Development Of A Novel Rapid Outpatient Strategy For TIA And Minor Stroke Patients

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Objectives: Timely evaluation of TIA and minor stroke (TIAMS) is important, yet the optimal disposition of TIAMS is not known. While the majority of TIAMS patients evaluated in U. S. emergency departments (EDs) are admitted, experience in other countries suggests expedited outpatient evaluation for select TIAMS patients can be safe. In the U. S., ED and neurology observation units have been developed for the focused evaluation of TIAMS, but no protocols, to date, have implemented and published on an outpatient approach to TIAMS. In our study, we assessed the feasibility and safety of a novel rapid outpatient stroke clinic for TIAMS patients: Rapid Access Vascular Evaluation-Neurology (RAVEN)

Methods: RAVEN was created as a neurology clinic for TIAMS patients discharged within 24 hours from the ED at an urban academic medical center. Patients were screened in the ED by a neurologist and selected using a decision tool identifying presumed low-risk TIAMS. Criteria included medical (e. g. NIH Stroke Scale of 5 or less, no disabling deficit, no fluctuating or recurrent symptoms, no thrombolytic agent given, negative CT for hemorrhage, no new onset atrial fibrillation, blood pressure not over 180/110), as well as social criteria (e. g. patient able to follow-up within 24 hours). Doppler ultrasound to exclude intracranial and extracranial stenosis, along with neurology re-evaluation was performed at RAVEN. Sample population was evaluated for rates of noncompliance with post-ED follow-up, 90-day stroke outcomes and need for hospitalization from clinic. Final diagnosis was also tabulated.

Results: Between December 2016 and June 2018, 162 TIAMS patients seen in the ED were recommended for RAVEN. Of these patients, 153 (94.4%) were evaluated within 24 hours of ED discharge. Two patients (1.3%) required hospitalization; 101 (66%) of these patients had a final diagnosis of TIAMS. 90 day stroke outcomes (modified Rankin) in RAVEN were similar to historic 90 day outcomes in TIAMS prior to RAVEN at our institution.

Conclusions We implemented a rapid outpatient management approach to TIAMS, among the first in the U. S. Our pilot data suggests that for a subset of TIAMS patients, rapid outpatient evaluation may be feasible and safe. Future work exploring such a strategy may improve TIAMS outcomes, reduce ED and inpatient crowding, and offer reductions in healthcare costs associated with TIAMS care.