An audit on analgesic provision in major trauma patients

Introduction:

Major trauma is well documented as a significant cause of lasting morbidity and mortality in the UK. It is associated with pain in both the acute and chronic phases resulting in significant physiological, psychological and socioeconomic stresses that may prolong the recovery process. Adequate pain management is, therefore, an important variable in patient outcomes. There is recognition throughout the literature of the need for an intensive multi-modal approach with regular clinical assessment in achieving definitive pain management. This audit aims to identify areas for quality improvement in analgesic provision to major trauma patients at a tertiary trauma centre.

Methods:

A retrospective review of the written and electronic notes record was performed of 67 patients referred to the major trauma service between 4th March and 25th March 2019. Patients were included if they met the TARN criteria for major trauma and could provide reliable verbal pain ratings. For each patient, the documented pain scores at presentation and up to 48 hours after admission to the ward were recorded. Documented analgesia in the Emergency Department (ED), on the ward and in the pre-hospital setting was included to provide context. The data was then compared against national guidelines, existing guidelines in other NHS Trusts and the wider literature.

Results:

86.9% of 61 patients scored at admission presented with a mean pain score of 1.97/3. 40.3% of patients received IV morphine first line, in accordance with NICE guidance. Of those that didn’t, only 20% presented with no pain. 20.9% were not pain scored to assess response and only 23.9% of patients received more than one dose of analgesia in the ED. The mean time to follow-up analgesia was 4.9 hours. 14.9% of patients had achieved definitive pain control before transfer. Only 32.8% were treated with multiple modalities in the ED. On the ward, consistent pain scoring improved from 28.4% to 94% and mean pain score improved by 47.7%. 47.5% achieved definitive pain management by 48 hours, associated with regular use of appropriate and multi-modal analgesia.

Conclusions:

There is a clear need for a more robust approach to early analgesic provision and pain scoring, both in the acute phase and on the ward. The variability in both patient experience and quantification of pain cannot be underestimated and it should be noted that inclusion in a major trauma classification is not necessarily associated with high pain scores or analgesic demand. Nevertheless, 85% of patients not achieving timely definitive pain management has an immeasurable impact on patient outcomes. Improvements can be made in the consistency and documentation of pain scoring and increasing accessibility to alternate analgesic modalities in the acute setting. The ED agreed to training and a trial period of prescribing opioid patient-controlled analgesia in response to the data collected. The development of a local guideline specifically for major trauma pain management and encouraging use of existing guidelines on prescribing in acute pain will help streamline the process and improve staff confidence in managing these patients in line with the recommendations made in the wider literature.