TITLE: Characteristics of Patients with Intracerebral Hemorrhage after Receiving Intravenous Tenecteplase for Acute Ischemic Stroke

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**ABSTRACT:**

Early stroke treatment for acute ischemic stroke (AIS) with intravenous (IV) alteplase or tenecteplase (TNKase) has been showed to improve functional outcomes. Tenecteplase used as an alternative for AIS has been studied in clinical trials and has been used in many organizations as an agent of choice. However, despite the increased utilization of TNKase for AIS in recent months, little is known about the characteristics of patients who suffer an intracerebral hemorrhage (ICH) and opportunities to prevent this often-fatal complication. In November 2020, we transitioned from alteplase to TNKase for AIS as an integrated health system of 21 hospitals in Northern California, United States. The aim of this retrospective review was to investigate the characteristics of AIS patients with ICH complication and opportunities in patient management after receiving IV TNKase in the emergency departments (EDs) and to report preliminary results. Based on the preliminary results, there were some patient-level risk factors that may have contributed to ICH complications after IV TNKase. Tighter control of blood pressures with anti-hypertensives before and after IV TNKase may also decrease bleeding risk. There were a few opportunities identified with patient assessment and monitoring. The use of both “full” National Institute of Health Stroke Scale (NIHSS) and abbreviated NIHSS varied between facilities, which may have delayed the identification of post-TNKase ICH as the abbreviated NIHSS did not provide a total score to assess for change in patient condition and about 40% of patients did not have an increase in the NIHSS. In-depth data reviews and analysis would be necessary to ascertain clinical significance.

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