initial trauma. During a median follow-up of 2.6 years (IQR: 1-5), 192 participants (0.30%; 95%CI: 0.25%-0.35%) were hospitalized for OP and 73 (0.10%; 95%CI: 0.07%-0.13%) were diagnosed with OUD. Having filled an opioid prescription within 3-months of injury was associated with an increased hazard ratio of OP (2.6; 95%CI: 1.9-3.5) and OUD (4.0; 95%CI: 2.3-7.0). However, history of OP (2.7; 95%CI: 1.2-6.1), of substance use disorder (4.3; 95%CI: 2.4-7.9), or of opioid prescription filled (2.7; 95%CI: 2.1-3.5) before trauma were also related to OP or OUD. **Conclusion:** Opioid poisoning and opioid use disorder are rare events after hospitalization for trauma in older patients. However, opioids should be used cautiously in patients with history of substance use disorder, opioid poisoning or opioid use during the past year.

Keywords: opioid poisoning, opioid use disorder, trauma

LO92

The effect of prehospital intravenous fluids on mortality in trauma: a systematic review and meta-analysis

M. Davison, MD, MSc, M. Schenk, MD, R. Ohle, MD, D. Savage, MD, PhD, J. Scully, HBA, S. Regalado, MA, MISt, A. Affleck, MD, Northern Ontario School of Medicine, Sudbury, ON

Introduction: Hemorrhage is the primary cause of death in 39% of trauma patients. In prehospital trauma management, there is debate over pursuing a 'scoop-and-run' approach versus early intravenous (IV) fluid therapy. We evaluated the literature regarding the effect of prehospital IV fluid therapy on mortality in adult trauma patients. **Methods:** A librarian-assisted search was conducted in PubMed, Medline and Embase. The population was adults with blunt and/or penetrating trauma. The intervention was total prehospital IV fluid volume 0-500 mL, and the control was prehospital fluid volume >500 mL. The outcome of interest was in-hospital mortality. Randomized controlled trials (RCTs), cohort and case-matched studies were included. Two reviewers used the Cochrane Risk of Bias (RoB) and Risk of Bias in Non-randomized Studies of Interventions (ROBINS-I) tools to evaluate biases, and kappa was calculated for inter-rater agreement. A summary relative risk (RR) of in-hospital mortality was calculated and heterogeneity (I2) analysis performed using RevMan 5 software. **Results:** Four RCT's and eleven observational studies were identified, with n = 15,448 patients. Two RCTs and four observational studies were excluded due to non-English language, and the location or volume of IV fluid administered, leaving eight studies with n = 4,568 patients. Inter-rater agreement was high with the ROBINS-I (unweighted κ=0.8841) and RoB tool (unweighted κ=0.8276). Two studies found decreased mortality, one found increased mortality, and five found no significant relationship to mortality with 0-500 mL prehospital IV fluid. The summary relative risk of mortality with 0-500 mL IV fluid compared to >500 mL IV fluid was not significant (RR = 0.98 [0.87, 1.11]). The heterogeneity for all studies was high (I2 = 84%), but was low (I2 = 0%) with removal of two studies. **Conclusion:** The majority of studies did not find a relationship between the volume of prehospital IV fluids and in-hospital mortality. Study heterogeneity was low except for two studies: this may be explained by mortality only being recorded at emergency department discharge in one study, and the high rate of penetrating gunshot and stabbing wounds in the other. There is a paucity of high-quality RCTs on the topic, and many studies are at significant risk of bias. Further research is needed to delineate the best approach to IV fluid therapy in adult trauma patients.

Keywords: intravenous fluid, prehospital, trauma

LO93

A single center randomized control trial of intravenous lidocaine for the management of traumatic rib fractures

P. Patton, MD, MSc, K. Vogt, MD, MSc, N. Parry, MD, F. Priestap, MSc, I. Ball, MD, MSc, Western University, London, ON

Introduction: Traumatic rib fractures (RF) are a common occurrence with 10% incidence in all trauma patients and are associated with significant morbidity and mortality. Adequate analgesia is paramount for preventing pulmonary complications and reducing morbidity and mortality. There is evidence of intravenous (IV) lidocaine's effectiveness and safety in the post-operative thoracic and abdominal surgical patient and we hypothesize that it may be ideal in trauma patients with RF. We evaluated IV lidocaine's analgesic efficacy in this population. **Methods:** A single-centre, double-blind, randomized control trial comparing a 72-96 hour IV lidocaine infusion plus standard analgesics to placebo infusion plus standard analgesics. Participants were adult trauma patients diagnosed with two or more RFs requiring hospital admission. A total of 36 patients were enrolled over 5 months in 2019. The study was powered to detect a 20% reduction in pain scores, which is determined to be clinically significant. **Results:** The primary outcome was mean pain score at rest and with movement, as measured on the Visual Analog Scale (VAS). There were consistent trends toward reduced VAS pain scores at rest and with movement in the lidocaine group as compared to placebo group with mean scores of 3.49 [SD 2.02 95% CI] and 7.08 [SD 1.71 95% CI] in the lidocaine group and 3.83 [SD 1.93 95% CI] and 8.03 [SD 1.44 95% CI] in the placebo group, at rest (p value 0.624) and with movement (p value 0.110), respectively . Secondary outcomes were patient satisfaction as measured on the VAS which demonstrated a score of 7.79 [SD 1.82 95% CI] in the lidocaine group and 6.63 [SD 1.77 95% CI] (p = 112) in the placebo group, and total morphine equivalents (ME) used (including breakthrough doses) that demonstrated a trend towards a reduction in the lidocaine group with 210.9 mg [SD 180.0 95% CI] compared to the placebo with total ME used of 309.9 mg [SD 221.8 95% CI]. Other secondary outcomes were protocol adherence, incidence of respiratory failure, hospital and ICU length of stay, mortality, incidence of lidocaine toxicity, and treatment regimens (non-opioid analgesics). **Conclusion:** These results demonstrate a trend towards lidocaine's analgesic benefit during rest and the critical times of patient movement and mobility, which has been demonstrated to be paramount in the reduction of respiratory complications from rib fractures. The results also tend towards a reduction in morphine equivalents, although the trial was not powered to demonstrate this

Keywords: pain management, traumatic rib fractures

LO94

Evaluation of stroke and bleeding outcomes among patients managed in the emergency department for newly diagnosed atrial fibrillation

S. Niaz, MD, C. Kirwan, BSc, N. Clayton, RA, M. Mercuri, BSc, PhD, K. de Wit, MBChB, MD, MSc, McMaster University, Hamilton, ON

Introduction: Atrial Fibrillation (AF) is the most common arrhythmia seen in patients presenting to the emergency department (ED). AF increases the risk of ischemic stroke which can be mitigated by anticoagulant prescription. National guidelines advise that emergency physicians initiate anticoagulation when AF is first diagnosed. We aimed to evaluate the 90-day incidence of stroke and major bleeding

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