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Avoiding Antiplatelet Reversal in Non-Operative Intracranial Hemorrhages: Functional Outcomes of Guideline-Based Practice

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Introduction: Intracranial hemorrhage (ICH) is a common, life-threatening neurological pathology in aging patients, many of whom take antiplatelet medications with potential to worsen the hemorrhage. In the event of ICH, Thomas Jefferson University Hospital (TJUH) follows a protocol modeling the 2016 Neurocritical Care Society (NCS) joint guidelines for antiplatelet medication reversal. We analyzed pre- and post-NCS guideline data from TJUH for outcomes of non-operative ICH patients in order to tease out the potential benefits of this protocol.

Methods: This retrospective cohort study took place from January 2016 – Jan. 2018 at a tertiary care center: TJUH. Patients included were ≥18 y.o., on antiplatelet therapy who, had CTs available for evaluation of expansion, and did not undergo surgical management. The primary outcomes measured for comparison were both the admission and discharge Glasgow Coma Scores (GCS), admission and discharge modified Rankin Scores (mRS), time to death, hematoma expansion, and in-hospital mortality. T-tests, the Kolmogorov-Smirnov-test, and Chi-Square test for independence were used.

Results: For pre- and post-protocol groups, no significant difference existed for GCS or mRS, at admission and discharge. There were no significant findings for in-hospital mortality and hemorrhage expansion.

Discussion: TJUH established a protocol in line with the 2016 NCS joint guidelines for managing ICH in patients on antiplatelet therapies. This protocol recommends discontinuing antiplatelet therapy and not transfusing platelets in patients not receiving surgical management. We examined the protocol efficacy have found no significant differences in the pre- and post-protocol groups, indicating patient outcomes may be equivalent.