Response to: 'Association between use of non-steroidal anti-inflammatory drugs and risk of myocardial infarction in patients with spondyloarthritis and osteoarthritis'

We wish to thank Zhou and colleagues for their letter.[1] As outlined in the published paper,[2] the myocardial infarction (MI) case definition was based on the diagnosis being recorded as a MI Read code in The Health Improvement Network (THIN), a validated means of identifying MI in pharmacoepidemiological studies.[3] Because THIN is based on general practitioner's coded records, the additional information Zhou *et al* suggested[1] is not systematically available. This was already acknowledged in the discussion section as a limitation, and we additionally described our internal MI validation study in the discussion section, in which 89% of MI cases had an administrative code supporting the occurrence of an MI; these codes included a hospitalisation, having had an ECG or angiogram performed and a referral to a cardiologist. Similarly, the definition of osteoarthritis is also outlined in the Methods section.

We recognise the importance of considering age as an effect modifier related to non-steroidal anti-inflammatory drug (NSAID) use and attempted to partly address this through the sensitivity analysis restricted to subjects aged 55–70.

The most frequent NSAID prescriptions are described in online supplementary table 1 from our paper.[2] The topic of NSAID dosage and frequency certainly deserves further study.

Finally, we are not aware of data demonstrating a relation of chondroitin to risk of MI. Systemic glucocorticoids are not recommended for the treatment of knee or hip osteoarthritis nor for spondyloarthritis according to the most recent American College of Rheumatology and European League Against Rheumatism guidelines; therefore, we expect low prevalence of use among subjects in this study. Further, these medications would be considered to be intermediates in the causal pathway, and therefore adjustment for any of those types of medications would induce bias.

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