ABSTRAK

Manifestasi mikroangiopati di ginjal ialah nefropati diabetik, berlangsung gangguan fungsi ginjal yang lalu menjadikan kegagalan faal ginjal menahun di penderita yang sudha lama mengidap DM. Faktor metabolik yang amat berpengaruh progresivitas komplikasi diabetes melitus ialah hiperglikemia. HbA1c ialah marker yang sering dipakai guna kontrol glikemik waktu panjang serta bisa dipakai guna indikator berlangsungnya komplikasi pada pasien Diabetes Melitus. Pasien yang punya kadar >7% berisiko 2x lebih tinggi komplikasi. Nefropati diabetik ialah diagnosis klinis didasarkan ada albuminuria atau turunnya LFG yang ditegakkan melalui pemeriksaan *rasio albumin kretinin* (ACR) urine. Tujuan penelitian untuk mengetahui kaitan diantara kadar HbA1c dengan ACR urine di pasien diabetes melitus tipe 2.

Metode penelitian memakai metode observasional analitik rancangan potong lintang yang datang ke poliklinik penyakit dalam RSPAL dr. Ramelan Surabaya dari Maret hingga Mei 2023. Kadar HbA1c diperiksa menggunakan alat dengan metode HPLC (*High Pressure Liquid Chromatography*), sedangakn untuk pemeriksaan ACR urine menggunakan alat dengan metode *Reflectance photometry and Refractometry*. Korelasi antara kadar HbA1c dengan ACR urine didapatkan dengan uji korelasi spearmen.

Terdapat 30 penderita (16 Laki-laki, 14 Perempuan) ikut di penelitian ini. Rata-rata kadar HbA1c adalah 8,01 %. Dan Hasil rasio albumin kreatinin urine ialah normal (< 30 mg/g Cr). Pada hasil uji korelasi spearman menghasilkan $p = (0,481) > \alpha (0,05)$, yang berarti tidak ada korelasi diantara kadar HbA1c dengan rasio albumin kreatinin urine.

Kata Kunci : Diabetes melitus tipe 2, HbA1c, ACR urine

ABSTRACT

The manifestation of microangiopathy in the kidneys is diabetic nephropathy, where there will be impaired renal function which then becomes chronic renal failure in patients who have long had DM. The metabolic factor that greatly influences the progressivity of diabetes mellitus complications is hyperglycemia. HbA1c is a marker that is routinely used for long-term glycemic control and can be used as an indicator of the occurrence of complications in patients with diabetes mellitus. Patients who have levels >7% will be at 2 times higher risk of developing complications. Diabetic nephropathy is a clinical diagnosis based on the presence of albuminuria and/or a decrease in LFG which is established through examination of urine *albumin cretinine ratio* (ACR). The purpose of this study was to determine the relationship between HbA1c levels and urine ACR in patients with type 2 diabetes mellitus.

This research method uses an analytical observational method with a cross-sectional design that comes to the internal medicine polyclinic of Dr. Ramelan Surabaya from March to May 2023. HbA1c levels were examined using a tool with the HPLC (*High Pressure Liquid Chromatography*) method, while for urine ACR examination using a tool with the *Reflectance photometry and Refractometry* method. *The correlation between HbA1c levels and urine ACR was obtained using the Spearmen correlation test.*

Thirty patients (16 male, 14 female) participated in this study. The average HbA1c level was 8.01%. And the results of urine albumin creatinine ratio are normal (< 30 mg / g Cr). The Spearman correlation test results showed p = (0.481) > α (0.05), which means there is no correlation between HbA1c levels and urine creatinine albumin ratio.

Keywords: Type 2 diabetes mellitus, HbA1c, ACR urine