

ABSTRAK

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Judul : Perbedaan Kadar *Blood Urea Nitrogen* dan Kreatinin antara Pasien Diabetes Melitus Tipe 2 Terkontrol Dan Tidak Terkontrol Di RSUD Pasar Rebo Jakarta Timur

Pendahuluan: Diabetes melitus tipe 2 (DMT2) berisiko menimbulkan komplikasi mikrovaskular, termasuk nefropati diabetik. Pemeriksaan status glikemik menggunakan hemoglobin terglikasi (HbA1C) untuk menentukan DM terkontrol ($\text{HbA1C} < 7\%$) dan DM tidak terkontrol ($\text{HbA1C} \geq 7\%$). Evaluasi fungsi ginjal harus dilakukan dengan mengukur kadar *blood urea nitrogen* (BUN) dan kreatinin. Penelitian ini bertujuan menganalisis perbedaan kadar BUN dan kreatinin antara pasien DMT2 terkontrol dan tidak terkontrol.

Metode: Penelitian ini menggunakan desain *cross sectional* dengan data sekunder rekam medis pasien DMT2 rawat jalan di Poli Penyakit Dalam RSUD Pasar Rebo, Jakarta Timur, periode Januari–Desember 2024. Penelitian dilakukan pada Mei–Juni 2025 pada subjek berusia 50–59 tahun dengan lama diagnosis ≤ 5 tahun, yang dikelompokkan menjadi DM terkontrol dan tidak terkontrol berdasarkan kadar HbA1c. Kadar BUN dihitung dari nilai ureum ($\text{ureum} \times 2,14 \text{ mg/dL}$). Analisis data meliputi uji normalitas Kolmogorov–Smirnov dan uji beda kadar BUN serta kreatinin antar kelompok dengan tingkat signifikansi $p < 0,05$.

Hasil: Penelitian terhadap 100 pasien DMT2 di RSUD Pasar Rebo menunjukkan mayoritas subjek berjenis kelamin perempuan (64%) dengan rerata usia 56 tahun. Rerata kadar BUN dan kreatinin pada kelompok DM terkontrol masing-masing sebesar 13,5 mg/dL dan 1 mg/dL, sedangkan pada kelompok DM tidak terkontrol sebesar 13,59 mg/dL dan 1,04 mg/dL. Uji beda independen menunjukkan tidak terdapat perbedaan bermakna antara kedua kelompok ($p > 0,05$).

Simpulan: Kadar BUN dan kreatinin pada pasien DMT2 terkontrol dan tidak terkontrol di RSUD Pasar Rebo Jakarta Timur tidak bermakna secara signifikan.

Kata Kunci: BUN, DMT2, HbA1c, Kreatinin.

ABSTRACT

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*Title : Differences in Blood Urea Nitrogen and Creatinine Levels
Between Controlled and Uncontrolled Type 2 Diabetes Mellitus
Patients at Pasar Rebo General Hospital East Jakarta*

Introduction: Type 2 diabetes mellitus (T2DM) is associated with a risk of microvascular complications, including diabetic nephropathy. Glycemic status is determined through glycated hemoglobin (HbA1C) measurements, where levels below 7% classify diabetes as controlled, and levels of 7% or higher indicate uncontrolled diabetes. Measuring blood urea nitrogen (BUN) and creatinine is essential for determining kidney function. This study aims to analyze the differences in BUN and creatinine levels between controlled and uncontrolled T2DM patients.

Methodology: A cross-sectional study using secondary medical record data of outpatient T2DM patients at the Internal Medicine Clinic of Pasar Rebo General Hospital, East Jakarta (January–December 2024), classified subjects aged 50–59 years with ≤ 5 years of diagnosis into controlled and uncontrolled groups based on HbA1c values. BUN was calculated from urea $\times 2.14$ (mg/dL), normality was assessed using the Kolmogorov–Smirnov test, and differences in BUN and creatinine levels between groups were analyzed with statistical significance set at $p < 0.05$.

Results: Among 100 T2DM patients at Pasar Rebo General Hospital, most were female (64%) with a mean age of 56 years. The mean BUN and creatinine levels were 13.5 and 1.0 mg/dL in the controlled group and 13.59 and 1.04 mg/dL in the uncontrolled group, with independent analysis showing no significant differences between groups ($p = 0.93$ and $p = 0.38$).

Conclusion: The research revealed that there was no meaningful variation in BUN and creatinine levels between T2DM patients with controlled and uncontrolled glycemic status at Pasar Rebo General Hospital, East Jakarta.

Keywords: Blood Urea Nitrogen (BUN), Creatinine, HbA1c, Type 2 Diabetes Mellitus (T2DM).