

## InMEDIATE Study: Inhaled Methoxyflurane vs. Standard Analgesia



Pain is a common complaint among trauma patients. There are many reports indicating that adequate pain control not only provides patient satisfaction and comfort, but also leads to shorter hospital stays, early mobilisation, and easy administration of other treatments. Traditional analgesics such as narcotics are commonly used to manage traumatic pain. However, the administration of narcotic analgesics is often associated with adverse reactions, the need for repeated dosing and tolerance, and close monitoring. Also, the management of pain with narcotics is not always optimal because of lack of resources or time restraints, lack of training, patient reluctance, and aversion to opiates.

Over the years, the use of anaesthetics has slowly been promoted for the management of traumatic pain. However, not all anaesthetic agents are easy to use or administer. Some like nitrous oxide are effective analgesics but not convenient for use in an emergency room. Results of some agents are also conflicting as per various clinical studies.

Researchers from Spain conducted the first randomised multicenter trial of methoxyflurane in several emergency centers for the management of traumatic pain. The study enrolled adult patients with acute moderate to severe trauma pain from 14 Spanish emergency departments. 305 patients were randomised 1:1 to methoxyflurane (156) or standard analgesic (149) treatment. Coprimary endpoints noted were a change from baseline in the Numeric Rating Scale pain intensity during the first 20 minutes of treatment and the time to initial pain relief.

The researchers noted that patients who were administered methoxyflurane had a marked decrease in the baseline Numeric Rating Pain scale compared to patients who were managed with the traditional analgesic treatment at all points. The most significant difference was at 20 minutes. In addition, the median time for pain relief was 3 minutes for methoxyflurane versus 10 minutes for the traditional analgesic group. Overall, patients treated with methoxyflurane achieved far better clinical and patient ratings for comfort and pain control compared to the standard analgesic treatments. The pain relief provided by methoxyflurane surprised both clinician and patient expectations in 77% and 72% of patients, respectively, compared to the standard analgesic treatment (38% and 19%).

The overall conclusion of this study was that methoxyflurane, which is a non-narcotic, should be used more frequently to manage trauma pain. The drug is rapidly acting, easy to administer, and can be an option if the traditional analgesic treatments are not available or if the patient prefers a non-narcotic. Finally, methoxyflurane is a potent analgesic even at low dose, and has an established safety profile. There have been no reports of adverse effects like liver or renal toxicity after use of methoxyflurane, and it has no adverse effect on haemodynamics. The agent provides good analgesia within minutes, and its effects are rapidly reversible. Finally, the drug does not require any special storage conditions and can be administered via a mask.

Source: [Annals of Emergency Medicine](#)

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