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Hyperalgesia in opioid-managed chronic pain and opioid-dependent patients.

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Abstract

This observational study aimed to determine whether pain sensitivity in patients with noncancer chronic pain, taking either methadone or morphine, is similar to patients maintained on methadone for dependence therapy, compared with a control group. Nociceptive thresholds were measured on a single occasion with von Frey hairs, electrical stimulation, and cold pressor tests. In all subjects receiving methadone or morphine, nociceptive testing occurred just before a scheduled dose. Cold pressor tolerance values in patients with noncancer, chronic pain, treated with morphine and methadone, were 18.1 +/- 2.6 seconds (mean +/- SEM) and 19.7 +/- 2.3 seconds, respectively; in methadone-maintained subjects it was 18.9 +/- 1.9 seconds, with all values being significantly ($P < .05$) lower than opioid-naïve subjects (30.7 +/- 3.9 seconds). These results indicate that patients with chronic pain managed with opioids and methadone-maintained subjects are hyperalgesic when assessed by the cold pressor test but not by the electrical stimulation test. None of the groups exhibited allodynia as measured using the von Frey hairs. These results add to the growing body of evidence that chronic opioid exposure increases sensitivity to some types of pain. They also demonstrate that in humans, this hyperalgesia is not associated with allodynia.

PERSPECTIVE: This article presents an observational study whereby the pain sensitivity of patients with chronic pain managed with opioids and opioid-maintained patients were compared with opioid-naïve patients. The results suggest that opioid use may contribute to an increase in the sensitivity to certain pain experimental stimuli.

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