

Combination proves effective for acute post-operative pain - A meta-analysis of single dose oral tramadol administered in combination with acetaminophen (paracetamol)

Results from a recent meta-analysis published in the European Journal of Anaesthesiology, showed the increased efficacy of the combination of tramadol with acetaminophen (paracetamol) for the treatment of acute post-operative pain.

The meta-analysis was done at the Oxford Pain Relief Unit at the University of Oxford in the United Kingdom.

Methods

Individual patient data from seven randomised, double blind placebo-controlled trials of tramadol plus acetaminophen (paracetamol) were used for analysis. All trials used identical methods and assessed single-dose oral tramadol (75 or 112.5mg) plus acetaminophen (650 or 975mg) in adult dental (1376) or gynaecological/orthopaedic (407) patients with moderate to severe pain. Summed pain intensity and pain relief data were extracted. Global evaluation by the patient was scored on a five point scale: poor, fair, good, very good, or excellent.

Results

The results of the meta-analysis confirmed that the tramadol/acetaminophen combination is more effective than either of its two components administered alone. The small dose of tramadol administered alone does not have much effect, but in combination with acetaminophen (paracetamol) it has an

effect that is greater than either individual component. The combination formulation also had significantly lower NNT (number-needed-to-treat) than the components alone, comparable to ibuprofen (400mg), the gold standard for this pain model.

Tramadol alone and acetaminophen (paracetamol) alone had NNT of about 12 and 8, respectively. However, the combination of tramadol and acetaminophen had a much improved NNT of just under 3.

Conclusions

The meta-analysis demonstrated the analgesic superiority of the combination treatment over its components, without additional toxicity. This is difficult to establish in individual conventional small size trials. "Combination analgesic formulations are an important and effective means of pain relief, and should prove useful in treating elderly and other groups of patients who often cannot tolerate non-steroidal anti-inflammatory drugs, including the newer COX-2 inhibitors," the study concluded.

Reference

McQuay H, Edwards J. Meta-analysis of single dose oral tramadol plus acetaminophen in acute postoperative pain. *Eur J Anaesthesiol.* 2003;20 Suppl 28:19-22.

