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Effect of Urate-lowering Therapy on the Risk of Cardiovascular Disease and All-cause Mortality in Patients with Gout: A Case-matched Cohort Study

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Abstract

Objective. To examine (1) the risk of death from cardiovascular disease (CVD) and from all causes in patients with gout who do not undergo urate-lowering therapy (ULT), and (2) the effect of ULT on mortality risk in patients with gout.

Methods. In this prospective case-matched cohort study, 40,623 Taiwanese individuals aged ≥ 17 years were followed for 6.5 years. Mortality rate was compared between 1189 patients with gout who did not receive ULT and reference subjects (no gout, no ULT) matched for age, sex, and the index date of gout diagnosis (1:3 patients with gout/reference subjects), and between 764 patients with gout who received ULT and 764 patients with gout who did not receive ULT matched 1-to-1 based on their propensity score and the index date of ULT prescription. Cox proportional hazard modeling was used to estimate the respective risk of CVD (International Classification of Diseases, 9th ed. code 390-459) and all-cause mortality.

Results. After adjustment, patients with gout not treated with ULT had an increased risk of CVD mortality (HR 2.43, 95% CI 1.33-4.45) and all-cause mortality (1.45, 1.05-2.00) relative to the matched reference subjects (no gout, no ULT). Patients with gout treated with ULT had a lower risk of CVD (0.29, 0.11-0.80) and all-cause mortality (0.47, 0.29-0.79) relative to patients with gout not treated with ULT. This survival benefit persisted for users of either allopurinol or benzbromarone.

Conclusion. Patients with gout who received ULT had significantly better survival rates than those who did not. Thus, undertreatment of gout has serious negative consequences.

Key Indexing Terms:

ALLOPURINOL BENZBROMARONE GOUT MORTALITY
URATE-LOWERING THERAPY

Footnotes

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