

P126**Analysis of acute pain management in the emergency department of a large private hospital in Cape Town, South Africa**

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Introduction: Pain is a common presenting complaint amongst emergency department (ED) patients. Evidence suggests that pain is often inadequately and inconsistently treated resulting in oligoanalgesia. Patients that do not have their pain timeously recognised and treated end up with an inferior patient experience in the ED. It was speculated that pain management in Panorama Mediclinic ED was not optimal and an in-depth analysis of pain management trends was performed in order to lead to a targeted intervention which would result in better care in the ED. **Methods:** A convenience sample of 100 random folders was collected from May-July 2015. Folders with presenting complaints excluding pain and children under 10 years of age were excluded. The data were collected onto a password protected Excel database and analysed using basic descriptive analysis. **Results:** 44% of patients included were green triage category, 30% yellow, 23% orange and 1% red. 82% of patients presented with verbal pain scores greater than 5/10. The average time to receive analgesia was 60.26 minutes. 33.3% of patients only received analgesia after being in the ED for >60 minutes. Of those patients receiving delayed analgesia, the majority of their pain scores were between 6-8/10. Abdominal and extremity pain together consisted of 51% of the anatomical pain distribution. 29% of the patients sampled received no analgesia during their visit to the EC and the majority of their pain scores were between 3-6/10. Intravenous acetaminophen, intravenous opioids and intramuscular opioids are by far the most common pharmaceutical agents to treat acute pain in this ED. **Conclusion:** This study demonstrated that acute pain is not well managed in the ED of Panorama Mediclinic. Subsequently an acute pain management protocol was implemented in which all patients with pain scores greater than 5/10 are offered early analgesia on initial presentation to the ED by the triage nurse.

Keywords: pain, analgesia, pain management

P127**Use of nt-probnp biomarker amongst cardiologists and emergency physicians to diagnose acute heart failure in the undifferentiated dyspneic emergency patient**

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Introduction: Diagnosing the undifferentiated dyspneic emergency department (ED) patient remains a challenge for clinicians; in order to rule in or out acute heart failure (AHF) natriuretic peptide biomarker testing has evolved and is recommended by cardiology international guidelines to be utilized in these presentations. However there is equipoise in the emergency community for its use, largely due to perceived modest test specificity. We sought to analyze this apparent clinical dichotomy as part of a multicenter trial of undifferentiated dyspneic ED patients. **Methods:** Patients with dyspnea presenting between October 2010 and October 2013 to one of four ED sites -2 Canadian, 1 American, 1 New Zealand- were assessed by certified staff emergency physicians (EPs) and their chest Xray reviewed. Those patients with undifferentiated dyspnea with a potential for AHF (ie further investigated or treated for AHF but investigated and/or treated for another cause) were consented and enrolled. Two of the sites (American, New Zealand) had NT-proBNP assay ordered as a standard

of care for these patients; the other 2 sites did not. At the end of Emergency care, the EP recorded the primary diagnosis of the dyspnea- either "AHF" or "Not AHF." Blinded adjudication was carried out by 2 cardiologists after reviewing sequential records: first, with index ED records but no NT-proBNP result; second, with the NT-proBNP result and lastly, with follow up 60 day records (deemed the gold standard diagnosis). EP accuracy between NT-proBNP and no NT-proBNP sites and NT-proBNP accuracy using standard cutpoints were calculated, as were the number of adjudicated cases influenced by exposure to NT-proBNP. **Results:** 197 patients were enrolled, 107 at NTproBNP sites and 90 at the other 2 sites. EP accuracy was 76% for either site. NT-proBNP used as a binary test with recommended age-stratified cutoffs had 80% accuracy, applied to 70% of patients (30% remained in "gray zone"). Cardiology adjudicators reversed 16% of initial diagnoses upon exposure to NT-proBNP result, ultimately diagnosing 41% of patients with AHF. **Conclusion:** This study supports the clinical equipoise amongst emergency physicians compared to cardiologists for the use of NT-proBNP in diagnosing acute heart failure in the undifferentiated dyspneic Emergency patient.

Keywords: acute heart failure, biomarkers

P128**Patterns of injurious falls on snow and ice in public pedestrian areas**

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Introduction: Maintenance of public pedestrian walkways to ensure safety can be onerous during Canadian winters. The costs of maintenance should be weighed against the potential for reducing injuries related to falls. Ice and snow covered surfaces can increase the chance of falling by 3.5 times compared to normal concrete surfaces. The objective of this study is to examine patterns of injury occurrence in persons injured when falling due to snow or ice in public areas. **Methods:** We identified persons presenting to emergency departments in Kingston, ON for treatment of injuries related to falls on ice or snow for a 5 year period ending in March 2015 using data from the Canadian Hospital Injury Reporting and Prevention Program (CHIRPP). Within CHIRPP, there is a series of variables that describes the injury event, location and circumstances. Hospital medical records were reviewed for additional information on anatomic injuries sustained and subsequent use of hospital based resources. Variables were managed and assessed in Excel. A descriptive analysis examined distributions of variables by subgroups of injury occurrence. **Results:** 674 injury cases of falls on snow and ice were identified. 316 cases (46.9% of cases/ about 60 per year) occurred in public pedestrian areas, the group of primary interest. Of these: 88 cases (27.8%) resulted in fractures; 68 (21.5%) were soft tissue injuries; 46 (14.6%) were head injuries, concussions or intracranial injuries; and 40 (12.7%) were sprains or strains. Of the fractures, 37 (42.0%) involved the upper limb and 33 (37.5%) involved the lower limb. 72 (81.8%) of fractures were managed in the emergency department with orthopedics referral or follow up. The large majority of sprains or strains (85.0%), soft tissue injuries (80.9%) and head injuries (82.6%) were managed in the emergency department without plans for hospital based follow up. **Conclusion:** Falls on snow and ice frequently occur on public pedestrian areas. The resulting injury can be significant, leading to fractures in upper and lower limbs. These fractures require more use of hospital based resources than other injury types. It is hoped that providing municipal decision makers with information on the frequency and severity of these injuries will lead to improved snow and ice removal in public pedestrian areas.

Keywords: falls, fracture