glukosa dengan retikulosit pada penderita DMT2.

Kata Kunci : DMT2, Hitung Retikulosit Relatif, dan Hitung Retikulosit Absolut

RELATIONSHIP BETWEEN RETICULOCYTE COUNTS IN PEOPLE WITH TYPE 2 DIABETES MELLITUS IN THE KALIBARU HEALTH CENTER

By :

RAHMATIKA SOFIANA
201703005

Abstract

Type 2 diabetes mellitus is a metabolic disorder characterized by increased blood glucose levels caused by insulin resistance. International Diabetes Federation (IDF) Atlas 2017 report that the prevalence of diabetes in Indonesia is still showing an increasing trend. Indonesia rank 6th in the world after China, India, United States, Brazil, and Mexico with a number of diabetes aged 20-79 years of around 10.3 million. This study aims to determine the relationship of the number of reticulocyte on glucose levels in people with T2DM and determine the factors that cause in the number of reticulocyte on glucose levels in people with T2DM. Sample in this study was people with type 2 diabetes mellitus at the Kalibaru Health Center. Analysis of reticulocyte counts in the blood was carried out by microscopic methods in the Hematology Laboratory of STIKes Mitra Keluarga using Brilliant Cresyl Blue (BCB) reagents with an incubation period of 30 minutes and a temperature of 37°C. Glucose results obtained stated that of 46 respondents had an average glucose levels of 185.41 mg/dl. The lowest glucose level was 56 mg/dl, the highest was 408 mg/dl, and highest was 119 mg/dl. Reticulocyte results obtained revealed that of 46 respondents had an average Relative Reticulocyte Count (RRC) of 1.561% and an Absolute Reticulocyte Count (ARC) of 60869.57/ul blood. The lowest Relative Reticulocyte Count (RRC) was 0.3%, the highest was 3.0%, and the highest was 1.0% while the lowest Absolute Reticulocyte Count (ARC) was 8.000/ul, the highest was 120.000/ul, and the highest 40.000/ul. Based on the results of the correlation test showed that there was no significant relationship between glucose levels with reticulocyte in people with T2DM.

Keywords : T2DM, Relative Reticulocyte Count, and Absolute Reticulocyte Count