GLOBAL RESEARCH HIGHLIGHTS

Editor's note: Annals has partnered with a small group of selected journals of international emergency medicine societies to share from each a highlighted research study, as selected monthly by their editors. Our goals are to increase awareness of our readership to research developments in the international emergency medicine literature, promote collaboration among the selected international emergency medicine journals, and support the improvement of emergency medicine world-wide, as described in the WAME statement at http://www.wame.org/about/policy-statements#Promoting%20Global%20Health. Abstracts are reproduced as published in the respective participating journals, and are not peer reviewed or edited by *Annals*.

African Journal of Emergency Medicine

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Official Journal of the African Federation for Emergency Medicine, the Emergency Medicine Association of Tanzania, the Emergency Medicine Society of South Africa, the Egyptian Society of Emergency Medicine, the Libyan Emergency Medicine Association, the Ethiopian Society of Emergency Medicine Professionals, the Sudanese Emergency Medicine Society, the Society of Emergency Medicine Practitioners of Nigeria and the Rwanda Emergency Care Association

Triage live lecture versus triage video podcast in pre-hospital students' education

Aghababaeiana H, Araghi Ahvazi L, Moosavi A, Ahmadi Mazhin S, Tahery N, Nouri M, Kiarsi M, Kalani L. Triage live lecture versus triage video podcast in pre-hospital students' education. Afr J Emerg Med. 2019;9:81-86.

Introduction: Triage is the process of determining the priority of patients' treatments based on the severity of their conditions. The aim of the present study was to survey the effect of triage video podcasting on the knowledge and performance of pre-hospital students.

Methods: Sixty pre-hospital students were randomly divided into two groups of a 30-subject control group and a 30-subject intervention group. A pre-test was administered among all students. Afterwards, for the first group, triage education was offered through lectures using PowerPoint, while for the second group, audio and video podcasts tailored for this training

program were employed. Right after the training as well as one month later, post-tests were run for both groups, and the results were analysed using an independent t-test and covariance.

Results: No significant difference was observed between the effects of both types of education on knowledge and performance, either immediately, or one month after training.

Discussion: We suggest that video podcasts are ready to replace traditional teaching methods in triage.

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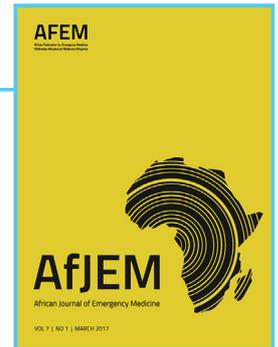
Emergency Medicine Journal

emj.bmj.com

Official Journal of the Royal College of Emergency Medicine

Adapting the Canadian CT head rule age criteria for mild traumatic brain injury

Fournier N, Gariepy C, Prévost J-F, Belhumeur V, Fortier É, Carmichael P-H, Gariepy J-L, Le Sage N, Émond M. Adapting the Canadian CT head rule age criteria for mild traumatic brain injury. *Emerg Med J.* 2019; http://doi.org/10.1136/emermed-2018-208153.

Objective: With the ageing population, the prevalence of mild traumatic brain injury (mTBI) among older patients is increasing, and the age criteria of the Canadian CT head rule (CCHR) is challenged by many emergency physicians. We modified the age criteria of the CCHR to evaluate its predictive capacity.

Methods: We conducted a retrospective cohort study at a level 1 trauma centre ED of all mTBI patients 65 years old and over with an mTBI between 2010 and 2014. Main outcome was a clinically important brain injury (CIBI) reported on CT. The clinical and radiological data collection was standardised.

Univariate analyses were performed to measure the predictive capacities of different age cut-offs at 70, 75 and 80 years old.

Results: 104 confirmed mTBI were included; CT scan identified 32 (30.8%) CIBI. Sensitivity and specificity (95% CI) of the CCHR were 100% (89.1 to 100) and 4.2% (0.9 to 11.7) for a modified criteria of 70 years old; 100% (89.1 to 100) and 13.9% (6.9 to 24.1) for 75 years old; and 90.6% (75.0 to 98.0) and 23.6% (14.4 to 35.1) for 80 years old. Furthermore, modifying the age criteria to 75 years old showed a

reduction of CT up to 25% (n=10/41) among the individuals aged 65–74 without missing CIBI.

Conclusion: Adjusting the age criteria of the Canadian CT head rule to 75 years old could be safe while reducing radiation and ED resources. A future prospective study is suggested to confirm the proposed modification.

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Hong Kong Journal of Emergency Medicine

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Official Journal of the Hong Kong College of Emergency Medicine

Feasibility of predictive model by clinical and laboratory parameters for risk stratification of geriatric abdominal pain

Lui CT, Ching WM, Tsui KL, Chu HC, Tsui ATS, Au TS, Wong TW, Fan KL, Leung LP. Feasibility of predictive model by clinical and laboratory parameters for risk stratification of geriatric abdominal pain. *HKJEM.* 2019;26:242-249.

Background: Assessment of geriatric patients presented with abdominal pain had been challenge for emergency physicians with the ageing population. A rapid, reproducible risk stratification model for the assessment of the need for admission for geriatric abdominal pain would be required to identify low-risk patients to be managed as out-patient basis.

Objective: Assess the feasibility of risk stratification model to predict the need of hospital admission based on readily available bedside parameters in emergency departments.

Methods: This is a multicenter retrospective cohort study in four emergency departments. Patients aged at least 65 who presented with chief complaint of abdominal pain within the previous 7 days of attendance as the chief complaint were included. Chart review was performed for the included patients. The primary outcome was defined as a composite of mortality, abdominal surgery or endoscopic treatment, and other inpatient treatments for abdominal diseases within 14 days, surrogating the need of hospital admission. Logistic regression was modeled to identify independent predictors. The diagnostic accuracy of the risk model was evaluated with the receiver operating characteristic curve and compared with the clinical gestalt of decision for hospital admission by the attending physician.

Results: In total, 553 patients were included. Symptoms of upper gastrointestinal bleeding, non-ambulatory presenting status, pain duration, focal abdominal tenderness, hyperglycemia, leukocytosis, and elevated creatinine were independent predictors of the outcome. The area under the receiver operating characteristic curve of the predicted probabilities of the logistic model was 0.741. In keeping for a low-risk criterion to achieve more than 90% sensitivity, the predictive model would only achieve 18.2% specificity which was inferior to clinical gestalt for hospital admission (sensitivity 99.3%, specificity 44.3%).

Conclusion: Risk stratification model by clinical assessment and laboratory markers alone were inadequate and inferior to clinical gestalt for identification of the group of patients requiring inpatient treatment.

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