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## Abstract

Administration of intravenous (IV) recombinant tissue plasminogen activator (rtPA) in patients within 4.5 hours of acute ischemic stroke (AIS) is well established; however, the efficacy of this thrombolytic therapy is highly time-dependent. The door-to-needle time (DNT) should be as short as possible for the best outcome. Then, we engineered an electronic template (ET) to assist with the management of AIS patients and the purpose of this study was to evaluate its efficacy. We analyzed 64 AIS patients (35 men, average age 79 [32–92] years old) that were treated with IVrtPA. Clinical parameters including DNT, time from stroke onset to arrival at hospital, time from arrival at hospital to brain imaging (computed tomography or magnetic resonance imaging), time from brain imaging to IVrtPA (picture-to-needle time, PNT), National Institutes of Health Stroke Scale score on admission, age, sex, presence of additional endovascular treatment, and utility of the ET were studied retrospectively. The ET was utilized in 11 of the 64 patients. There was a trend toward significance for a shorter PNT in the ET group compared with the non-ET group ( $75.4 \pm 29.6$  versus  $58.4 \pm 24.1$  min,  $p = 0.079$ ). Utility of the ET was almost significant in the  $DNT \leq 60$  min group compared with the  $> 60$  min group (42.9 versus 14.0%, respectively;  $p = 0.0565$ ). Conclusively, the ET can assist physicians in the decision-making for IVrtPA, resulting in a shorter PNT. Other efforts are required to shorten the DPN.