E-019 OUTCOME OF THE PATIENTS PRESENTING WITH BASILAR OCCLUSIONS IN A BUSY STROKE CENTER TREATED WITH NEW GENERATION STENT RETRIEVERS

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10.1136/neurintsurg-2016-012589.91

Introduction/purpose Posterior circulation strokes with basilar occlusions have the worse clinical outcomes of all strokes. The outcome data utilizing new generation stent retrievers is sparse as most of the clinical trials evaluating stent retrievers exclude posterior circulation strokes. This retrospective review was undertaken to report our experience with stent retrievers in acute basilar occlusions.

Materials/methods From March 2012 to March 2016, we performed thrombus retrieval in 337 patients. Retrospective review revealed 23 patients (7%) with basilar occlusions were treated with stent retrieval and adjuvant therapy.

- Patient demographic:
  - 23 patients: 16 males, 7 females
  - Age ranged from 29–87 years (mean: 60.4, median: 63)
- Presentation time from symptom onset:
  - 0–3 hours: 4 patients
  - 3–8 hours: 6 patients
  - Time unknown: 13 patients. 9/13 patients: wake up strokes
  - Intravenous TPA was administered in 4/23 patients (17%)
  - Initial non contrast CT scan findings:
  - Negative: 17 patients
  - Positive for patchy strokes: 6 patients
  - Dense basilar artery on CT: 9 patients
- Thrombectomy device utilized:
  - Solitaire 4x20mm in 7, 4x40mm in 4, 6x30mm in 9, 6x20mm in 1 patient
  - In one patient solitaire could not be deployed
  - In one patient: Trevo was utilized
  - Balloon guide catheters were used in 10 patients with balloon dilated in the Subclavian artery. In 9 patients, local suction with stent retrievers was applied.o 6/23 patients required stent placement for underlying stenosis

Results

- NIHSS
  - NIHSS at presentation range from 2–38 (mean: 24, median: 22.5)
  - NIHSS 24 hour post intervention range from 0–38 (mean: 17, median: 13.5)
- Number of passes:
  - Pass attempts range from 1–5. Successful 1st pass achieved in 10 patients (mean number of passes: 2/patient)
- TICI scores:
  - Initial TICI pre procedure:
    TICI 0: 19 patients, TICI 1/2a: 4 patients
  - Final TICI score post procedure:
    TICI 3: 11, TICI 2c: 2, TICI 2b: 5, TICI 1: 2, and TICI 0: 3 patients.
    Successful reperfusion (TICI 2b or higher) was achieved in 18/23 patients (78.3%).
- Outcome:
  - Modified Rankin Score (MRS) at discharge/90 days:
    Death (6): 10 patients
    MRS 0–2 (good clinical outcome group): 7/23 (30%)
    MRS 3–5: 5 patients
    1 patient declined follow up
    Good clinical outcome group 5/7 patients presented within 6 hours of symptom onset while 2/7 patients presented as wake up strokes. Initial CT findings were negative in all 7 patients.

Conclusion Although the successful recanalization rate (TICI 2 b or higher) in basilar occlusions is high (18/23 (78.3%)), the mortality (10/23 (43%)) and morbidity with MRS $\geq$ 3 (5/23 (22%)) remains disappointingly high. In our study, good clinical outcome (MRS 0–2) was achieved in 30% (7/23) of patients, better than the natural course in basilar occlusions, which is encouraging. This group highlights the value of early presentation and a negative CT as strong predictors of a good outcome. The prognosis in patients with basilar occlusions with positive CT findings and unknown time of onset remain guarded.

Disclosures I. Akhtar: None. **J. Halpin:** None. **W. Holloway:** None. **C. Martin:** None. **N. Akhtar:** None.

E-020 BETWEEN A ROCK AND A HARD PLACE: THE USE OF SELF-EXPANDING STENTS FOR THE ENDOVASCULAR TREATMENT OF ACUTE ISCHEMIC STROKE DUE TO RECALCITRANT EMERGENCY LARGE VESSEL OCCLUSION IN THE ERA OF STENT-RETRIEVERS: SINGLE-CENTER EXPERIENCE AND EARLY RESULTS

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10.1136/neurintsurg-2016-012589.92

Objective The efficacy of stent-retrievers in achieving recanalization in the setting of acute ischemic stroke (AIS) secondary to an emergency large vessel occlusion (ELVO) has now been conclusively proven in several randomized clinical trials. However, in a small subset of these patients recanalization may not be achieved by means of mechanical thrombectomy with stent-retrievers and/or thromboaspiration with large bore catheters. In selected cases of this type of recalcitrant occlusion, acute intracranial stenting may be safe and effective as a last and final effort to achieve flow restoration and improve recanalization rates with good clinical outcomes (Modified Ranking Scale (mRS) ≤2).

Methods Retrospective analysis of 7 patients who underwent endovascular treatment of ELVO between January 2012 and April 2016 at a single tertiary care center with acute intracranial stenting for a vessel occlusion recalcitrant to recanalization by means of standard mechanical thrombectomy and/or thromboaspiration techniques.

Results Six males and a female with median baseline National Institutes of Health Stroke Scale (NIHSS) score of 20 (range 18–29) were included in this study. Three occlusive lesions were located from the internal carotid artery (ICA) terminus to the M1, 2 lesions were distal M1 occlusions, 1 lesion was a distal M1 occlusion that spanned the superior and inferior M2 divisions, and 1 lesion was at the distal basilar extending to the bilateral P1 segments. The median number of attempted yet unsuccessful mechanical thrombectomies before considering acute intracranial stenting was 4. One procedure included balloon angioplasty prior to stenting, two procedures