high-risk findings associated with a central cause; history of IS/TIA (OR 3.8 95%CI 1.7-8.2), cancer (OR 3.2 95%CI 1.4-7.2), dyslipidemia (OR 2.3 95%CI 1.2-4.4), symptoms of visual changes (OR 2.1 95%CI 1.5-6.3), dysarthria (OR 9.1 95%CI 3-27.4), vomiting (OR 2 95%CI 1-3.7), motor deficit (OR 7.7 95%CI 2.9-20.2), sensory deficit (OR 28.9 95%CI 7.4-112.9), nystagmus (OR 3.3 95%CI 1.6-6.7), ataxia (OR 2.5 95%CI 1.3-4.9) and unable to walk 3 steps unaided (OR 3.4 95%CI 1.4-8.5). Absence of these findings had a sensitivity of 100% (95%CI 92.5-100%) for ICH, IS, Tumour and 95.2% (86.5-98.9) if including TIA and MS. Specificity was 51.5% (95% CI 49.4-53.6%). **Conclusion**: Clinical exam is highly sensitive for identifying patients without a central etiology for their dizziness.
Keywords: clinical exam, decision aid, vertigo

LO51
Does my dizzy patient need a computed tomography of the head?

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Introduction: Dizziness is among the most common presenting complaints in the emergency department (ED). Although the vast majority of these cases are the result of a benign, self-limiting process, many patients undergo computed tomography (CT) of the head. The objective of this study was to define the yield of and diagnostic accuracy of CT in dizziness in addition to defining high-risk clinical features predictive of an abnormal CT. **Methods**: At a tertiary care ED we performed a medical records review from Jan 2015-2018 including adult patients with a triage complaint of dizziness (vertigo, unsteady, lightheaded), excluding those with symptoms >14days, recent trauma, GCS < 15, hypotensive, or syncope/loss of consciousness. Five trained reviewers used a standardized data collection sheet to extract data. Our outcome was a central cause defined as: cerebrovascular accident (CVA), brain tumor (BT) or intracranial haemorrhage (ICH) diagnosed on CT or magnetic resonance imaging. Univariate analysis/logistic regression were performed and odds ratios reported. A sample size of 796 was calculated based on an expected prevalence of 5% with an 80% power and 95% confidence interval to detect an odds ratio greater than 2. **Results**: 2310 patients were recruited, 800 (35%) underwent CT head, 471(59%) female and a mean age of 62.8 years (+/−17.5 years). The top three diagnoses for patients undergoing CT were peripheral vertigo/benign positional vertigo (153 – 19%), vertigo not-otherwise-specified (137 – 17%) and dizziness not-otherwise-specified (137 – 17%). The number of CT scans considered abnormal was 30 (3.7%). The top three diagnoses for patients with an abnormal CT were CVA (22 – 75%), BT (9 – 26%) and ICH (6-17%). High risk clinical findings associated (p < 0.001) with an abnormal head CT were dysmetria, objective motor neurological signs, positive Rhomberg, ataxia and inability to walk 3 steps. Objective motor neurological signs (OR 8.4 [95% CI 3.27-21.72]) and ataxia (OR 3.4 [95% CI 1.62-7.41]) were both independently associated with an abnormal CT. Patients without any high risk findings on exam had a 0.7%(3/381 – 2 CVA,1 Tumour) probability of an abnormal CT. Sensitivity of CT for a central cause of dizziness was 71.43%(95%CI 55.4-84.3%), specificity 100%(95%CI 99.5-100%). **Conclusion**: Current rate of imaging in dizziness is high and inefficient. CT should be the first imaging test in those with high-risk clinical features, but a normal result does not rule out a central cause.

Keywords: cerebrovascular accident, computed tomography, vertigo

LO52
Classification versus prediction of mortality using the Systemic Inflammatory Response score and quick Sepsis-related Organ Failure Assessment scores in patients with infection

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Introduction: Despite their widespread use, measures of classification accuracy (i.e. sensitivity and specificity) have several limitations that conceals relevant information and may bias decision-making. Assessing the predictive ability of clinical tools instead may provide more useful prognostic information to support decision-making, particularly in an Emergency setting. We sought to contrast classification accuracy versus predictive ability of the Systemic Inflammatory Response Syndrome (SIRS) and quick Sepsis-related Organ Failure Assessment (qSOFA) Sepsis scores for determining mortality risk among patients with infection transported by paramedics. **Methods**: A one-year cohort of patients with infections transported to the Emergency Department by paramedics was linked to in-hospital administrative databases. Hospital mortality was determined for each patient at the time of discharge. We calculated sensitivity and specificity of SIRS and qSOFA for classifying hospital mortality across different score thresholds, and estimated discrimination (assessed using the C statistic) and calibration (assessed visually) of prediction. Prediction models for hospital mortality were constructed using the aggregated SIRS or qSOFA scores for each patient as a predictor, while accounting for clustering by institution and adjusting for differences in patient age and sex. Predicted and observed risk were plotted to assess calibration and change in risk across levels of each score. **Results**: A total of 10,409 patients with infection who were transported by paramedics were successfully linked, with an overall mortality rate of 9.2%. The median SIRS score among non-survivors was 2, while the median qSOFA score was 1. SIRS score had higher sensitivity estimates than qSOFA for classifying hospital mortality at all thresholds (0.11 – 0.83 vs. 0.08 – 0.80), but the qSOFA score had better discrimination (C statistic 0.76 vs. 0.71) and calibration. The risk of hospital mortality predicted by the SIRS score ranged from 6.6-24% across score values, whereas the risk predicted by the qSOFA score ranged from 8.6-53%. **Conclusion**: Assessing the SIRS and qSOFA scores predictive ability reveals that the qSOFA score provides more information to clinicians about a patient's mortality risk despite having worse sensitivity. This study highlights important limitations of classification accuracy for diagnostic test studies and supports a shift toward assessing predictive ability instead. Character count 2490
Keywords: diagnostic accuracy, risk prediction, sepsis

LO53
The correlation of workplace-based assessments with periodic performance assessment of emergency medicine residents

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Introduction: Competency-based medical education (CBME) relies on pragmatic assessment to inform trainee progression decisions. It is unclear whether face-to-face workplace-based assessment (WBA) scoring by faculty reflects their true perception of trainee competence, as many factors influence individual assessments. To better defend competence committee decisions, it is critical to understand how