7 (70%) were male, and 2 (20%) died of a traumatic cause. In all ten cases, patients had withdrawal of life sustaining measures for medical futility prior to TGLN being contacted for consideration of donation. There could have been an addition seven liver, six pancreatic islet, four small bowel, and seven kidney donors. The ten missed ED donors could have increased total donors by 11%. **Conclusion**: The ED is a significant source of missed organ donors. In all cases of missed organ donation, patients had withdrawal of life sustaining measures prior to TGLN being called. In the future, it is essential that all patients have an organ procurement organization such as TGLN called prior to withdrawal of life sustaining measures to ensure that no opportunity for consideration of organ donation is missed.
Keywords: donation, organ

LO67

Association between hypotension and mortality in critically ill patients with severe traumatic brain injury: experience at a single Canadian trauma center

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Introduction: Hypotension is known to be associated with increased mortality in severe traumatic brain injury (TBI) patients. Systolic blood pressure (SBP) of <90 mmHg is the threshold for hypotension in consensus TBI treatment guidelines; however, evidence suggests hypotension should be defined at higher levels for these patients. Our objective was to determine the influence of hypotension on mortality in TBI patients requiring ICU admission using different thresholds of SBP on arrival at the emergency department (ED). **Methods**: Retrospective cohort study of patients with severe TBI (Abbreviated Injury Scale Head score ≥3) admitted to ICU at the QEII Health Sciences Centre (Halifax, Canada) between 2002 and 2013. Patients were grouped by SBP on ED arrival (<90 mmHg, <100 mmHg, <110 mmHg). We performed multiple logistic regression analysis with mortality as the dependent variable. Models were adjusted for confounders including age, gender, Injury Severity Score (ISS), injury mechanism, and trauma team activation (TTA). **Results**: A total of 1233 patients sustained a severe TBI and were admitted to the ICU during the study period. The mean age was 43.4 ± 23.9 years and most patients were male (919/1233; 74.5%). The most common mechanism of injury was motor vehicle collision (491/1233; 41.2%) followed by falls (427/1233; 35.8%). Mean length of stay in the ICU was 6.1 ± 6.4 days, and the overall mortality rate was 22.7%. SBP on arrival was available for 1182 patients. The <90 mmHg group had 4.6% (54/1182) of these patients; mean ISS was 20.6 ± 7.8 and mortality was 40.7% (22/54). The <100 mmHg had 9.3% (110/1182) of patients; mean ISS was 19.3 ± 7.9 and mortality was 34.5% (38/110). The <110 mmHg group had 16.8% (198/1182) of patients; mean ISS was 17.9 ± 8.0 and mortality was 28.8% (57/198). After adjusting for confounders, the association between hypotension and mortality was 2.22 (95% CI 1.19-4.16) using a <90 mmHg cutoff, 1.79 (95% CI 1.12-2.86) using a <100 mmHg cutoff, and 1.50 (95% CI 1.02-2.21) using a <110 mmHg cutoff. **Conclusion**: While we found that TBI patients with a SBP <90 mmHg were over 2 times more likely to die, patients with an SBP <110 mmHg on ED arrival were still 1.5 times more likely to die from their injuries compared to patients without hypotension. These results suggest that establishing a higher threshold for clinically meaningful hypotension in TBI patients is warranted.

Keywords: hypotension, mortality, traumatic brain injury

LO68

Does point-of-care ultrasonography change actual care delivered by shock subcategory in emergency department patients with undifferentiated hypotension? An international randomized controlled trial from the SHoC-ED investigators

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Introduction: Although use of point of care ultrasound (PoCUS) protocols for patients with undifferentiated hypotension in the Emergency Department (ED) is widespread, our previously reported SHoC-ED study showed no clear survival or length of stay benefit for patients assessed with PoCUS. In this analysis, we examine if the use of PoCUS changed fluid administration and rates of other emergency interventions between patients with different shock types. The primary comparison was between cardiogenic and non-cardiogenic shock types. **Methods**: A post-hoc analysis was completed on the database from an RCT of 273 patients who presented to the ED with undifferentiated hypotension (SBP <100 or shock index > 1) and who had been randomized to receive standard care with or without PoCUS in 6 centres in Canada and South Africa. PoCUS-trained physicians performed scans after initial assessment. Shock categories and diagnoses recorded at 60 minutes after ED presentation, were used to allocate patients into subcategories of shock for analysis of treatment. We analyzed actual care delivered including initial IV fluid bolus volumes (mL), rates of inotrope use and major procedures. Standard statistical tests were employed. Sample size was powered at 0.80 (α:0.05) for a moderate difference. **Results**: Although there were expected differences in the mean fluid bolus volume between patients with non-cardiogenic and cardiogenic shock, there was no difference in fluid bolus volume between the control and PoCUS groups (non-cardiogenic control 1878 mL (95% CI 1550 – 2206 mL) vs. non-cardiogenic PoCUS 1687 mL (1458 – 1916 mL); and cardiogenic control 768 mL (194 – 1341 mL) vs. cardiogenic PoCUS 981 mL (341 – 1620 mL). Likewise there were no differences in rates of inotrope administration, or major procedures for any of the subcategories of shock between the control group and PoCUS group patients. The most common subcategory of shock was distributive. **Conclusion**: Despite differences in care delivered by subcategory of shock, we did not find any significant difference in actual care delivered between patients who were examined using PoCUS and those who were not. This may help to explain the previously reported lack of outcome difference between groups.
Keywords: hypotension, point of care ultrasound, shock

LO69

A retrospective cohort study on the impact of point-of-care ultrasound on radiologic imaging in patients presenting to the emergency department with suspected uncomplicated renal colic

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