ABSTRACT

DIFFERENCES IN PRE-HEMODIALYSIS UREA AND CREATININE LEVELS IN RELATION TO HOSPITAL MORTALITY IN STAGE 5 CHRONIC KIDNEY DISEASE PATIENTS AT RSUD DR. H. ABDUL MOELOEK BANDAR LAMPUNG 2023-2024

By

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Background Chronic kidney disease (CKD) is a global health problem with a continuously increasing prevalence. In the end stage, CKD patients require renal replacement therapy such as hemodialysis to maintain survival. Pre-hemodialysis urea and creatinine laboratory measurements are commonly used to assess kidney function. To date, evidence regarding differences in pre-hemodialysis urea and creatinine levels in relation to mortality among the Indonesian population remains limited. Therefore, this study aimed to determine the differences in pre-hemodialysis urea and creatinine levels associated with mortality in stage 5 CKD patients.

Methods: This study used a retrospective cohort design. Secondary data were obtained from medical records. Samples were selected using consecutive sampling, totaling 156 patients, consisting of 78 discharged and 78 deceased patients. Data were analyzed using univariate and bivariate methods with the Independent t-test or Mann-Whitney test as an alternative.

Results: The mean pre-hemodialysis urea level was higher in deceased patients (264.92 mg/dL) compared to discharged patients (142.25 mg/dL). Similarly, the mean pre-hemodialysis creatinine level was higher in the deceased group (10.88 mg/dL) than in the discharged group (7.62 mg/dL). Bivariate analysis using the Mann–Whitney test showed statistically significant differences in urea ($p = 0.001$) and creatinine levels ($p = 0.004$) between the two groups.

Conclusion: There are significant differences in pre-hemodialysis urea and creatinine levels associated with mortality in stage 5 CKD patients.

Keywords: chronic kidney disease, hemodialysis, creatinine, urea, mortality.

ABSTRAK

PERBEDAAN KADAR UREUM DAN KREATININ PRA-HEMODIALISIS TERHADAP HOSPITAL MORTALITY PASIEN PENYAKIT GINJAL KRONIS STADIUM 5 DI RSUD DR. H. ABDUL MOELOEK BANDAR LAMPUNG PERIODE 2023-2024

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Latar Belakang: Penyakit ginjal kronis (PGK) merupakan masalah kesehatan global dengan angka prevalensi yang terus meningkat. Pada stadium akhir, pasien PGK memerlukan terapi pengganti ginjal, seperti hemodialisis untuk mempertahankan kelangsungan hidup. Pemeriksaan laboratorium kadar ureum dan kreatinin pra-hemodialisis digunakan secara umum untuk menilai fungsi ginjal. Hingga saat ini, bukti mengenai perbedaan kadar ureum dan kreatinin pra-hemodialisis terhadap mortalitas pada populasi Indonesia masih terbatas. Oleh karena itu, penelitian ini bertujuan untuk mengetahui perbedaan kadar ureum dan kreatinin pra-hemodialisis terhadap mortalitas pasien PGK stadium 5.

Metode: Penelitian ini menggunakan desain kohort retrospektif. Data sekunder diperoleh melalui rekam medis. Sampel diambil dengan teknik *consecutive sampling* sebanyak 156 dengan masing-masing kelompok dipulangkan dan meninggal sebanyak 78 sampel. Analisis data dilakukan secara univariat dan bivariat menggunakan uji *Independent t-test* atau uji *Mann Whitney* sebagai uji alternatif.

Hasil: Rata-rata kadar ureum pra-hemodialisis pada pasien meninggal lebih tinggi (264,92 mg/dL) dibandingkan pasien dipulangkan (142,25 mg/dL). Demikian pula, rata-rata kadar kreatinin pra-hemodialisis lebih tinggi pada kelompok meninggal (10,88 mg/dL) dibandingkan pasien dipulangkan (7,62 mg/dL). Analisis bivariat menggunakan uji Mann Whitney menunjukkan perbedaan yang bermakna secara statistik pada kadar ureum ($p = 0,001$) dan kreatinin ($p=0,004$) antara kedua kelompok.

Kesimpulan: Terdapat perbedaan kadar ureum dan kreatinin pra-hemodialisis terhadap mortalitas pasien PGK stadium 5.

Kata kunci: penyakit ginjal kronis, hemodialisis, kreatinin, ureum, mortalitas.