Diabetes & Glucose Metabolism

PSUN166
Triglycerides and Glucose Index as a Predictor of Renal Impairment

Seung Eun Lee, MD, Jung Hwan Park, MD, PhD, and Dong Sun Kim, MD, PhD

Background: Metabolic syndrome closely associated with development of various chronic complications, including impaired kidney function. However, previous indices for insulin resistance (IR) have some limitation in precision estimating metabolic abnormality. **Objective:** We investigate that higher triglycerides x glucose index (TyG) may be an alternative to predicting early impairment of kidney function. We analyzed biochemical and spirometry data from a nation-wide, population-based, case-control study (the KNHNES IV and V). The homeostasis model assessment, the quantitative insulin sensitivity check index, and TyG were uses as a surrogate marker of IR. Eligibles as cases were all native Korean who were aged 20 years or more and had no any medical illness. **Results:** A total of 14534 participants were divided into 2 groups according to estimated glomerular filtration rate (eGFR, mL·min-1·1.73 m-2) as follows: Group I (n = 10189), $\geq$ 90 and $\leq$ 120; and Group II (n = 4345), $\geq$ 60 and < 90. Group I had lower TyG (8.43 $\pm$ 0.01 vs. 8.60 $\pm$ 0.01, P<0.0001) as compared with group II. Linear regression showed that TyG was closely associated with UACR (β = -3.3978, P<0.0001). Logistic regression analysis showed that TyG was closely associated with early impairment of kidney function (OR = 1.519, 95% CI = 1.421-1.623), and further adjustment did not attenuated

this association (OR = 1.103, 95% CI = 1.005-1.210). **Conclusions:** In this study, we demonstrated that TyG may be useful indicator of early renal impairment. To confirm these findings, large population-based prospective clinical should be needed.

Presentation: Sunday, June 12, 2022 12:30 p.m. - 2:30 p.m.