

# COCHRANE CORNER



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## ORAL ANALGESIA IN OSTEOARTHRITIS

So far, this year has seen two reviews published looking at oral analgesia in osteoarthritis: an updated review from **Ottawa (Canada)** looking at tramadol for osteoarthritis;<sup>1</sup> and another from **Sydney (Australia)** looking at paracetamol.<sup>2</sup> These are both clearly highly topical given the current focus and concern over opioid analgesia in terms of side-effect profiles. The Canadian authors conducted a large review and identified 22 randomized controlled trials evaluating the clinical effectiveness of tramadol as an analgesic intervention in the treatment of all types of osteoarthritis. The authors included all publications reporting the efficacy of tramadol or tramadol and another analgesic *versus* placebo or active control. A total of 6496 participants were reported in the 22 trials included in this review, the majority of whom had hip or knee osteoarthritis with moderate to severe pain. The authors established that there is moderate-quality evidence to show that no significant benefits were seen with the tramadol arms of the study for clinically important differences in pain and physical function, with only a few more participants in the tramadol arms deriving meaningful benefit over the control arms. We are aware of the side-effect profile of tramadol, which is now a controlled drug in the United Kingdom. Unsurprisingly, the study authors report 17% more participants suffering side effects from the tramadol arms; in those study groups, 12% more participants withdrew due to side effects. Taken as a whole, this review is highly significant; tramadol is an opioid and, in many parts of the world, is used as a drug of abuse. When combining the results of this review, which demonstrate limited clinical effectiveness, with the much-publicized work surrounding the opioid epidemic currently sweeping across the Western world, we do have to question the use of tramadol for controlling osteoarthritis pain. Paracetamol is generally a much safer drug and, in most of our practices, is the first-line analgesic that is recommended by the National Institute for Health and Care Excellence (NICE) in the United Kingdom, as well as being part of the first-line treatment for all painful conditions in the World Health Organization (WHO) pain ladder. The review team from Sydney sought to review the efficacy of this commonly used drug and, perhaps somewhat surprisingly, given how frequently it is prescribed worldwide, found just ten randomized placebo-controlled trials reporting effectiveness for patients with hip or knee osteoarthritis (n = 3541). However, the trials included were evaluated as providing high-quality evidence. The take-home message from this review is that there is high-quality evidence evaluating the use of paracetamol as an effective analgesic for managing osteoarthritis joint pain. The authors of this review

conclude that paracetamol showed no clinically important improvements in pain or physical function scores. This is perhaps a surprising finding, given the wide use of paracetamol. These two reviews highlight the difficulties associated with prescribing effective analgesic regimens for patients with osteoarthritic pain.

## WRIST FRACTURES IN CHILDREN

Authors from **Middlesbrough (United Kingdom)** reported their review of the evidence for treatments in paediatric wrist fractures, and found 30 trials that covered 14 different comparisons of stable and unstable or displaced fracture populations and both operative and nonoperative management.<sup>3</sup> These comparisons are clinically important, as undertaking operative intervention in children carries with it both the burden of complications and the risk of anaesthesia. While potentially seemingly equivalent, even a plaster cast can lead to loss of participation, difficulties at school, and care provision and school attendance issues when compared with a splint. These are important questions that have yet to be entirely answered. Key findings for children with buckle fractures included full return to previous function and no adverse events whatever the treatment across the comparisons in the trials. Notably, no difference was found in physical function at four weeks with removable splints *versus* below-elbow cast. Therefore, this evidence certainly supports the trend in the United Kingdom of management of these simple injuries with the least complicated approach, the use of splints, and early discharge. For children with displaced distal radius fractures, the authors undertook a separate analysis and evidence synthesis. The two most commonly undertaken interventions for these children are manipulation then treatment with either a plaster cast or Kirschner wires and casting. In this analysis of evidence, the review team go on to suggest that there may be no difference between wiring and plaster *versus* plaster alone in physical function at six months for displaced fractures that have been reduced. A note is, however, made of the low-quality evidence that does appear to suggest that surgery reduces the risk of treatment failure. This being said, the evidence certainly does not contradict common practice; where a good closed reduction is achieved, a well-moulded plaster should suffice without the need for wiring. There is clearly a need for further intervention studies here, as conclusions are far from firm in terms of the reduction of need for reintervention. The review also makes a note of the paucity of trial evidence for more serious wrist injuries, such as displaced fractures that are roughly aligned without formal reduction. Surgery for

these injuries are commonplace, but with the significant healing and remodelling potential in younger children, there is evidence to suggest that, in some cases, rough alignment in a plaster will lead to equivocal outcomes at a year. This is certainly an area for future research.

### FRACTURES OF THE MIDDLE-THIRD CLAVICLE

The management of fractures of the middle third of the clavicle have provoked much debate over the last few decades, although over the last few years we have developed a considerable evidence base with a number of large modern trials. Authors from **São Paulo (Brazil)** have undertaken the daunting task of performing a systematic review and meta-analysis looking at these trials, and have gone on to update the last published Cochrane review from 2013.<sup>4</sup> In their review, 14 studies (reporting the outcomes of 1469 cases) were deemed suitable for inclusion in this extensive evidence review. These trials included ten studies comparing plate fixation with sling/figure-of-eight bandage and four studies comparing intramedullary nail *versus* sling/figure-of-eight bandage. The authors of this review found no indication of benefit from surgery over conservative management with regard to function, pain, and quality of life at one year. They did note, however, that surgery may reduce the risk of treatment failure (i.e secondary surgery for nonunion). The authors report an incidence figure of 11.6% for symptomatic nonunion in the conservative treatment arms. It is quite likely that patients who unite their middle-third clavicle fractures do just as well following union from either treatment arm, as is suggested by the review. However, the high rate of secondary intervention and meta-analysis establishing an over 10% symptomatic nonunion rate really does highlight the clinical

difficulties of managing clavicle fractures. The aim in opting primarily for surgery in modern orthopaedic trauma practice would, therefore, be the prevention of nonunion, and this can be seen with a closer look at some of the modern trials. As is always the case, our treatment should be tailored in accordance with patient and fracture factors, weighing up the risk of symptomatic nonunion *versus* the risks of surgery for that individual patient. There are some well-established risk scores for predicting nonunion in clavicle fractures.<sup>5</sup> Taken in conjunction with evidence on timing of fixation, which suggests that, although nonunion surgery results in a higher complication rate, it is safe and equally effective to undertake delayed primary fixation,<sup>6</sup> there appears to be no need to rush into surgery.

### REFERENCES

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