mSAVE

The “Stent retriever Assisted Vacuum-locked Extraction” (SAVE) technique is a promising embolectomy method for intracranial large vessel occlusion (LVO). We report our experience using a modified SAVE (mSAVE) approach for clot reduction prior to embolectomy in acute ischemic stroke patients with large clots.

MATERIALS AND METHODS: We retrospectively analyzed 20 consecutive patients undergoing mSAVE in our center due to intracranial LVO. Angiographic data (including first-pass and overall complete reperfusion, defined as an expanded Thrombolysis in Cerebral Infarction (eTICI) score of 3, rate of successful reperfusion (eTICI ≥2c), number of passes, time from groin puncture to reperfusion) and clinical data (favorable outcome at 90 days, defined as modified Rankin Scale (mRS) ≤2) were assessed.

RESULTS: First-pass and overall eTICI 3 reperfusion was reached in 13/20 (65%) and 14/20 (70%), respectively. The rate of successful reperfusion (eTICI ≥2c) after one pass was 85% and on final angiogram 90% with an average number of 1.1 ± 0.3 attempts. Eight out of 11 (73%) ICA occlusions were reperfused successfully and 5 (46%) completely after a single pass. Median groin to reperfusion time was 33 minutes (IQR 25-46). A favorable clinical outcome was achieved in 9/20 (45%) patients at discharge and after 90 days, respectively.

Clot reduction followed by embolectomy (mSAVE) is feasible and may be an important tool in the treatment of large clots [1)].

1)
Psychogios MN, Tsogkas I, Brehm A, Hesse A, McTaggart R, Goyal M, Maier I, Schnieder M, Behme D, Maus V. Clot reduction prior to embolectomy: mSAVE as a first-line technique for large clots. PLoS One. 2019 May 9;14(5):e0216258. doi: 10.1371/journal.pone.0216258. eCollection 2019. PubMed PMID: 31071109.