Hooked on tPA
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Keywords:
tPA; CVA; Hemorrhage; Stroke; tPA complications; Head CT without contrast

Clinical Image
A 43-year-old female presented to the ED after a syncopal episode. On arrival, her blood pressure was 223/93 mm Hg. Examination revealed left-sided facial numbness without facial droop and left-sided weakness with decreased sensation. Initial CT head was negative. Subsequently, tPA was given. Two hours after tPA administration, patient developed projectile vomiting and progressive confusion. She was immediately intubated for airway protection. Repeat head CT showed new 2.8 × 2.2 cm right thalamic nucleus hemorrhage with extension into the third ventricle, 1.6 × 1.5 cm left lateral occipital lobe hemorrhage, 3 × 2.4 cm anterior frontal hemorrhage, 8 mm right lateral temporal lobe hemorrhage, and subarachnoid hemorrhage with right to left midline shift. Treatment included external ventriculostomy drainage insertion and physical therapy. Symptoms improved and patient was discharged to acute rehabilitation facility. Alteplase is an excellent agent for decreasing the risk for disability after a stroke. However, 5%-7% of patients will develop symptomatic intracerebral hemorrhage. Therefore, patients should be monitored in the ICU or stroke unit for a 24-hour period after tPA is administered and evaluated with specific set of measures (Figure 1). Vital signs and neurologic status will need to be checked in a precise time interval fashion, BP must be carefully maintained at approximately 180/105, and avoidance of anticoagulant/antithrombotic agents and catheters should be done. Patient should also have a follow up head CT at 24 hours after tPA was started. Patients that with neurological deterioration require prompt evaluation and intervention.

Figure 1: Multiple areas of parenchymal hemorrhage and intra-ventricular extension as well as probable subarachnoid hemorrhage with early mass effect (A-C).