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Community Stroke Practice Experience with Small Vessel Thrombectomy

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Community stroke practice experience with small vessel Thrombectomy

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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 1.5 hours window with poor collateral circulation
- We present our technical institutional experience with the endovascular management of acute occlusions of the M2-M3 MCA, A1-A2 ACA and P1-P2 PCA territories

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 P1-2 PCA vessels for which endovascular revascularization was performed
- 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

Conclusion

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

References


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