Multimodal analgesia to reduce NSAID induced myocardial Infarction

We read with great interest the extended report by Dubreuil *et al* on 'Risk of myocardial infarction with use of selected non-steroidal anti-inflammatory drugs in patients with spondyloarthritis and osteoarthritis'.¹ This study raises interesting point that the use of certain non-steroidal anti-inflammatory drugs (NSAIDs) such as diclofenac increases the risk of myocardial infarction (MI) in patients with spondyloarthritis by twofold to threefold.

The treatment goal for patients with ankylosing spondylitis should be to maximise quality of life through: symptom control, minimising inflammation, prevention of structural damage and preservation/normalisation of function and social participation.^{2,3} NSAIDs are recommended by the European League against Rheumatism (EULAR) as first-line therapy in patients with spondyloarthritis in both short term and long term.⁴⁻⁶

The analgesic benefit of NSAIDs appears to be dose dependent, interestingly, so too is the risk of MI.^{7,8} Furthermore, Bhala and colleagues demonstrated that use of certain NSAIDs increase the risk of MI in people without a history of cardiovascular disease.^{7,9} Currently, EULAR recommends physicians to consider additional analgesics for residual pain after previous suboptimal treatments. Given the likely dose-dependent risk of MI, it may also be necessary to recommend the use a multimodal analgesic approach in an effort to reduce the required NSAID dosing.

Previously, a Cochrane review found that there was no added benefit when comparing monotherapy versus combination therapy in adults aged 18 years or older with diagnosis of inflammatory arthritis: rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis and other spondyloarthritis. However, previous studies do not report on the ability of additional analgesic agents to reduce the required dose of NSAIDs. Within the Cochrane review, three studies showed some benefit with the addition of paracetamol.¹⁰

It is worth noting that none of these studies assess the value of combination therapy for patients with inflammatory arthritis who have persistent pain despite optimal disease suppression. In this situation, it may be found that anti-inflammatory analgesic may be of no greater benefit than other simple analgesics such as paracetamol. Additional agents that may prove beneficial in reducing the required doses of NSAIDs, if not improving pain control in acute flares include pregabalin,¹¹ duloxetine,¹¹ tramadol,¹² tapentadol¹³ and buprenorphine.¹⁴

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