Community Stroke Practice Experience with Small Vessel Thrombectomy

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Community stroke practice experience with small vessel Thrombectomy

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Methods

- Institutional Stroke Registries were queried between 2017 and 2019 for consecutive cases of acute thromboembolic disease affecting the M2-M3 MCA, A1-2 ACA and P1-P2 PCA territories
- Patients with LVO and daughter vessel occlusions in the queried vessels were excluded as well as patients for whom revascularization was not performed after diagnostic angiography
- A total of 26 patients were identified representing 30 parent small vessels containing acute thrombus
- Thrombectomy techniques were categorized as primary aspiration with the ADAPT technique, primarily stent retrieval approaches or combined approaches (PCA)
- We assessed post procedural revascularization efficacy and itemized the thrombectomy devices employed

Results

- In total 30 vessels were treated with greater than 50% revascularization in approximately 80% of vessels
- 6 A2-ACA, 6 P1/P2-PCA and 18 M2-MCA vessels were treated
- Half of the treated patients were male
- All cases employed the primary combined approach (PCA)
- Intravenous tPA was used in 53% of cases of which 88% obtained greater than 50% revascularization post procedurally

Background

- Only few studies in large academic centers have demonstrated outcomes after Thrombectomy for emergent small vessel occlusions
- A 2018 study by Grossberg and colleagues demonstrated 83% successful revascularization in 69 patients with distal vessel emboli
- Community stroke centers can capably produce excellent treatment outcomes in these patient populations

Introduction

Emergent endovascular revascularization is currently mainstay for patients presenting with emergent Large Vessel Occlusion (LVO) of the intracranial circulation

Stroke syndromes affecting smaller vessels can carry significant morbidity

Newer technologies and greater experience with the endovascular approach make treatment for small vessel occlusions increasingly more manageable

This is more relevant in patients presenting outside the tPA window with poor collateral circulation

We present our technical institutional experience with the endovascular management of acute occlusions of the M2-M3 MCA, A1-2 ACA and P1-P2 PCA territories

Conclusion

Emergent Thrombectomy of distal intracranial vessel occlusions is technically feasible in the community stroke practice

References