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Mechanical Thrombectomy in Acute Ischemic Stroke Patients Greater than 90 years of age experience in 26 patients in a Large Tertiary Care Center: Outcome comparison with younger patients

Nicholas Elmer

Thomas Jefferson University, nicholas.elmer@jefferson.edu


Ahmad Sweid, MD

Thomas Jefferson University, ahmad.sweid@jefferson.edu

Joshua H. Weinberg

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Thomas Jefferson University, joshua.weinberg@jefferson.edu

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Vivian Xu

Thomas Jefferson University, vivian.xu@jefferson.edu

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Kavya Shivashankar

Thomas Jefferson University, kavya.shivashankar@jefferson.edu

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Authors

Nicholas Elmer; Ahmad Sweid, MD; Joshua H. Weinberg; Vivian Xu; Kavya Shivashankar; Tyler D. Alexander, MS; Jane Khalife, MD; Michael R. Gooch, MD; Nabeel Herial, MD; Nohra Chalouhi, MD; Pascal Jabbour, MD; Robert H. Rosenwasswer MD; and Stavropoula Tjournakaris, MD

Mechanical Thrombectomy in Acute Ischemic Stroke Patients Greater than 90 years of age experience in 26 patients in a Large Tertiary Care Center: Outcome comparison with younger patients.

Nicholas Elmer, Ahmad Sweid*, MD, Joushua H. Weinberg, BS, Vivian Xu, BS, Kavya Shivashankar, BA, Tyler D. Alexander, MS, Jane Khalife, MD, Michael R. Gooch, MD, Nabeel Herial, MD, Nohra Chalouhi, MD, Pascal Jabbour, MD , Robert H. Rosenwasser, MD, Stavropoula Tjoumakaris, MD

Introduction: Several independent randomized control trials have shown the superior efficacy of mechanical thrombectomy for acute ischemic stroke (AIS). However, the elderly has been underrepresented or excluded in these trials. In this study, we investigated the feasibility and safety of mechanical thrombectomy in patients with AIS aged 90 years or greater.

Methods: A retrospective review of patients age 90 years or older presenting with AIS who underwent mechanical thrombectomy between 2010 and 2018.

Results: Of total 453 patients with AIS, 5.74 % (26) were aged 90 or older, and 69.32 % (314) ranged from 60-89 years of age. Of all baseline characteristics between both groups, there is a significant difference in age, gender, body mass index (BMI), smoking, hyperlipidemia (HLD), atrial fibrillation, and diabetes mellitus. The mean NIHSS upon admission was higher in the nonagenarians (17 vs. 15). Similar proportions of both groups received tPA (57.69%, 15 vs. 42.68%, 134, p=0.14). There was no difference in peri & post-procedural complications, good

TICI score (88.46%, 23 vs. 87.58%, 275, $p=1.00$), “good” mRS scores (34.62%, 4 vs. 49.36%, 155, $p=0.40$), and mortality (11.54%, 3 vs. 13.06%, 41, $p= 0.82$).

Discussion: Age is one of the factors that affect functional outcome following mechanical thrombectomy. Advancements in catheter techniques, technical experience, and great outcomes with mechanical thrombectomy allow for pushing the envelope to deal with age as one of the factors, rather, than an exclusion criterion. Our results show that mechanical thrombectomy is safe and feasible in nonagenarians.