

We describe the prehospital analgesia administered to wartime pediatric trauma patients” Schauer et al (2018).

Abstract:

BACKGROUND: Previous studies have evaluated prehospital analgesia during combat operations in Iraq and Afghanistan, but were limited to the adult population. However, a significant portion of the casualties of those conflicts were children. We describe the prehospital analgesia administered to wartime pediatric trauma patients.

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METHODS: We queried the Department of Defense Trauma Registry (DODTR) for all pediatric patients (<18 years of age) admitted to United States and Coalition fixed-facility hospitals in Iraq and Afghanistan from January 2007 to January 2016. We divided pediatric patients into 2 groups: those that had documentation of receipt of analgesic drugs in the prehospital setting (n = 618) and those who had not received analgesia before reaching a fixed-facility (n = 2,821). For characterization of drug administration, we grouped patients into those receiving acetaminophen, NSAID, fentanyl, ketamine, morphine, or other analgesics (e.g., hydromorphone, tramadol, etc.). **RESULTS:** During the study period, there were 3,439 pediatric encounters with documentation of 703 instances of analgesia administrations to 618 patients (17.9% of total pediatric encounters). Of the subjects receiving analgesic agents, 46.2% (n = 325) received morphine, 30.4% (n = 214) received fentanyl, 17.4% (n = 122) received ketamine, 1.8% (n = 13) received acetaminophen, and 2.8% (n = 20) received a non-steroidal anti-inflammatory drug. The remaining 9 administrations consisted of methoxyflourane (1), nalbuphine (2), hydromorphone (3), and tramadol (3). An injury severity score (ISS) >15 increased the odds of receiving an analgesic agent (OR 1.26, 95% CI 1.02-1.56). Additionally, there was an association between analgesia administration and the following prehospital interventions: wound dressing, tourniquet, intravenous (IV) line placement, intraosseous line placement, IV fluids, intubation, and external warming.

CONCLUSIONS: Overall, a low proportion of pediatric trauma subjects within this



population received analgesia in the prehospital environment. The most common analgesic medication administered was morphine. Those receiving analgesic agents had more severe injuries and higher rates of concomitant interventions. These results highlight the potential need for Tactical Combat Casualty Care guidelines specifically providing recommendations for analgesia administration among pediatric patients.

Reference:

Schauer, S.G., Arana, A.A., Naylor, J.F., Hill, G.J. and April, M.D. (2018) Prehospital Analgesia for Pediatric Trauma Patients in Iraq and Afghanistan. Prehospital Emergency Care. February 7th. .

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