

Partnering With Key Stakeholders for Successful Implementation of Inhaled Analgesia for Specific Emergency Department Presentations

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Abstract : Methoxyflurane is an inhaled analgesic administered via a disposable inhaler, which has been used in Australia for 40 years for the management of pain in children & adults. However, there is a lack of data for methoxyflurane as a frontline analgesic medication within the emergency department (ED). This study will investigate the usefulness of methoxyflurane in a private inner-city ED. The study concluded that the inclusion of all key stakeholders in the prescribing, administering & use of this new process led to comprehensive uptake & vastly positive outcomes for consumer & health professionals. Method: A 12-week prospective pilot study was completed utilizing patients presenting to the ED in pain (numeric pain rating score > 4) that fit the requirement of methoxyflurane use (as outlined in the Australian Prescriber information package). Nurses completed a formatted spreadsheet for each interaction where methoxyflurane was used. Patient demographics, day, time, initial numeric pain score, analgesic response time, the reason for use, staff concern (free text), & patient feedback (free text), & discharge time was documented. When clinical concern was raised, the researcher retrieved & reviewed patient notes. Results: 140 methoxyflurane inhalers were used. 60% of patients were 31 years of age & over (n=82) with 16% aged 70+. The gender split; 51% male: 49% female. Trauma-related pain (57%) saw the highest use of administration, with the evening hours (1500-2259) seeing the greatest numbers used (39%). Tuesday, Thursday & Sunday shared the highest daily use throughout the study. A minimum numerical pain score of 4/10 (n=13, 9%), with the ranges of 5 - 7/10 (moderate pain) being given by almost 50% of patients. Only 3 instances of pain scores increased post use of methoxyflurane (all other entries showed pain score < initial rating). Patients & staff noted obvious analgesic response within 3 minutes (n= 96, 81%, of administration). Nurses documented a change in patient vital signs for 4 of the 15 patient-related concerns; the remaining concerns were due to "gagging" on the taste, or "having a coughing episode"; one patient tried to leave the department before the procedure was attended (very euphoric state). Upon review of the staff concerns - no adverse events occurred & return to therapeutic vitals occurred within 10 minutes. Length of stay for patients was compared with similar presentations (such as dislocated shoulder or ankle fracture) & saw an average 40-minute decrease in time to discharge. Methoxyflurane treatment was rated "positively" by > 80% of patients - with remaining feedback related to mild & transient concerns. Staff similarly noted a positive response to methoxyflurane as an analgesic & as an added tool for frontline analgesic purposes. Conclusion: Methoxyflurane should be used on suitable patient presentations requiring immediate, short term pain relief. As a highly portable, non-narcotic avenue to treat pain this study showed obvious therapeutic benefit, positive feedback, & a shorter length of stay in the ED. By partnering with key stake holders, this study determined methoxyflurane use decreased work load, decreased wait time to analgesia, and increased patient satisfaction.

Keywords : analgesia, benefits, emergency, methoxyflurane

Conference Title : ICAA 2020 : International Conference on Anesthesia and Analgesia

Conference Location : Paris, France

Conference Dates : November 19-20, 2020