Clinical and epidemiological research

Risk of myocardial infarction with use of selected non-steroidal anti-inflammatory drugs in patients with spondyloarthritis and osteoarthritis

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Abstract

Objectives Spondyloarthritis (SpA) is associated with an increased risk of myocardial infarction (MI) due to underlying inflammation and possibly due to medications such as certain non-steroidal anti-inflammatory drugs (NSAIDs). We sought to describe MI risk among patients with SpA who were prescribed NSAIDs, and to compare the pattern of risk in SpA with that in osteoarthritis (OA).

Methods Nested case-control studies were performed using The Health Improvement Network (THIN). Underlying cohorts included adults with incident SpA or OA who had >1 NSAID prescription and no history of MI. Within each cohort, we matched each MI case to four controls without MI. NSAID use was categorised as: (a) current (prescription date 0–180 days prior to index date), (b) recent (181–365 days) or (c) remote (>365 days). We performed conditional logistic regression to compare the odds of current or recent NSAID use relative to remote use of any NSAID, considering diclofenac and naproxen specifically.

Results Within the SpA cohort of 8140 and the OA cohort of 244,339, there were 115 and 6287 MI cases, respectively. After adjustment, current diclofenac use in SpA was associated with an OR of 3.32 (95% CI 1.57 to 7.03) for MI. Naproxen was not associated with any increase (adjusted OR 1.19, 95% CI 0.53 to 2.68). A ratio of ORs for SpA/diclofenac relative to OA/diclofenac was 2.64 (95% CI 1.24 to 5.58).

Conclusions MI risk in SpA is increased among current users of diclofenac, but not naproxen. The MI risk with diclofenac in SpA appears to differ from that in OA.

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