

from two graduating classes at the Schulich School of Medicine & Dentistry in London, ON were screened for eligibility. Two students did not complete the study, and were excluded. There were 13 students in the NEJM group, and 15 students in the ATLS group. **Results:** The NEJM group's average score was 45.2% (± 9.6) on the pre-questionnaire, 67.7% (± 12.9) for the procedure, and 60.1% (± 7.7) on the post-questionnaire. The didactic group's average score was 42.8% (± 10.9) on the pre-questionnaire, 73.7% (± 9.9) for the procedure, and 46.5% (± 7.5) on the post-questionnaire. There was no difference between the groups on the pre-questionnaire ($\Delta +2.4\%$; 95% CI: $-5.2, 10.0$), or the procedure ($\Delta -6.0\%$; 95% CI: $-14.6, 2.7$). The NEJM group had better scores on the post-questionnaire ($\Delta +11.15\%$; 95% CI: $3.7, 18.6$). **Conclusion:** The NEJM video was as effective as video-recorded training for teaching the knowledge and technical skills essential for chest tube insertion. Participants expressed high satisfaction with this modality. It may prove to be a helpful adjunct to standard instruction on the topic.

Keywords: chest tube, medical education, clinical medicine videos

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High-risk clinical features for acute aortic syndrome

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Introduction: Acute aortic syndrome (AAS) is a rare clinical syndrome with a high mortality encompassing acute aortic dissection, intramural hematoma and penetrating atherosclerotic ulcer. The objective of our study was to assess the diagnostic accuracy of high risk historical, examination and basic investigative features for AAS, in confirmed cases of AAS and a low risk control group in order to address the spectrum bias in previous diagnostic accuracy studies. **Methods:** We performed a historical matched case-control study: participants were adults >18 years old presenting to two tertiary care emergency departments (ED) or one regional cardiac referral center. Cases: new ED or in-hospital diagnosis of non-traumatic AAS confirmed by computed tomography or echocardiography. Controls: triage diagnosis of truncal pain (<14 days) and an absence of a clear diagnosis on basic investigation. Cases and controls were matched in a 4:1 ratio by sex and age. A sample size of 165 cases and 660 controls was calculated based on 80% power and confidence interval of 95% to detect an odds ratio of greater than 2. **Results:** Data were collected from 2002-2014 yielding 194 cases of AAS and 776 controls (mean age of 65(SD 14.1) and 66.7% male). Of the 194 cases of AAS, 32 (16.5%) were missed on initial assessment. Chest pain unspecified (20.7%), abdominal pain unspecified (9.9%) and acute coronary syndrome (8.7%) were the top diagnoses in the control population. Absence of acute onset pain (Sensitivity 95.9% negative likelihood ratio (LR-) 0.07(0.03-0.14)), and a negative D-dimer (Sensitivity 96.7%, LR- 0.05(0.01-0.18)) can help rule out AAS. Presence of tearing/ripping pain (Specificity 99.7%, LR+ 42.1 (9.9-177.5)), a history of aortic aneurysm (Specificity 97.8%, LR+ 6.35(3.54-11.42)), hypotension (Specificity 98.7%, LR+ 17.2 (8.8-33.6)), pulse deficit (Specificity 99.3, LR+ 31.1(11.2-86.6)), neurological deficits (Specificity 96.9%, LR+ 5.26(2.9-9.3)), and a new murmur (Specificity 97.8%, LR+ 9.4(5.5-16.2)) can help rule in the diagnosis of AAS. **Conclusion:** Patients with one or more high-risk feature should be considered high risk, whereas patients with no high risk and multiple low risk features are at low risk for AAS. Further research should focus on a combination of these factors to guide who warrants further investigation thus reducing miss rate, morbidity and mortality.

Keywords: acute aortic syndrome

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Addiction medicine training in Canadian emergency medicine residency programs: a needs assessment survey

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Introduction: Emergency department visits related to substance use are becoming more serious and increasingly costly in Canada. Emergency physicians must be able to effectively screen, manage, refer, and advocate for these complex patients. This study sought to describe the current state of addiction medicine training in Canadian emergency medicine (EM) residency programs and to assess the need for a formal curriculum. **Methods:** All Royal College and College of Family Physicians EM Program Directors (PDs) were asked to participate in a ten-question needs assessment survey on addiction medicine training for residents. Questions were developed through consensus after reviewing the relevant literature and conducting a formal pilot survey with staff physicians experienced in survey methodology. Responses were collected securely using the Research Electronic Data Capture (REDCap) database. **Results:** 19 out of 31 (62%) eligible PDs completed the survey. The importance of addiction medicine training received a median score of 69.5 (IQR = 74.0) on a scale of 1-100. Most programs devoted two hours or less per year of formalized teaching on individual topics (such as opioids, alcohol, harm reduction) over the past two academic years. The two most common teaching modalities used were didactic lectures (15/19, 78.9%) and case-based tutorials (12/19, 63.2%). Case-based tutorials were identified as the most effective teaching method (12/19, 63.2%). Topics highlighted as most important to include in a curriculum were: screening for substance use disorders and referral for further treatment (14/19, 73.7%), social determinants of health (14/19, 73.7%), alcohol, opioid, and stimulant intoxication and/or withdrawal (14/19, 73.7% each), and management of patients on opioid agonist therapy (14/19, 73.7%). The most commonly perceived barriers to implementing such a curriculum were insufficient curriculum time (10/19, 52.6%) and lack of qualified teaching staff (7/19, 36.8%). **Conclusion:** This needs assessment provides an understanding of the current state of addiction medicine training for EM residents in Canada. A case-based addiction medicine workshop is currently being developed to address identified curriculum gaps. Integrating this curriculum longitudinally into a time-constrained academic schedule is an important next step.

Keywords: addiction medicine, resident curriculum, medical education

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Age related rates of abnormal CT findings in otherwise low risk minor head injury patients over 65

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Introduction: The Canadian CT Head Rules (CCTHR) is the gold standard clinical decision rule for minor head injuries (MHIs) & has been shown to have 100% sensitivity in identifying patients that would have an abnormal CT scan. Within the CCTHR age 65+ is considered to be an independent risk factor for abnormal head CT. However, a previously published Italian study indicated that the rate of pathological findings in otherwise low risk MHI patients under the age of 79 was less than 1% & significantly lower than those over the age of 80, which brings to question whether the traditional age cut off of 65 as a factor in the CCTHR is too conservative when considering the appropriateness for imaging. Therefore this study aimed to quantify the extent to which