

Analisis Hubungan Rasio Albumin terhadap Kreatinin Urin dengan Estimasi Laju Filtrasi Ginjal pada Pasien Diabetes Melitus Tipe-2 = Analysis Correlation of Urine Albumin to Creatinine Ratio with Glomerular Filtration Rate in Type-2 Diabetes Mellitus Patients

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Abstrak

[ABSTRAK

Saat ini belum ada penanda biologis yang dapat digunakan untuk mendeteksi PGK sejak dini. Rasio albumin terhadap kreatinin urin (UACR) dan estimasi laju filtrasi ginjal (eLFG) digunakan sebagai penanda gangguan fungsi ginjal. Penelitian ini bertujuan untuk mengetahui hubungan antara UACR dengan eLFG pada pasien DM tipe 2 dengan normoalbuminuria dan mikroalbuminuria. Sampel yang dianalisis adalah urin dan serum 90 orang pasien DM tipe 2 di Puskesmas Pasar Minggu yang dikumpulkan tahun lalu, dengan teknik total sampling. Kreatinin urin diukur dengan metode kinetik jaffe. Albumin urin diukur dengan metode bromkresol hijau. eLFG diperoleh dari nilai kreatinin serum. Hasil rerata UACR yang didapatkan ($15,60 \pm 1,93$). Hasil rerata eLFG Cockcroft Gault ($95,65 \pm 4,17$), MDRD ($89,71 \pm 3,65$) dan CKD-EPI ($87,00 \pm 2,62$). Hasil hubungan antara UACR dengan eLFG rendah MDRD ($p = 0,004, r = -0,422$); Cockcroft ($p = 0,083, r = -0,261$); CKD-EPI ($p = 0,006, r = -0,404$), sedangkan dengan LFG tinggi MDRD ($p = 0,020, r = 0,346$); Cockcroft ($p = <0,0-01, r = 0,540$); CKD ($p = 0,002, r = 0,449$). Kesimpulan yang didapatkan yaitu hubungan bermakna antara UACR dengan eLFG rendah dan tinggi. Tidak ditemukan hubungan yang bermakna antara UACR normoalbuminuria dan mikroalbuminuria dengan eLFG.

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ABSTRACT

Diabetes mellitus type 2 is one of the causes complication of chronic kidney disease (CKD). Currently there are no biological markers that can be used to detect CKD early. Urinary albumin to creatinine ratio (UACR) and estimated kidney filtration rate (eLFG) is used as a marker of impaired kidney function. This study aimed to determine the relationship between UACR with eLFG in patient type 2 diabetes mellitus with normoalbuminuria and microalbuminuria. Samples were urine and serum of 90 patients with type 2 diabetes mellitus in Puskesmas Pasar Minggu which were collected last year, with total sampling technique. Urinary creatinine was measured by Jaffe kinetic method. Urine albumin was measured by the method bromkresol green. eLFG obtained from serum creatinine values. UACR results obtained (15.60 ± 1.93). Results eLFG Cockcroft Gault (95.65 ± 4.17), MDRD (89.71 ± 3.65) and CKD-EPI (87.00 ± 2.62). Results relationship between UACR with low eLFG MDRD ($p = 0.004, r = -0.422$); Cockcroft ($p = 0.083, r = -0.261$); CKD ($p = 0.006, r = -0.404$), while the high eLFG MDRD ($p = 0.020, r = 0.346$); Cockcroft ($p = <0.001, r = 0.540$); CKD ($p = 0.002, r = 0.449$) so there is a significant relationship between UACR with low and high eLFG. There is no significant relationship between UACR normoalbuminuria and microalbuminuria with eLFG., Diabetes mellitus type 2 is one of the causes complication of chronic kidney disease (CKD). Currently there are no biological markers that can be used to detect CKD early. Urinary albumin to creatinine ratio (UACR) and estimated kidney filtration rate (eLFG) is used as a marker of impaired kidney function. This study aimed to determine the relationship between UACR with eLFG in patient type 2 diabetes mellitus with

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