low back pain could be reduced by 28 per 100 patients using a model that incorporates sex, age >65, and trauma. **Conclusion:** Serious low back pathology is extremely rare in patients presenting with low back pain. Combinations of red flags readily available in emergency departments have the potential to reduce unnecessary imaging tests.
Keywords: low back pain, diagnostic imaging, red flags

LO76

Can emergency physicians perform carotid artery ultrasound to detect severe stenosis in patients with TIA and stroke?

R. Suttie, MD, M.Y. Woo, MD, J.J. Perry, MD, MSc, L. Park, BHSc, G. Stotts, MD, University of Ottawa, Department of Emergency Medicine, Ottawa, ON

Introduction: Carotid artery stenosis (CAS) is a common cause of stroke. Patients with severe, symptomatic CAS can have their subsequent stroke risk reduced by carotid endarterectomy or stenting when completed soon after a TIA or non-disabling stroke. Patients presenting to a peripheral ED with TIA/stroke, may require transfer to another hospital for imaging to rule-out CAS. The purpose of this study was to determine the test characteristics of carotid artery POCUS in detecting greater than 50% stenosis in patients presenting with TIA/stroke. **Methods:** We conducted a prospective cohort study on a convenience sample of adult patients presenting to a tertiary care academic ED with TIA/stroke between June and October 2017. Carotid POCUS was performed by a trained medical student or a trained emergency physician. Our outcome measure, CAS >50% was determined by the final radiology report of CTA imaging by a trained radiologist, blinded to our study. A blinded POCUS expert reviewed the carotid POCUS scans. We calculated the sensitivity and specificity for CAS >50% using carotid POCUS versus the gold standard of CTA. **Results:** We enrolled 75 patients of which 5 did not meet inclusion criteria. The mean age was 70.4 years, 57% were male. 16% were diagnosed with greater than 50% CAS. 47% were stroke codes and 37% were admitted to hospital. Carotid POCUS had a sensitivity and specificity of 72% (46%-99%) and 88% (80%-96%) respectively. There were three false negatives of which two were exactly 50% ICA stenosis on CTA and the other was 100% occlusion of the distal ICA. Kappa coefficient for inter-rater reliability between standard and expert interpretation was 0.68 for moderate agreement. The scan took a mean time of 6.2 minutes to complete. **Conclusion:** Carotid POCUS has moderate correlation with CTA for detection of CAS greater than 50%. Carotid POCUS identified all the critical 70-99% stenosis lesions that would need urgent surgery. Further research is needed to confirm these findings.
Keywords: stroke, point-of-care ultrasound, transient ischemic attack

LO77

Predictors of adverse self-reported 10-day outcomes in emergency department patients with acute ureteral colic

G. Innes, MD, MSc, L. Cuthbertson, BHSc, MEd, F. Scheuermeyer, MD, MHSc, J. E. Andruchow, MD, MSc, H. Boyda, PhD, J. Brubacher, MD, MSc, University of Calgary, Alberta Health Services, Calgary, AB

Introduction: Our objective is to investigate predictors of adverse patient reported outcomes during the 10 days after an index emergency department (ED) encounter for ureteral colic. **Methods:** This prospective two-city patient experience survey enrolled ED patients with confirmed 2-10 mm ureteric stones. Researchers telephoned consenting patients 10 days post-ED visit and assessed quality of life (QoL) using survey items from the VR-12 Health Outcome Survey. We used five survey items and three other variables to derive a composite measure of patient adverse experience (AE). The association between patient characteristics, symptoms and perceptions of care with outcome was determined using multiple logistic regression. **Results:** Of 224 patients studied (68% male, mean age 52 years) 154 (68.8%) indicated that one or more of the following AEs occurred during their 10 day followup interval: 103 (46%) reported that the impact of pain on their life was >4/10; 87 (39%) described poor or fair health status; 83 (37%) required >7 days for return of normal function; 66 (27.7%) had >2 severe pain episodes per day; 62 (27.7%) required ED revisit or hospitalization; 47 (21%) found usual activities were limited most or all the time; 45 (20%) required >2 opioid doses/day; and 24 (10.7%) lost >7 work days. A composite measure derived from 3 survey items (days to normal, pain impact, health status) captured 92% of patients with adverse experiences. On multivariable logistic regression modeling, the strongest predictors of adverse (composite) outcome were male sex (adjusted OR = 0.44; CI, 0.22-0.85), (excellent) quality of physician answers (OR = 0.40; CI,0.2-0.77), proximal or mid-ureteric stone (OR = 1.9; CI, 1.1-3.5), arrival pain severity (OR = 1.18 per unit increase; CI,1.01-1.4), and perceived physician skill (OR = 0.81; CI, 0.65-1.0). Patient age, stone size, pain duration, nausea, discharge pain and perceived ED care quality were not independent predictors of 10-day adverse patient experience in multivariate models. **Conclusion:** Patient sex, quality of physician communication, patient sex, arrival pain severity, and proximal stone location are highly associated with 10-day patient reported AE.
Keywords: renal colic, patient adverse experiences, quality of life

LO78

Point-of-care ultrasound compared with manual palpation for the detection of a carotid pulse in live models: a randomized cross-over study

K. Badra, MD, C. Alexandre, BSc, R. Simard, MD, J. Lee, MD, MSc, J. Chenkin, MD, MEd, Sunnybrook Health Sciences Centre, Toronto, ON

Introduction: Pulse check by manual palpation (MP) is an unreliable skill even in the hands of healthcare professionals. In the context of cardiac arrest, this may translate into inappropriate chest compressions when a pulse is present, or conversely omitting chest compressions when one is absent. To date, no study has assessed the utility of B-mode ultrasound (US) for the detection of a carotid pulse. The primary objective of this study is to assess the time required to detect a carotid pulse in live subjects using US compared to the standard MP method. **Methods:** This is a prospective randomized controlled cross-over non-inferiority trial. Health care professionals from various backgrounds were invited to participate. They attended a 15 minute focused US workshop on identification of the carotid pulse. Following a washout period, they were randomized to detect a pulse in live subjects either by MP first or by US first. Both pulse check methods were timed for each participant on 2 different subjects. The primary outcome measure was time to carotid pulse detection in seconds. Secondary outcome measures included comfort levels of carotid pulse detection measured on a 100mm visual analog scale (VAS), and rates of prolonged pulse checks (greater than 5 or 10 seconds) for each technique. Mean pulse detection times were compared using Students t-test. The study was powered to determine whether US was not slower than MP by greater than 2 seconds. **Results:** A total of 93 participants completed the study. Time to detect pulse was 4.2 (SD = 3.4) seconds by US compared with 4.7 (SD = 6.5) seconds by MP (P = 0.43). Seventeen (18%) participants took >5 seconds to identify the carotid pulse using US compared to 19 (20%) by MP (P = 0.74). Eight (9%) candidates took >10 seconds to