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REAL WORLD MANAGEMENT OF BLEEDING POST-TPA IN ACUTE ISCHEMIC STROKE

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Introduction:
Management of bleeding following thrombolysis (t-PA) for ischemic stroke includes discontinuing t-PA, noncontrast head CT, CBC, PT/INR, aPTT, and fibrinogen with supportive care and possible cryoprecipitate, platelets, tranexamic acid (TXA) or aminocaproic acid administration. National guidelines offer insight, without clear recommendations related to timing/sequence of therapies. Evidence-based guidelines for bleeding within 12 hours of t-PA with sequential recommendations for laboratory testing, empiric cryoprecipitate, and blood product/medication treatment were developed. We sought to evaluate bleeding complications following t-PA administration and guideline use at a large academic medical center.

Objectives:
A retrospective electronic medical record review of stroke registry patients, using a standardized case report form and data dictionary, was performed. Demographics, laboratory values, coagulation studies, thromboelastography (TEG) results and blood product/medication treatment were collected and compared to guideline recommendations. Descriptive analyses are reported.

Results:
Overall, 316 patients received t-PA from 2016-2018 and 12 (3.8%) had bleeding complications (mean age, 74.9 years ± SD 11.7, 58% male, mean 12.1 hours [1-25 hours] from t-PA to bleeding). Bleeding occurred within 12 hours in six patients but only three received empiric cryoprecipitate. Two had a fibrinogen level drawn (neither < 100 mg/dL) and 12 had platelet levels drawn (two resulted < 150,000 mm3 and did not receive platelets and two > 150,000 mm3 received platelets). Two patients had TEG results, but no therapies administered in response. One patient received TXA.

Conclusions:
Guideline adherence was low; 50% of eligible patients received cryoprecipitate, platelets were not administered based on platelet count, and there were missing baseline and subsequent recommended laboratory values. This is likely due to the low occurrence of bleeding complications; averaging five or less patients/year (4.5% in 2016, 4.9% in 2017, 2% in 2018) and total bleeding complications almost half of what was reported in the NINDS trial (3.8 vs. 6.4%)..