

Abstract

Nonsteroidal anti-inflammatory drugs and nonmelanoma skin cancer

Nonsteroidal anti-inflammatory drugs (NSAIDs) have been assigned a promising role in the chemoprevention of various malignancies. However, epidemiological data on the association between NSAID use and nonmelanoma skin cancer (NMSC) are limited. To explore whether patients regularly exposed to systemic NSAIDs are at a reduced risk of basal cell carcinoma (BCC) or squamous cell carcinoma (SCC), we conducted a population-based case-control analysis using the Clinical Practice Research Datalink, a United Kingdom primary care database. We identified 65 398 patients with incident BCC and 7864 patients with incident SCC diagnosed between 1995 and 2013 and matched 1 and 4 NMSC-free controls to each BCC and SCC case, respectively, on age, sex, general practice, calendar time, and years of history in the database. We compared prior NSAID exposure between cases and controls using multivariate conditional logistic regression analyses controlling for several potential confounders. Overall, we found no association between NSAID use and BCC, but when looking exclusively at users of single NSAID substances there was a suggestion of a reduced BCC risk in regular users of aspirin and ibuprofen (adjusted odds ratio [adj. OR]: 0.92, 95% confidence interval [CI]: 0.85-0.99 and adj. OR: 0.61, 95% CI: 0.48-0.78, respectively). The risk of SCC was slightly decreased in regular users of any NSAIDs (adj. OR: 0.89, 95% CI: 0.82-0.97), with the strongest risk reduction observed in current users of coxibs (adj. OR: 0.77, 95% CI: 0.62-0.95). These findings provide evidence that patients predisposed to NMSC might benefit from chemoprevention with NSAIDs.