Nonsteroidal Anti-inflammatory Drugs and the Risk for Chronic Renal Disease

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Objective: To evaluate the risk for chronic renal disease associated with regular use of nonaspirin nonsteroidal anti-inflammatory drugs (NSAIDs).

Design: Multicenter case-control study.

Patients: Patients were 554 North Carolina residents (age range, 30 to 79 years) hospitalized between 1980 and 1982 with a discharge diagnosis indicating newly diagnosed chronic renal dysfunction and a serum creatinine level consistently at or above 130 µmol/L (1.5 mg/dL). Controls were 516 persons chosen randomly by telephone screening (if younger than 65 years of age) and from listings of Medicare recipients (if 65 years of age or older), frequency-matched to patients by age, race, sex, and proximity to study hospitals.

Measurements: Data on use of prescription NSAIDs and other analgesics before 1980, other risk factors, and potential confounders were obtained by telephone interviews. Patients were classified by frequency and duration of use; daily users were those who took an NSAID for at least 360 consecutive days.

Main Results: A twofold risk for chronic renal disease was associated with previous daily use of NSAIDs (adjusted odds ratio, 2.1; 95% CI, 1.1 to 4.1). Increased risk was predominantly limited to men older than 65 years, for whom the odds ratio for daily use was 10.0 (CI, 1.2 to 82.7) after adjusting for use of other analgesics. In other age-sex groups, the risk associated with NSAID use tended to be increased among those with heart disease or other factors that might indicate compromised renal circulation. These findings did not result from confounding by known renal disease risk factors and were not readily explained by potential biases.

Conclusions: Regular use of NSAIDs may increase the risk for chronic kidney disease in some high-risk groups. With the recent over-the-counter availability and increasing popularity of NSAIDs, the possibility of an increased risk for chronic renal disease associated with their use may warrant further scrutiny.

Topics
kidney failure, chronic ; anti-inflammatory agents, non-steroidal


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