

EDITORIAL

Post-operative pain management

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This month sees the landmark publication of an authoritative Cochrane overview of systematic reviews of oral analgesics for acute post-operative pain in adults.[1] The lead author, Professor Andrew Moore describes this study in this month's podcasts (click [here](#) to listen to the podcast).

Pain management is a routine feature of everyday medicine. To the uninitiated, post-operative analgesia is often considered a straightforward pain problem. After all, the extent and timing of tissue damage are predictable, the damage occurs normally in controlled circumstances in a clinical environment with access to analgesia, and in many societies there is choice of analgesic strategy. However, despite the ubiquity of pain and analgesic practice, post-operative pain management is commonly reported to be poor [e.g.], [2]. In part, the limited success of routine post-operative pain management may be due to a lack of clarity on the evidence base for different pain management interventions and strategies.

There is general agreement that poor acute pain management can have major personal, organisational, and financial costs. Pain is a major reason for consultation in primary care, a cause of prolonged hospital stay, and of patient dissatisfaction.[3] In addition, untreated acute pain is a significant predictor of chronic pain and disability, itself a major societal burden.[4] Effective pain management is a mark of a civilised society, and some have argued that it should be considered a basic human right.[5] Expertly synthesising the evidence in the service of those making analgesic decisions is a fundamental task.

This Cochrane overview of reviews examines the experience of 45,000 patients who consented to take part in approximately 350 clinical trials of single-dose oral analgesics interventions. All were reviewed previously in 35 separate systematic reviews of single doses of 38 drugs available in *The Cochrane Library*. Three additional non-Cochrane reviews with identical methods were also included. The data are summarised as the number needed to treat (NNT) for each treatment compared with placebo to achieve the desired outcome measure of obtaining a 50% reduction in pain at 4–6 hours post-operation. The majority of studies in the reviews assess the role of single-dose analgesics following third-molar extractions, although other operative models have been used.

This review teaches us a number of important lessons. The good news is that after more than 60 years of co-ordinated analgesic science, we have a large number of analgesic options. We are currently limited to indirect comparisons but it is interesting to

note that some commonly used analgesics have no high quality evidence of effectiveness, and others with strong evidence are rarely used and unavailable to many.

The review also provides methodological lessons. First, post-operative pain management is a useful place to attempt one of the early Cochrane overviews of reviews because there are standard and homogenous methods used in primary trials for decades. While this research industry is impressive, it is clear that the field is dominated by efficacy trials that show us how well a drug works in standard conditions after a single dose. These trials do not tell us how to get the best from these drugs for different conditions. This will involve different patients, surgical procedures, conditions, outcomes, and much longer follow-up. Analgesic science in the 21st century will involve a move away from a focus on the traditional narrow parameters needed to establish efficacy, to a concern for the individual, including non-pain outcomes, methods to establish starting, stopping and switching rules, and learning how to present findings in a helpful way to different stakeholders. Perhaps most importantly, this overview review offers a challenge to consider 'analgesic failure' as a clinically relevant outcome.

This overview, which was supported by programme grant funding from the UK National Institute for Health Research, is a considerable achievement on the part of the researchers. The Cochrane Pain, Palliative and Supportive Care Review Group (PaPaS, <http://www.papas.cochrane.org>) was pleased to have facilitated it. Further, this review is a major contribution to the pain community, appearing as it does in 2011, the International Association for the Study of Pain's global year of acute pain (<http://www.iasp-pain.org>). This year has seen many attempts internationally to raise awareness of optimal methods of post-operative pain management. Providing the evidence base for single-dose oral analgesics for post-operative pain is an important contribution in support of these efforts.

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Declarations of interest

The author has completed the Unified Competing Interest form at www.icmje.org/coi_disclosure.pdf available upon request) and declares (1) infrastructure funding to support the Pain,

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