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The relationship between uric acid and homocysteine levels based on alcohol-related facial flushing

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Background & Aim: This study aimed to determine the correlation between blood uric acid and homocysteine levels, based on alcohol-related facial flushing.

Methods: Among male adults who visited a health examination center of a university hospital located in Daejeon, Korea, for a personal health examination from March 2013 to February 2014, 702 subjects were analyzed including 401 subjects without alcohol-related facial flushing and 301 with facial flushing. Pearson's correlation and stepwise multivariate linear regression analyses were performed between the log homocysteine levels and other variables including uric acid.

Results: Uric acid showed a significant positive correlation with log homocysteine ($\gamma=0.166$, $P=0.001$) ($\beta=0.176$; $P=0.001$) in the non-flushing group. In contrast, none of the variables showed any significant correlations with log homocysteine in the flushing group.

Conclusions: Alcohol users not exhibiting alcohol-related facial flushing showed a positive correlation between uric acid and homocysteine levels, whereas those without facial flushing showed no such correlation.