

4th International Conference on

Epidemiology & Public Health

October 3-5, 2016 | London, UK

ALCOHOL USE AND SERUM URIC ACID USING MENDELIAN RANDOMIZATION

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We used a Mendelian randomization analysis to assess the causal effect of alcohol use on Uric Acid (UA) in Koreans. The Korean Cancer Prevention Study-II (KCPS) Biobank cohort consisted of 159,844 healthy Korean aged 20 years or older. Clinical data, including UA, alcohol use, and other related confounding variables were collected. Single nucleotide polymorphism rs671 of ALDH2 was genotyped among 2,790 men and 1,271 women in 2016, which was a randomly selected subcohort of KCPS Biobank participants. In Mendelian randomization analysis, the causal risk increase for UA was estimated to be 0.64 mg/dL per alcohol unit (10 g ethanol) per day (95% CI: 0.58-0.70) in men ($p=0.046$), which was comparable to the observational estimate (Durbin-Wu-Hausman chi-square test P for difference =0.266). The associations did not change after excluding heavy drinkers or the elderly. In women, similar results were shown with no significant association between alcohol use and UA. These novel results provide evidence that alcohol use is causally associated with risk of UA in Koreans and support its role as a risk determinant. This study was funded by a grant of the Korean Health Technology R&D Project, Ministry of Health & Welfare, Republic of Korea (HI14C2686).

Biography

Jee is a professor of the Epidemiology and Health Promotion, Graduate School of Public Health, Yonsei University, where he teaches epidemiology. His current research is focused on large scaled prospective cohort study for smoking, obesity, metabolic syndrome, CVD and cancer. He developed the Korean Cancer Prevention Study (KCPS) in 2001. The cohort consists of over one million adult Koreans who had a physical examination as part of their care by the national health program.

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