

INTISARI

Martua Lasroha Sumiati. Nim 3212064. *Hubungan Antara Kadar Enzim Gamma Glutamil Transferase Dengan Kadar Glukosa Darah Puasa Pada Pasien DM Tipe 2 di Laboratorium Prodia Cibubur.*

Diabetes Melitus (DM) merupakan penyakit kronik yang terjadi akibat pankreas tidak mampu menghasilkan insulin yang cukup atau ketika tubuh tidak dapat secara efektif menggunakan insulin, hal ini akan menyebabkan peningkatan konsentrasi glukosa atau hiperglikemia yang disertai gangguan metabolisme karbohidrat, lemak dan protein. Parameter pemeriksaan Glukosa puasa berperan untuk melihat risiko terjadinya hiperglikemia yang didukung pemeriksaan Gamma GT, dimana enzim Gamma GT berperan dan bertanggung jawab atas *katabolisme glutathione*. *Cedera vaskular* pada diabetes akibat dari *hiperglikemia* telah dikaitkan dengan stres oksidatif yang menyebabkan *depleksi glutathione intraseluler* dengan meningkatnya *superoksida dismutase ekstraseluler* plasma. Dari beberapa penelitian didapat hubungan peningkatan aktivitas enzim GGT pada individu yang mengalami penyakit sindrom metabolik, serta kondisi stres oksidatif. Tujuan penelitian ini untuk mengetahui hubungan antara kadar enzim Gamma Glutamil Transferase dengan kadar Glukosa darah puasa pada pasien DM Tipe 2 di Laboratorium Klinik Prodia Cibubur. Penelitian berdasarkan data penderita diabetes melitus yang melakukan pemeriksaan kadar glukosa puasa dan Gamma GT di Prodia Cibubur periode 22 Maret – 22 April 2022. Subjek sebanyak 60 pasien yang diambil dari data observasi di Laboratorium Klinik Prodia Cibubur. Hasil penelitian menunjukkan sebanyak 36 laki-laki (60%) dan 24 perempuan (40%). Terdapat pengelompokan usia <45 tahun sebanyak 10 (17%) pasien dan usia ≥45 tahun sebanyak 50 (83%) pasien. Pada pasien laki-laki diabetes mellitus tipe 2 memiliki kadar Gamma GT tinggi (kadar Gamma GT >66 U/L) sebanyak 12 (20%) pasien dan pada pasien perempuan diabetes mellitus tipe 2 memiliki kadar Gamma GT tinggi (kadar Gamma GT >39 U/L) sebanyak 19 (31.7%) pasien. Hasil uji korelasi *Pearson* untuk melihat korelasi kadar Glukosa puasa dengan kadar Gamma GT bahwa dengan tingkat kepercayaan 95% didapat tidak ada hubungan antara kadar Glukosa puasa dengan kadar Gamma GT dengan nilai $p = 0.228$ dan $r = -0.158$

Kata kunci : Diabetes Melitus, Glukosa Puasa, Gamma GT

ABSTRACT

Martua Lasroha Sumiati. Nim 3212064. *Correlation between gamma glutamil transferase levels and fasting blood glucose levels in type 2 DM patients in the laboratory Prodia Cibubur West Java*

Diabetes mellitus (DM) is a chronic disease that occurs due to the pancreas not being able to produce enough insulin or when the body cannot effectively use insulin, this will lead to an increase in glucose concentration or hyperglycemia accompanied by impaired metabolism of carbohydrates, fats and proteins. Fasting glucose examination parameters play a role in seeing the risk of hyperglycemia supported by Gamma GT examination, where the Gamma GT enzyme plays a role and is responsible for glutathione catabolism. Vascular injury in diabetes resulting from hyperglycemia has been linked to oxidative stress causing intracellular glutathione depletion with increased plasma ecstasy dismutase superoxide. From several studies obtained an association of increased activity of the enzyme GGT in individuals experiencing metabolic syndrome disease, as well as oxidative stress conditions. The purpose of this study is to find out Correlation between gamma glutamil transferase levels and fasting blood glucose levels in type 2 DM patients in the laboratory Prodia Cibubur West Java. Research based on data from people with diabetes mellitus who checked fasting glucose levels and Gamma GT in Prodia Cibubur for the period March 22 to April 22, 2022. The subjects of 60 patients were taken from observation data at the Prodia Cibubur Clinical Laboratory. The results showed as many as 36 men (60%) and 24 women (40%). There is a grouping of <45 years of age as many as 10 (17%) patients and ≥ 45 years old as many as 50 (83%) patients. In male patients type 2 diabetes mellitus has high Gamma GT levels (Gamma GT levels >66 U / L) as much as 12 (20%) patients and in female patients type 2 diabetes mellitus has high Gamma GT levels (Gamma GT levels >39 U / L) as many as 19 (31.7%) patients. Pearson correlation test results to see the correlation of fasting glucose levels with Gamma GT levels that with a confidence level of 95% obtained there is no relationship between fasting glucose levels and Gamma GT levels with values $p = 0.228$ and $r = -0.158$

Keywords : Diabetes Mellitus, Fasting Glucose, Gamma GT