Acute Large Vessel Occlusion Treatment

see Acute ischemic stroke treatment.

Indications

Acute Large Vessel Occlusion Treatment Indications.

In a multicenter, prospective, randomized, controlled, open-label, adaptive, noninferiority trial with blinded primary end point evaluation. Between October 2019 and February 2022, multicenter participation occurred across 19 research hospitals and/or universities in the US and 5 in Germany. Patients with LVO stroke were enrolled and included up to 8 hours after symptom onset.

Interventions: Patients underwent 1:1 randomization to thrombectomy with the pRESET or Solitaire stent retriever.

Main outcomes and measures: The primary outcome was the difference in the rate of 90-day functional independence across the 2 devices, using a -12.5% noninferiority margin for the lower bound of the 1-sided 95% CI of the difference between pRESET and Solitaire retrievers.

Results: Of 340 randomized patients, 170 (50.0%) were female, and the median (IQR) age was 73.0 (64.0-82.0) years. The study procedure was completed in 322 of the 340 randomized patients. The primary end point of 90-day functional independence was achieved by 95 patients (54.9%; 95% CI, 48.7-61.1) in the pRESET group and in 96 (57.5%; 95% CI, 51.2-63.8) in the Solitaire group (absolute difference, -2.57%; 95% CI, -11.42 to 6.28). As the lower bound of the 95% CI was greater than -12.5%, the pRESET retriever was deemed noninferior to the Solitaire retriever. The noninferiority of pRESET over Solitaire was also observed in the secondary clinical end point (90-day shift in modified Rankin Scale score) and in both angiographic end points (Expanded Treatment in Cerebral Infarction [eTICI] score of 2b50 or greater within 3 passes: 146 of 173 [84.4%] vs 149 of 167 [89.2%]; absolute difference, -4.83%; 95% CI, -10.84 to 1.19; eTICI of 2c or greater following the first pass: 76 of 173 [43.7%] vs 74 of 167 [44.3%]; absolute difference, -0.63%; 95% CI, -9.48 to 8.21). Symptomatic intracranial hemorrhage occurred in 0 patients in the pRESET group and 2 (1.2%) in the Solitaire group. Mortality occurred in 25 (14.5%) in the pRESET group and in 24 (14.4%) in the Solitaire group at 90 days. Findings of the per-protocol and as-treated analyses were in concordance with findings of the intention-to-treat analysis.

In this study, among patients with Large Vessel Occlusion (LVO) stroke, thrombectomy with the pRESET stent retriever was noninferior to thrombectomy with the Solitaire stent retriever. Findings suggest that pRESET offers a safe and effective option for flow restoration and disability reduction in patients with LVO stroke [1].

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to bridge or not to bridge?

Xiong Y, Pan Y, Nogueira RG, Ren Z, Jovin TG, Wang Y. Treating acute large vessel occlusion stroke: to bridge or not to bridge? Stroke Vasc Neurol. 2021 Apr 26:svn-2021-000952. doi: 10.1136/svn-2021-000952. Epub ahead of print. PMID: 33903180.

1)

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