P011

A pre-clerkship procedural curriculum designed for the future of Canadian medical education: a pilot and feasibility study

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Introduction: Procedural skills training varies significantly across Canadian medical schools, and there is currently no standardized assessment tool to evaluate its benefits. This project aims to develop a curriculum that teaches 2nd-year medical students to perform and evaluate procedural skills. The goals of this program include decreasing anxiety, increasing confidence, and achieving competence for students and also allowing staff to judge the appropriate level of supervision when delegating learners to perform basic procedures in the team setting. Our curriculum incorporates, near-peer teaching as well as near peer formative assessment. **Methods**: Each of the twelve 2nd year participants completed a State Trait Anxiety Inventory and self-reported confidence questionnaire related to procedural skills. Students participated in four sessions taught by expert physicians over a five month period. A new skill was taught at each monthly workshop and an opportunity to practice previously taught skills was provided. Skills were assessed in a skills integration simulation OSCE, and the anxiety and confidence questionnaire was repeated. **Results**: Students who completed this pilot program showed a significant decrease in mean anxiety state (2.48 vs 1.74, p-value <0.001), while the control group did not (p-value = 0.408). When assessing confidence, students who completed this program showed increased self-assessed knowledge and confidence in each of the program's assessed skills. An increased level of competency was achieved in each skill by each student as assessed by the expert physicians. **Conclusion**: There is evidence to suggest that implementation of this procedural skills training model within the Canadian medical school curriculum may improve student anxiety, confidence, and competency for success in clerkship and could be the foundation for developing milestones for EPAs.

Keywords: pre-clerkship, procedural curriculum, simulation

P012

Mortality rate of cancer patients by type presenting to the intensive care unit with sepsis.

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Introduction: Sepsis in cancer patients is associated with higher mortality rates than non-cancer patients. As a whole, hematological or solid tumor cancers have not demonstrated a prognostic link to sepsis survival rates in intensive care units (ICU), however poor-prognosis solid tumours (less than 25% 5-year survival) have not been investigated. This study examined ICU mortality rate and its predictive factors of patients with sepsis and poor-prognosis solid tumors in comparison to patients with higher prognosis solid tumours. **Methods**: A 6-year retrospective chart review of 79 patients with sepsis and solid tumour cancers and/or metastatic cancers admitted to the ICU was conducted. Information regarding mortality rate within 14 days, length of ICU stay, incidence of intubation, and other primary reasons for ICU admission was collected. Data was analysed using logistic regression. **Results**: Logistic regression results showed intubation as the only significant factor contributing to patient mortality (p < .001), with the odds of mortality being 12.3 times higher for intubated than non-intubated patients. Five-year cancer survival rate was the second best predictor (p = .082), while age, sex, and metastasis were also not significant predictive factors for survival. Intubated patients with poor prognosis cancers had the lowest survival chance as further indicated by the 16 patients who met this criterion, of which 14 died within two weeks of ICU admission. **Conclusion**: The fact that poor prognosis cancers in sepsis were not significantly predictive of ICU mortality supports current literature regarding solid tumors in general, while intubation being a significant predictor for mortality in patients with sepsis and cancer regardless of type builds on previous research. A limitation of this study is the relative low number of included cases with poor-prognosis cancer types. Further evaluation is needed to understand the implications of our results for end-of-life care and ICU admission for patients with these characteristics.

Keywords: cancer, intensive care, sepsis

P013

A new efficient and accurate scanning protocol for traumatic pneumothorax

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Introduction: According to the International Evidence-Based Recommendations for Point-of-Care Lung Ultrasound published in 2012, the sonographic technique for evaluating a patient for a pneumothorax (PTX) "consists of exploration of the least gravitationally dependent areas progressing more laterally" in the supine patient. However, there is a wide variety of scanning protocols in the literature with varying accuracy and complexity. We sought to derive an efficient and accurate scanning protocol for diagnosing pneumothorax using point of care ultrasound in trauma. **Methods**: We performed a retrospective chart review of a tertiary care trauma registry from Nov 2006 to Aug 2016. We included patients with a PTX diagnosed on computed tomography (CT). Patients were excluded if they did not have an identifiable PTX on the CT scan or if they underwent a tube thoracostomy prior to the CT scan. Penetrating and blunt trauma were eligible. Data were extracted with a standardized data collection tool and 20% of charts reviewed by two reviewers. Pre defined zones were used to map area of PTXs on CT. Sensitivity, specificity and 95% CI are reported for presence of PTXs in each individual or combination of lung zones as identified on CT scan. **Results**: Data were collection yielded 170 traumatic PTX on chest CT with an average age of 44.2 and 77.8% male. The kappa for data extraction was 0.88. 19.4% of patients had bilateral PTX leading to a total sample size of 203. The average ISS score was 20.7 and 93% of patients survived to discharge. The length of ICU stay and hospital stay was 3.7 and 11.2 days respectively. The most accurate and efficient protocol would involve scanning the inferior border of the clavicle at the para-sternal border and again at the mid-clavicular line down to the cardiac (left hemithorax) and liver lung points (right hemithorax). The sensitivity of this scanning area in the detection of PTXs was 91.6% (95% CI 86.9-95%,). Limiting the area to the most anterior point of the chest wall increased the risk of missing a PTX (Sensitivity 89.7% (95%CI 84.6-93.5)). **Conclusion**: We have derived an evidence-based standardized accurate and efficient scanning protocol to rule out a pneumothorax on point of care ultrasound.

Keywords: pneumothorax, point of care ultrasound, trauma