

# Acute pain management: the evidence grows

*An Australian document now has an important role in acute pain management worldwide*

More than 50% of patients continue to have severe pain after surgery and trauma.<sup>1</sup> This situation not only results in unnecessary suffering, but occurs despite evidence that inadequate treatment of acute pain increases the risk of postoperative complications and may lead to persistent (chronic) pain. Indeed, operations and injuries are considered to contribute to at least 25% of the burden of chronic pain.<sup>1</sup>

These points were highlighted at a forum cosponsored by the International Association for the Study of Pain (IASP), the European Federation of IASP Chapters, and the World Health Organization on 11 October 2004. This forum launched the Global Day Against Pain in support of the declaration that in acute, chronic non-cancer and cancer pain, “the relief of pain should be a human right”, and that improvements in the management of pain, including acute pain, require “global education of health professionals, patients and their families”.<sup>1</sup>

In Australia, there has been long-standing awareness of the need to improve the management of acute pain. This was supported by the publication of the first edition of *Acute pain management: scientific evidence* by the National Health and Medical Research Council (NHMRC) in 1999.<sup>2</sup> At that time, the NHMRC and the Agency for Health Care Policy and Research in the United States were the only organisations worldwide to have produced evidence-based documents on the treatment of acute pain. More recently, this awareness has been highlighted by a number of high-level activities including the Pain Management Project of the National Institute of Clinical Studies,<sup>3</sup> the development of the *Operational principles for acute pain management* by the Victorian Quality Council<sup>4</sup> and the release of a *Statement on patients' rights to pain management* by the Australian and New Zealand College of Anaesthetists (ANZCA) and the Faculty of Pain Medicine (FPM), a multicolligate Faculty under ANZCA.<sup>5</sup>

International awareness of the need to improve the management of pain also continues to grow. The IASP held another Global Day Against Pain on 17 October 2005, which focused on pain in children.<sup>6</sup> The Global Day Against Pain is to become an

annual event. The IASP is also forming a special interest group on acute pain, which will further promote better management.<sup>7</sup>

Over recent years there has been an enormous increase in the amount of evidence available on the management of acute pain. Therefore, ANZCA and the FPM convened a working party to oversee a revision of the 1999 NHMRC acute pain document. To summarise the substantial amount of new evidence in a concise and easily readable form to help health care professionals and consumers, a large panel of contributors was appointed to draft sections of the document, and a multidisciplinary consultative committee (including medical, nursing, allied health and complementary medicine providers as well as consumers) was chosen to review drafts of the document and contribute more broadly as required. Evidence was annotated according to the levels recommended by the NHMRC.<sup>8</sup> In addition, many practical recommendations for the treatment of aspects of acute pain were included by the working party as “clinical practice points” because of their clinical relevance, even though they are not purely evidence-based.

The revised document<sup>9</sup> was approved by the NHMRC in June 2005 and launched at the World Pain Congress in Sydney in August 2005. It has already received widespread recognition with formal endorsement by the IASP and the Australian Pain Society. As it forms the basis for the section on acute and postoperative pain in the third edition of the IASP's *Core curriculum for professional education in pain*, its use worldwide is ensured.<sup>10</sup> It has also been endorsed by the Royal College of Anaesthetists in Britain and recommended by the American Academy of Pain Medicine to its members.

Much of the evidence relating to acute pain management comes from the hospital setting, but many of the principles can be extrapolated to other acute pain settings, such as managing pain from renal colic or migraine or the use of opioids and non-steroidal antiinflammatory drugs (NSAIDs). Examples of updated key messages and clinical practice points for the use of opioids, paracetamol, NSAIDs and cyclo-oxygenase-2 (COX-2) inhibitors are listed in the Box.

**Selected updated key messages and clinical practice points\*<sup>9</sup>**

**Opioids**

- Dextropropoxyphene has low analgesic efficacy (Level I evidence).
- In the management of acute pain, one opioid is not superior over others but some opioids are better in some patients (Level II evidence).
- Tramadol has a lower risk of respiratory depression and impairs gastrointestinal motor function less than other opioids at equi-analgesic doses (Level II evidence).
- Pethidine is not superior to morphine for treating pain of renal or biliary colic (Level II evidence).
- In adults, age is a better predictor of opioid requirements than weight, although there is a large interpatient variation (Level IV evidence).
- Assessing sedation level is a more reliable way of detecting early opioid-induced respiratory depression than a decreased respiratory rate (clinical practice point).
- The use of pethidine should be discouraged in favour of other opioids (clinical practice point).

**Paracetamol, non-steroidal anti-inflammatory drugs (NSAIDs) and cyclo-oxygenase-2 (COX-2) inhibitors**

- Paracetamol is an effective analgesic for acute pain (Level I evidence).
- NSAIDs and COX-2 inhibitors are effective analgesics with similar efficacy for acute pain (Level I evidence).
- NSAIDs given in addition to paracetamol improve analgesia (Level I evidence).
- COX-2 inhibitors and NSAIDs have similar adverse effects on renal function (Level I evidence).
- Paracetamol, NSAIDs and COX-2 inhibitors are valuable components of multimodal analgesia (Level II evidence).
- COX-2 inhibitors do not impair platelet function (Level II evidence).
- Gastric ulceration rates with short-term use of COX-2 inhibitors are similar to those for placebo (Level II evidence).
- Adverse effects of NSAIDs are significant and may limit their use (clinical practice point).
- The risk of adverse renal effects of NSAIDs and COX-2 inhibitors is increased in the presence of factors such as pre-existing renal impairment, hypovolaemia, hypotension, use of other nephrotoxic agents and angiotensin-converting enzyme inhibitors (clinical practice point).

Levels of evidence designated according to those recommended by the National Health and Medical Research Council.<sup>8</sup>

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As the field of acute pain medicine is changing rapidly, new information emerging in areas considered to be of importance will be reviewed by the working party and posted periodically on the ANZCA website (<http://www.anzca.edu.au/publications/acute-pain.htm>). A third edition of *Acute pain management: scientific evidence*

is planned for 2010. A revision of the consumer guide to acute pain management will also be available shortly at the above website.

Knowledge about acute pain medicine is growing too rapidly for individuals to keep abreast of it unaided. It is hoped that the updated guidelines will help clinicians and others approach acute pain treatment more effectively and safely, thus going some way towards reducing the suffering and improving outcomes of patients in our community.

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