Improving Door-to-Groin Time for Stroke-Alert Patients Arriving at TJUH

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Improving Door-to-Groin Time for Stroke-Alert Patients Arriving at TJUH

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Introduction: Due to the large number of endovascular-eligible acute ischemic stroke patients, the urgent nature of effective stroke treatment protocols has become increasingly recognized at TJUH. Due to the hospital’s unique situation with two city blocks between the ER and endovascular lab, in-hospital factors remain a significant reason for the delay of treatment.

Objective: The purpose was to conduct a quality-assurance trial to determine whether standardizing imaging modalities for inpatient and ER stroke-alert patients at our institution would improve door-to-puncture times.

Methods: After implementation of the new stroke alert protocol, data were prospectively collected for six months for two groups of patients: patients transferred from the ER for possible large vessel occlusions (LVO) who underwent thrombectomy and patients who were transferred for possible LVO but deemed not a candidate for thrombectomy. Retrospective comparison data were obtained from 2015 to 2017 for the same six-month period to account for seasonal variability.

Results: The co-primary outcomes were door-to-groin puncture time (DTG) time and door-to-door (ER to endovascular lab (DTD)) time. Average DTD times for 2015, 2016 and 2017 were 114, 129 and 145 minutes and the average DTG times were 263, 207, and 165 minutes, respectively.

Discussion: After enactment of the new algorithm, our DTG time decreased to 103 minutes and the DTD time decreased to 107 minutes. Therefore, the emphasis on quality improvement
regarding the stroke alert algorithm decreased DTG time for acute stroke patients with large vessel occlusion undergoing mechanical thrombectomy.