visits among seniors are frequently instigated by a fall at home. Some of these patients develop intracranial hemorrhage (ICH) because of falling. There has been little research on the frequency of ICH in elderly patients who fall, and on which clinical factors are associated with ICH in these patients. The aim of this study was to identify the incidence of ICH, and the clinical features which are associated with ICH, in seniors who present to the ED having fallen. Methods: This was a prospective cohort study conducted in three EDs. Patients were included if they were age >65 years, and presented to the ED within 48 hours of a fall on level ground, off a bed/chair/toilet or down one step. Patients were excluded if they fell from a height, were knocked over by a vehicle or were assaulted. ED physicians recorded predefined clinical findings (yes/no) before any head imaging was done. Head imaging was done at the ED physician’s discretion. All patients were followed for 6 weeks (both by telephone call and chart review at 6 weeks) for evidence of ICH. Associations between baseline clinical findings and the presence of ICH were assessed with multivariable logistic regression. Results: In total, 1753 patients were enrolled. The prevalence of ICH was 5.0% (88 patients), of whom 74 patients had ICH on the ED CT scan and 14 had ICH diagnosed during follow-up. 61% were female and the median age was 82 (interquartile range 75-88). History included hypertention in 76%, diabetes in 29%, dementia in 27%, stroke/TIA in 19%, major bleeding in 11% and chronic kidney disease in 11%. 35% were on antplatelet therapy and 25% were on an anticoagulant. Only 4 clinical variables were independently associated with ICH: bruise/laceration on the head (odds ratio: 4.3; 95% CI 2.7-7.0), new abnormalities on neurological examination (OR: 4.4; 2.4-8.1), chronic kidney disease (OR: 2.4; 1.3-4.6) and reduced GCS from baseline (OR: 1.9; 1.0-3.4). Neither anticoagulation (OR: 0.9; 0.5-1.6) nor antplatelet use (OR: 1.1; 0.6-1.8) appeared to be associated with ICH. Conclusion: This prospective study found a prevalence of ICH of 5.0% in seniors after a fall, and that bruising on the head, abnormal neurological examination, abnormal GCS and chronic kidney disease were predictive of ICH. Keywords: intracranial hemorrhage, predictors, seniors

ORAL PRESENTATIONS

LO01
Development and validation of an adjustment score for ruling out MI using a single high-sensitivity cardiac troponin T assay in patients with chest pain and kidney dysfunction

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Introduction: Very low concentrations of high-sensitivity cardiac troponin can rule-out myocardial infarction (MI) at ED arrival in patients with chest pain. However, this single troponin rule-out strategy works poorly in patients with renal impairment and elevated baseline troponin levels. The objective of this study was to develop and validate a troponin adjustment strategy to accurately rule-out MI using a single hs-cTnT measurement in patients with kidney dysfunction. Methods: We used data from three cohorts of ED chest pain patients to develop an adjustment score for a high-sensitivity troponin T (hs-cTnT) assay in patients with kidney dysfunction. The derivation cohort (n = 8846) used administrative and registry data. Two validation cohorts (n = 1187 and 1092) were prospectively-collected. The score assigned points for increasing hs-cTnT levels and subtracted points for lower estimated glomerular filtration rate (eGFR). In the derivation cohort, hs-cTnT concentrations achieving 98.5% sensitivity in patients with eGFR ≥60, 45-59, 30-44, 15-29 and <15 were assigned ascending positive integer values. Negative integer values were assigned to cGFR values 45-59, 30-44, 15-29 and <15. The scores for troponin and eGFR were summed for each patient, with scores ranging from −4 to +5. The proportion of patients with 7-day MI ruled out by a score ≤0, sensitivity, NPV, negative likelihood ratio (LR-) and area under the curve (AUC) were quantified.