Results: We reviewed 1,408 studies and selected 44 for full review (kappa = 0.70). Thirty-three were excluded due to wrong patient population and non-analgesic use of ketamine. Eleven studies with 1,249 participants were included - six randomized control trials (RCTs) and five observational studies. All of which had an overall low risk of bias. There was extensive variation in the dose and route of LDK used (0.1 - 0.7 mg/kg SC/IV/IM), administration protocols, and use of adjunct analgesia. There is a lack of high quality data regarding the use of LDK as an analgesic agent in the ED. However, the current moderate quality data demonstrates a significant analgesic effect of LDK with occasional need for rescue analgesia and neuropsychological adverse events. Commonly reported neuropsychological adverse events included dizziness, dysphoria, and confusion, rarely agitation or hallucinations. All adverse events were self-limited or occasionally required benzodiazepines for resolution. **Conclusion:** Our GRADE evidence table identified moderate quality evidence from six RCTs supporting the analgesic effect of LDK for acute pain management in the ED when compared to using opioids alone.
Keywords: pain, low-dose ketamine

LO049

Ibuprofen or oxycodone? An observational cohort study of post-emergency department discharge management of children's fracture pain

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Introduction: Pediatric fracture pain is under-treated both in the emergency department (ED) and after discharge. Oral opioids and ibuprofen are amongst the top medications used to treat this pain. This study describes the post ED discharge effectiveness and safety of ibuprofen and oxycodone. **Methods:** A prospective cohort observational study was conducted at the Stollery Children's Hospital (Edmonton, Alberta) from June 2010 to July 2014. Children aged 4-16 years, with an acute fracture, who were being discharged home with *either* ibuprofen (Ibu) or oxycodone (Oxy) for pain management were eligible for recruitment. Patients were contacted daily for three days, and at 2 and 6 weeks post-injury. Information regarding medication use, pain levels (with the Faces Pain Scale, Revised), adjuvant therapies, adverse events, and side effects and follow up was collected. **Results:** A total of 329 children (n = 112 Oxy, n = 217 Ibu) were included. Mean age was 10.4 years (Ibu), and 12.3 years (Oxy); 68% (n = 223) were male. Fracture types included forearm/wrist (47%,n = 154), lower leg/ankle (14%,n = 46), shoulder/clavicle (13%,n = 42), and upper arm/elbow (12%,n = 39). Reductions were performed in 34% of cases (n = 113), while 9% (n = 29) had buckle fractures. Children receiving Oxy had their eating, sleeping, play, and school attendance affected more than those receiving Ibu. More children receiving Oxy (81%, 91/112) experienced an adverse effect than those receiving Ibu (61%, 129/213) (p = 0.0002); abdominal pain, dizziness, drowsiness, nausea, and vomiting were most prominent. The change in pain score (maximum pain - post-treatment pain) for Day 1 was 3.79 for Oxy and 3.61 Ibu; Day 2 was 3.68 Oxy and 3.55 Ibu; Day 3 was 3.34 Oxy and 3.66 Ibu. On Day 1, 59% (66/112) of Oxy cohort patients used other medication(s) for their pain treatment; 19% (41/213) did the same in the Ibu cohort. **Conclusion:** Ibuprofen and oxycodone provide similar pain relief for children with post-Ed discharge fracture pain. Oxycodone has greater impact on activities of daily living, side effects, and use of other medications to relieve pain. Oxycodone does not appear to confer any benefit over ibuprofen for pain relief, and given its negative side effect profile, this study suggests that ibuprofen is the better option. Further research is needed to determine the best combination treatment for fracture pain for children.
Keywords: opioid, pain, pediatric

LO050

The predictive value of pre-endoscopic risk scores to predict adverse outcomes among emergency department patients with upper gastrointestinal bleeding - a systematic review

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Introduction: Patients with upper gastrointestinal bleeding (UGIB) are at risk for serious adverse events (SAE) after emergency department (ED) discharge. Endoscopy can aid in risk stratification but is not easily available. Therefore, stratifying using pre-endoscopic risk scores can aid ED physicians in disposition decisions. The aim of this study was to conduct a systematic review to assess the predictive value of pre-endoscopic risk scores for risk-stratification of ED UGIB patients. **Methods:** We searched 4 databases from inception to March 2015 with search terms related to "UGIB" and "ED". Inclusion criteria were: 1) adult UGIB patients presenting to the ED; 2) risk scores without endoscopic predictors developed and validated in variceal and non-variceal UGIB patients. We excluded case reports, reviews, abstracts, animal studies and commentaries. In 2 phases (screening and full-review), 2 reviewers independently screened articles for inclusion. SAE included 30-day death, recurrent bleeding and need for intervention. Two reviewers independently extracted patient level data and the consensus data was used for analysis. We report kappa for the article selection, and pooled sensitivity, specificity, positive and negative predictive value, positive and negative likelihood ratios and accuracy with 95% CI for the risk scores. **Results:** We identified 3,173 articles, of which 3,065 were excluded in phase I (kappa 0.88, 95% CI 0.83-0.93). In phase II, we included 16 of the 108 remaining articles (kappa 0.84, 95% CI 0.70-0.97); 3 studied Glasgow Blatchford Score (GBS), 1 clinical Rockall score (cRockall) and 2 AIMS65; 6 compared GBS and cRockall, 3 compared GBS, a modification of the GBS and cRockall and 1 compared the GBS and AIMS65. Overall, the accuracy of the GBS, cRockall and AIMS65 was 0.47 (95% CI 0.46-0.47), 0.47 (95% CI 0.46-0.49) and 0.62 (95% CI 0.61-0.62), respectively. The accuracy for the GBS with a cut-off score of 2 was 0.73 (95% CI 0.71-0.74). **Conclusion:** None of the risk scores identified by our systematic review were robust and hence, cannot be recommended for use in clinical practice. However, the GBS with a cut-off score of 2 was superior over other risk scores. Future prospective studies are needed to develop robust new scores for use in ED patients with UGIB.
Keywords: upper gastrointestinal bleeding, risk stratification, emergency department

LO051

Validation of a clinical decision rule to detect patients with adverse drug events in the emergency department

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Introduction: Adverse drug events (ADE) are a leading cause of emergency department (ED) visits, yet are missed in up to 50% of presentations. In 2014, Accreditation Canada, a not-for-profit

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