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Lack of Better Functional Outcome in Young Border Hispanic Patients with Acute Ischemic Stroke after Endovascular Thrombectomy Compared to Older Patients: A Retrospective Chart Review

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Lack of Better Functional Outcome in Young Border Hispanic Patients with Acute Ischemic Stroke after Endovascular Thrombectomy Compared to Older Patients: A Retrospective Chart Review

Abstract

Background: Previous data indicates that young acute ischemic stroke patients have better prognosis after endovascular thrombectomy. However, data has also shown that Hispanic patients are associated with poorer outcomes following thrombectomy. Our goal is to study the interaction between age and Hispanic status to assess functional outcomes after endovascular thrombectomy in young versus older patients in a predominantly Hispanic population with a high prevalence of diabetes mellitus and obesity.

Methods: A retrospective chart review of patients with an anterior circulation large vessel occlusion between August 2012 to January 2022 was performed, comparing the data of young patients (18-49 years) and older patients (≥ 50 years). Baseline characteristics and outcomes including Modified Rankin Scale (mRS), Symptomatic Intracerebral Hemorrhage (sICH), Expanded Treatment in Cerebral Infarction score (eTICI), and mortality were studied, adjusting for confounders.

Results: A total of 811 patients, with 66 (8%) being 18 to 49 years old (33% female) revealed younger patients had lower presenting median National Institute of Health Stroke Scale (NIHSS) scores (9.5 versus 17, $P < 0.001$), and lower presence of comorbid hypertension (69 versus 88%, $P < 0.001$), atrial fibrillation (1.6 versus 32%, $P < 0.001$), and hyperlipidemia (41 versus 57%, $P = 0.010$), with no differences in diabetes mellitus rates. Both groups had a Hispanic predominance (73 versus 74%, $P = 0.97$). Median Alberta Stroke Program Early CT Score (ASPECT), intravenous thrombolysis treatment (IVT), and median groin to reperfusion time did not differ between the two groups. Subset analysis indicated that 90-day mRS score 0-2, sICH, eTICI, and mortality rates did not differ significantly.

Conclusion: Our Hispanic population demonstrates no differences in sICH, mortality, and functional independence between young and older acute ischemic stroke patients after endovascular thrombectomy. The Texas Rio Grande Valley region has uniquely high rates of diabetes and obesity in young patients compared to elsewhere. Our findings demonstrate that Hispanic status and high diabetes rates in young patients may predominate over age-related outcome differences in prior data. Further investigation is needed to elucidate the unique intersection between Hispanic status, diabetes mellitus, obesity, and age in ischemic stroke patients after endovascular thrombectomy.