

비당뇨병 환자에서 HbA1c과 만성콩팥병의 연관성

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HbA1c Levels are associated with Chronic Kidney Disease in Non-diabetic Adult Population

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Background: The aim of the study was to evaluate the clinical association between HbA1c and CKD in non-DM patients.

Patients and Methods: We identified 24,791 adults who underwent voluntary routine health checkups. Participants were excluded from this study for the following reasons: they could not provide data regarding HbA1c or renal function; or the participants were younger than 18 years of age or DM. 14,672 participants were included in this study. The participants were divided into 3 groups according to their HbA1c level: the Low group (<5.7%), the Middle group (5.7-5.9%), and the High group (>5.9%).

Results: The number of participants in the Low, Middle, and High groups was 8,651, 3,865, and 2,156 participants, respectively. Linear regression analyses showed that HbA1c in non-diabetes participants were associated with numbers of MetS components. The numbers of MetS components were increased as the HbA1c levels increased. The prevalence of CKD in the Low, Middle, and High group was 1.1%, 2.6%, and 4.9%, respectively. Logistic regression showed that odds ratios for MetS according to 1% increase in HbA1c was 7.397 (95% CI, 6.145-8.521) in univariate analysis and 3.284 (95% CI, 2.779-3.880) in multivariate analysis. Odds ratio for CKD according to 1% increase in HbA1c was 7.678 (95% CI, 5.430-10.857) in univariate analysis and 2.117 (95% CI, 1.433-3.129) in multivariate analysis.

Conclusion: In non-diabetic patients, HbA1c is associated with CKD through increase in metabolic syndrome or insulin resistance.

Key Words: 만성콩팥병, 헤모글로빈 A1c, 당뇨병
Chronic kidney disease, HbA1c, Diabetes mellitus