

Abstract 3468: Correlation of the Miami Emergency Neurologic Deficit (MEND) Exam Performed in the Field by Paramedics with an Abnormal NIHSS and Final Diagnosis of Stroke for Patients Airlifted from the Scene.

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Abstract

Introduction Early recognition and rapid transport to a stroke center by prehospital providers is essential in the care of stroke patients. In this study, prehospital providers were trained to perform the Miami Emergency Neurologic Deficit (MEND) exam as part of an 8-hour comprehensive course, Advanced Stroke Life Support (ASLS®). The MEND exam was devised to facilitate communication between healthcare providers throughout the continuum of care for stroke patients. It can provide a baseline exam in the prehospital setting, and then be used by nurses for initial evaluation and subsequent exams in the ED, ICU or hospital floor. The MEND exam incorporates all three components of the Cincinnati Prehospital Stroke Scale (CPSS) and six additional components from the NIHSS (level of consciousness, orientation, commands, visual fields, gaze, leg motor, limb ataxia, sensation). The exam takes less than 2 minutes and requires no tools, making it ideal for the Prehospital environment.

Purpose Determine the correlation of the MEND exam completed by a prehospital provider on scene to the initial NIHSS performed by the neurologist at the receiving facility, and the final diagnosis.

Methods All prehospital providers from three Fire Rescue agencies participated in the training (96 EMT-P, 68 EMT, 5 RN). The Prehospital providers conducted the CPSS, and if abnormal, placed the helicopter team on standby. They then completed the MEND exam and communicated their findings to a receiving hospital stroke neurologist. We retrospectively reviewed the MEND exam performed by the prehospital providers to determine the correlation with the same components of the initial NIHSS at the hospital. While the NIHSS assigned a numerical value to those specific components, the MEND exam did not. Additionally, we examined the final discharge diagnosis to determine how many patients had a stroke or transient ischemic attack (TIA).

Results From Sept. 2008 to June 2011, 51 patients met the criteria of having both a MEND exam and NIHSS completed. There were 32 males (63%) and 19 females (37%)

with a median age of 67 years (44-98 years). The average NIHSS score was 9 (range 0-30). 90.2% (46 of 51) of patients had an NIHSS that correlated to the findings on the MEND (95% C.I. 90.1-90.3). Of the 5 remaining patients, 1 completely recovered on the flight (diagnosed with a TIA), and 3 had a NIHSS score of 0 and were diagnosed with other conditions. Stroke or TIA was diagnosed in 40 patients (78.4%). Of 37 strokes, 32 were ischemic (86.5%) and 5 hemorrhagic (13.5%). The 11 patients not diagnosed with a stroke had several other pathologies (e.g. seizure, hypertensive crisis, viral encephalitis, complex migraine).

Conclusion The MEND exam completed in the Prehospital setting correlated well with the initial NIHSS performed at the receiving facility. The MEND exam is a valuable tool when assessing stroke patients and determining need for air transport.

- Stroke
- Emergency care
- Cerebrovascular disorders

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