中文題目：血清鉀離子及尿酸濃度在慢性血液透析病人的影響及相關性

英文題目：Correlation between serum potassium and uric acid levels in chronic hemodialysis patients: clinical implication and outcome prediction

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Background: The aims of this study were to evaluate correlations between serum potassium (S[K]) and uric acid (S[UA]) in hemodialysis patients, and to determine whether lower levels of both S[K] and S[UA] were associated with poor long-term prognoses in these patients.

Methods: A cohort of 424 maintenance hemodialysis patients (58±13 years of age; 47% male; 39% with diabetes) from a single center were divided into tertiles based on the product of S[K] × S[UA] (K×UA): Group 1: low K×UA: *n* = 141; Group 2: median K×UA: *n* =141; and Group 3: high K×UA: *n* =142. The longest observation period was 60 months.

Results*:* S[K] showed a positive linear correlation with S[UA] (r=0.33; p<0.001). In multivariate logistic regression analysis, Group 1 was characterized by hypoalbuminemia (odds ratio [OR]=0.20, 95% confidence interval (CI)=0.11-0.35), and lower levels of normalized protein catabolism [nPCR] (OR=0.10, 95%CI= 0.05-0.22), and phosphate levels (OR=0.41, 95%CI=0.33-0.51). In contrast, Group 3 was associated with higher nPCR (OR=6.07, 95%CI=2.93-12.50) and albumin levels (OR=2.12, 95%CI=2.12-7.00). Compared to the reference (Group 1), the hazard ratio (HR) for long-term mortality was significantly lower in Groups 2 (HR=0.65, 95%CI=0.43- 0.99) and 3 (HR=0.56, 95%CI=0.36-0.89). In multivariate Cox proportional analysis, the risk of mortality decreased by 2% (HR=0.98; 95%CI=0.96-0.99) per 1 unit increase in K×UA product.

Conclusion*:* Hemodialysis patients with lower S[K] and [UA] levels were characterized by hypoalbuminemia and lower nPCR, and they were associated with a long-term mortality risk.

Key words: hypokalemia, hyperuricemia, end-stage renal disease, malnutrition, inflammation, chronic kidney disease