Association Between High Risk Alcohol Consumption, Impaired Fasting Glucose and Diabetes Mellitus in Korean People – The Fifth Korea National Health and Nutrition Examination Survey (Knhanes V, 2010–2012)

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Background: There are few reports that alcohol consumption is related with type 2 diabetes mellitus in Korea. The aim of this study was to investigate the association between high risk alcohol drinking and impaired fasting glucose[IFG] and diabetes mellitus[DM] with representative sample in Korea.

Methods: We used data from the Korean National Health and Nutrition Examination Survey, 2010-2012. The participants were aged 30 years and older and we excluded the subjects who were diagnosed with DM by doctors. High risk drinking was divided into four groups: none, once a month, once a week and nearly daily. After adjusting for confounding factors, polychotomous logistic regression analysis was performed to assess the association between high risk drinking, IFG and DM.

Results: The prevalence of IFG and DM was 22.1% and 3.0%, respectively. On polychotomous logistic regression analysis adjusting for confounding factors(age, BMI, sex, hypercholesterolemia, household income, education status, physical activity and smoking status), odds ratio[OR] of IFG and DM in the high risk drinking group who drank once a week was 1.497(95% confidence interval[CI]: 1.240-1.807) and 1.827(95% CI: 1.126-2.963), respectively. Odds ratio of IFG in the high risk drinking group who drank nearly daily was 2.066(95% CI: 1.587-2.960).

Conclusion: This study shows that high risk drinking is associated with IFG and DM. Prospective studies are needed to verify these results.

Keywords: High risk drinking, Impaired fasting glucose, Diabetes mellitus