

A Comparison of Two Stroke Cohorts Cared for by Two Different Specialties in a Practice-Based Tele-Stroke Population

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Introduction

Neurologists have continually led the assessment and management of Acute Ischemic Stroke (AIS) by use of IV-rtPA, anti-platelet therapy, antihypertensives, and other pharmacologic agents. Since the advent of mechanical thrombectomy (MT) and its proven efficacy, neurovascular surgeons (NS) are playing an increasingly important role in the management and overall care of AIS. Our goal is to assess outcomes of AIS patients managed by NS, who have been traditionally managed by neurologists.

Methods

Outcomes of AIS patients who presented to the telestroke system, over a 5-year period, were assessed. NIHSS and mRS stroke scales were used as outcome metrics. Multivariate analysis was conducted to compare outcomes of patients treated by neurovascular surgeons and those treated by neurologists.

Results

1,353 AIS patients were identified. 21.6% received care from neurosurgeons and 78.4% received care from neurologists. Of the neurologist-managed group: 7.8% received MT and were followed by NS, 34% received IV rt-PA, average discharge NIHSS = 9.0 (SD=8.42), latest follow-up mRS < 2 = 57.5% and mortality rate = 9.4%. Of the neurovascular surgeon-managed group: 7.4% patients received MT, 20% received IV rt-PA, average discharge NIHSS = 0.14 (SD=0.72), latest follow-up mRS=2 = 98.6% and mortality rate = 8.3%. There were no significant differences between groups in MT use (OR 1.22; CI95%, 0.971-2.09; p=0.464), IV rt-PA administration (OR 0.98; CI95%, 0.70-1.38; p= 0.924), mortality rate (OR 1.21; 0.71-2.03; p=0.483) and patients' latest mRS, p=0.873.

Conclusions

Acute ischemic stroke requires multidisciplinary management. We found that care provided by neurosurgeons has similar efficacy and patient outcomes as the care provided by neurologists. These findings support the role and ability of neurosurgeons to manage and care for these patients.

Learning Objectives

Dually trained Neuro-Vascular surgeons are gaining more proficiency in treating and managing AIS patients. Although ischemic stroke is a matter of multidisciplinary management, these surgeons are appropriately knowledgeable to prescribing IV rt-PA and concurrently performing MT in a highly specialized stroke unit.