Oral Presentation 5 - Title: Routine Delayed Head CT is Indicated in Geriatric Blunt Trauma Patients on Antithrombotics

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Background: Anti-coagulant and/or anti-platelet (AC/AP) therapy confers a theoretical added risk of intracranial hemorrhage (ICH) following trauma, however, there is no consensus on whether all blunt trauma patients on AC/AP require repeat head CTs. We determined the utility of repeat head CTs in geriatric trauma patients who were or were not AC/AP agents in detecting ICH.

Methods/Research Design. We queried the trauma registry of an ACS verified Level 1 Trauma Center for geriatric blunt trauma hospitalizations between 2/2023 and 12/2023 with intracranial hemorrhage. Transfers from institutions where CT images were not available in our EMR were excluded. Blunt trauma patients on AC/AP agents evaluated by the trauma team (trauma team activations) routinely undergo a delayed CT scan of the head. Others receive delayed CT scan based on alteration in mental status or at discretion of the team. Patients were divided into two groups based on the detection of intracranial hemorrhage on index vs delayed CT scan.

Results (or Preliminary Results, as applicable for a project in progress): There were 212 hospitalizations with ICH, of whom 21 patients demonstrated ICH only on the delayed head CT (Table 1). The initial and delayed bleeding groups did not differ significantly in terms of median age (79 vs 81 years), sex (53.9% vs 52.4% male), and median head/neck AIS (3 vs 3). On admission, both groups presented with similar injury severity scores. 94.9% of repeat CT scans were completed within 24 hours, with 45.8% within 6 hours. Types of ICH detected included epidural, subdural, subarachnoid, intraparenchymal, intraventricular, and multi-compartment hemorrhage. Patients presenting with delayed ICH were overwhelmingly on AC/AP therapy. 11 of the 21 delayed ICH patients had an AIS of 0 or 1 in non-head/neck body regions, indicating no or minor injuries to other body regions. Only 1 patient in the delayed ICH group required neurosurgical intervention. There was no in-hospital mortality.

Conclusion (or Preliminary Conclusion, as applicable for a project in progress): A substantial number (9.9%) of ICH were identified only on delayed head CT in geriatric blunt trauma patients, of whom 81% were on pre-admission AC/AP therapy. Half of AC/AP patients with ICH on delayed CT had AIS 0/1 in the non-head/neck regions, suggesting that the only reason for hospitalization was the delayed presentation of ICH. The absence of a significant difference in injury mechanism, ISS, and GCS on presentation between the two groups indicates that the role of AC/AP as a high-risk feature for delayed traumatic ICH can no longer be questioned.