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Hubungan Glukosa Urine Dengan Mikroalbumin Pada Pasien Penderita Diabetes Melitus Tipe 2 Di Laboratorium Klinik Pramitra Biolab Bandar Lampung

xv + 24 halaman, 5 tabel, 1 gambar dan 12 lampiran

ABSTRAK

Diabetes melitus tipe 2 merupakan penyakit metabolik kronik yang dapat menyebabkan komplikasi, termasuk kerusakan ginjal. Pemeriksaan glukosa urine dan mikroalbumin penting untuk deteksi dini komplikasi tersebut. Penelitian ini bertujuan untuk mengetahui hubungan antara kadar glukosa urine dengan mikroalbumin pada pasien diabetes melitus tipe 2. Penelitian dilakukan secara analitik observasional dengan desain *cross-sectional* pada pasien DM tipe 2 di Laboratorium Klinik Pramitra Biolab Bandar Lampung pada Juni 2025. Jumlah sampel penelitian adalah 36 sampel, diambil dari populasi yang telah memenuhi kriteria inklusi dan eksklusi. Data glukosa urine diperiksa menggunakan metode reflektansi, sedangkan mikroalbumin menggunakan metode fluorescence immunoassay. Hasil analisis menunjukkan glukosa urine yaitu negatif (-) sebanyak 21 sampel (58,3%), 1+ sebanyak 1 sampel (2,8%), 2+ sebanyak 3 sampel (8,3%), dan 3+ sebanyak 11 sampel (30,6%) dan rata-rata mikroalbumin sebesar 194,57 mg/L. Uji korelasi Spearman menunjukkan adanya hubungan positif sedang antara kadar glukosa urine dengan mikroalbumin ($p = 0,004$; $r = 0,471$). Semakin tinggi glukosa urine, maka semakin tinggi kadar mikroalbumin, yang mengindikasikan potensi kerusakan ginjal pada pasien DM tipe 2.

Kata Kunci : Diabetes Melitus Tipe 2, Glukosa Urine, Mikroalbumin,
Nefropati Diabetik, Komplikasi Ginjal
Daftar Bacaan : 36 (2004-2024)

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The Relationship Between Urine Glucose and Microalbumin in Patients with Type 2 Diabetes Mellitus at the Pramitra Biolab Clinical Laboratory, Bandar Lampung

xv +24 pages, 5 tables, 1 images and 12 attachments

ABSTRACT

Type 2 diabetes mellitus is a chronic metabolic disease that can lead to complications, including kidney damage. Urine glucose and microalbumin testing are important for the early detection of such complications. This study aims to determine the relationship between urine glucose levels and microalbumin in patients with type 2 diabetes mellitus. The study was conducted as an analytical observational cross-sectional study on patients with type 2 diabetes mellitus at the Pramitra Biolab Clinical Laboratory Bandar Lampung in June 2025. The sample size was 36 participants, selected from a population that met the inclusion and exclusion criteria. Urine glucose levels were measured using the reflectance method, while microalbumin levels were measured using the fluorescence immunoassay method. The analysis results showed that urine glucose was negative (-) in 21 samples (58.3%), 1+ in 1 sample (2.8%), 2+ in 3 samples (8.3%), and 3+ in 11 samples (30.6%), and the average microalbumin level was 194.57 mg/L. The Spearman correlation test indicated a moderate positive correlation between urine glucose levels and microalbumin ($p = 0.004$; $r = 0.471$). Higher urine glucose levels were associated with higher microalbumin levels, indicating potential kidney damage in patients with type 2 diabetes mellitus.

Keywords : *Diabetic Nephropathy, Kidney Complications, Microalbumin, Type 2 Diabetes Mellitus, Urine Glucose*
Reading List : *36 (2004-2024)*