ABSTRAK

Pendahuluan: Gagal ginjal kronik (GGK) merupakan masalah kesehatan global dengan beban biaya tinggi dan mortalitas signifikan. Di Indonesia, prevalensi GGK terus meningkat, sementara faktor kardiometabolik seperti hipertensi dan diabetes serta infeksi tertentu (mis. hepatitis B) diduga berperan dalam progresivitas penyakit pada kelompok usia dewasa muda.

Tujuan: Menentukan hubungan usia, jenis kelamin, hipertensi, diabetes melitus, dan hepatitis B dengan derajat GGK, serta mengidentifikasi faktor yang paling berpengaruh pada pasien dewasa muda. Metode: Studi retrospektif pada rekam medis pasien usia 19-44 tahun di RS Khusus Ginjal Rasyida Medan tahun 2024 (total sampling; n=121). Variabel dependen: derajat GGK (stadium 4-5). Analisis univariat untuk distribusi karakteristik; bivariat (uji Fisher) untuk hubungan tiap faktor dengan derajat GGK; multivariat (regresi) untuk menentukan faktor independen bermakna pada derajat GGK. Hasil: Dari 121 pasien, laki-laki 57% (69); usia terbanyak 33-44 tahun 62,8% (76). Hipertensi derajat 2 ditemukan pada 55,4% (67). Riwayat diabetes: 22,3% (27); pre-diabetes 18,2% (22). Hepatitis B: 10,7% (13). Uji bivariat menunjukkan hubungan bermakna antara derajat GGK dengan hipertensi ($p<0,001$), diabetes ($p<0,001$), dan hepatitis B ($p=0,004$); tidak bermakna untuk jenis kelamin ($p=0,052$) dan usia ($p>0,05$). Regresi multivariat menegaskan hipertensi ($p<0,001$), diabetes ($p<0,001$), dan hepatitis B ($p=0,033$) sebagai prediktor independen derajat GGK.

Kesimpulan: Pada dewasa muda, derajat GGK berhubungan kuat dengan hipertensi, terutama derajat 2, serta diabetes melitus dan hepatitis B, sementara usia dan jenis kelamin tidak berasosiasi bermakna. Temuan menekankan pentingnya skrining dan pengendalian tekanan darah, kontrol glikemik ketat, serta penatalaksanaan hepatitis B untuk memperlambat progresivitas GGK. Disarankan penelitian lanjutan memasukkan faktor gaya hidup dan metabolik lain (IMT, dislipidemia, asupan garam, merokok, riwayat keluarga, dan kepatuhan terapi).

ABSTRACT

Introduction: Chronic kidney disease (CKD) is a global health problem with a high economic burden and significant mortality. In Indonesia, the prevalence of CKD continues to rise, while cardiometabolic factors such as hypertension and diabetes, as well as certain infections (e.g., hepatitis B), are thought to contribute to disease progression in young adults.

Objective: To determine the association between age, sex, hypertension, diabetes mellitus, and hepatitis B with CKD stage, and to identify the most influential factors in young adult patients.

Methods: This was a retrospective study of medical records from patients aged 19–44 years at Rasyida Kidney Specialty Hospital, Medan, in 2024 (total sampling; n = 121). The dependent variable was CKD stage (stages 4–5). Univariate analysis was performed to describe patient characteristics; bivariate analysis (Fisher's exact test) was used to assess the association between each factor and CKD stage; and multivariate logistic regression was used to determine independent predictors of advanced CKD.

Results: Of the 121 patients, 57% (69) were male, and the majority were aged 33–44 years (62.8%, n = 76). Stage 2 hypertension was present in 55.4% (67) of patients. A history of diabetes was found in 22.3% (27), with 18.2% (22) classified as prediabetic. Hepatitis B was identified in 10.7% (13). Bivariate analysis showed significant associations between CKD stage and hypertension ($p < 0.001$), diabetes ($p < 0.001$), and hepatitis B ($p = 0.004$), but no significant associations for sex ($p = 0.052$) or age ($p > 0.05$). Multivariate regression confirmed hypertension ($p < 0.001$), diabetes ($p < 0.001$), and hepatitis B ($p = 0.033$) as independent predictors of advanced CKD.

Conclusion: In young adults, CKD stage is strongly associated with hypertension—particularly stage 2—as well as diabetes mellitus and hepatitis B, while age and sex show no significant association. These findings highlight the importance of blood pressure screening and control, strict glycemic management, and hepatitis B treatment to slow CKD progression. Further studies are recommended to include lifestyle and metabolic factors such as BMI, dyslipidemia, salt intake, smoking, family history, and treatment adherence.