

Evaluating Changes in Vital Signs of Multiple Trauma Patients with extremity or Pelvic Fracture after Resuscitation Based on Receiving or Not Receiving Intravenous Analgesics

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Abstract

Introduction: Trauma is among the injuries associated with a high prevalence of pain and little treatment for it. Pain can change vital signs and especially cause tachycardia due to sympathetic activity. This can distort our assessment of the patient's shock; therefore, the present study evaluates the effect of prescribing analgesics on vital signs and hydration in trauma patients with extremity or pelvic fractures. **Methods:** 325 trauma patients over the age of 16 with extremity or pelvic fractures and GCS score of 14 or 15 were evaluated regarding changes in vital signs and receiving crystalloid in 2 groups of with and without analgesic administration. **Results:** 325 patients were divided into 2 groups of with (263 patients) and without (62 patients) analgesic administration. 80.9% of the patients received analgesics. In the group receiving analgesics, on average heart rate decreased from 103 to 95 ($p < 0.001$). However, it did not affect blood pressure and the respiratory status of the 2 groups receiving analgesics or not showed a significant difference. The group receiving analgesics received more crystalloids. **Conclusion:** Pain management in trauma leads to improvement in tachycardia and probably our better understanding of presence or absence of shock in the patient. Therefore, it is recommended to move the evaluation and treatment of acute trauma pain from the secondary survey in trauma to the D phase of the primary survey.

Key words: Multiple trauma; pain management; analgesic; vital signs
