

Abstract

Use of diuretics and risk of incident gout: Population-based case-control study

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Objective: Use of diuretics has been associated with an increased risk of gout. Data for different types of diuretics are scarce. This study investigated the association between use of loop diuretics, thiazide or thiazide-like diuretics, and potassium sparing agents and the risk of developing incident gout.

Methods: We conducted a retrospective population-based case-control analysis using the General Practice Research Database (GPRD) from the United Kingdom. We identified case patients with incident gout between 1995 and 2010. We matched one control patient to each case patient on age, sex, general practice, calendar time, and years of active history in the database, used conditional logistic regression to calculate odds ratios (ORs) with 95% confidence intervals (CIs), and adjusted for potential confounders.

Results: We identified 91,530 incident cases of gout and the same number of matched controls. Compared to past-use of the respective drug class, adjusted ORs for current use of loop diuretics, thiazide diuretics, thiazide-like diuretics, and potassium sparing diuretics were 2.64 (95% CI 2.47-2.83), 1.70 (95% CI 1.62-1.79), 2.30 (95% CI 1.95-2.70), and 1.06 (95% CI 0.91-1.23), respectively. Combined use of loop diuretics and thiazide diuretics was associated with the highest relative risk estimates of gout (adj. OR 4.65, 95% CI 3.51-6.16). Current use of calcium channel blockers or losartan slightly attenuated the risk of gout in users of various diuretics.

Conclusion: Use of loop, thiazide, and thiazide-like diuretics was associated with an increased risk of incident gout.