<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenting Author First Name</th>
<th>Presenting Author Last Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30 - 1:40 pm</td>
<td>Improving Utilization Rates of Comprehensive Stroke Services; The Impact of a Regional Approach</td>
<td>Stacey M</td>
<td>Lang</td>
</tr>
<tr>
<td>1:40 - 1:50 pm</td>
<td>Implications of Adherence to 2015 AHA Guidelines for Mechanical Thrombectomy (MT) in Emergent Large Vessel Occlusion (ELVO)</td>
<td>Rohini</td>
<td>Bhole</td>
</tr>
<tr>
<td>1:50 - 2:00 pm</td>
<td>Preliminary Results of the Prospective Trevo Retriever Registry</td>
<td>Joey D</td>
<td>English</td>
</tr>
<tr>
<td>2:00 - 2:10 pm</td>
<td>Mechanical Thrombectomy in pediatric patients with large vessel occlusion – clinical case series.</td>
<td>Viktor</td>
<td>Szeder</td>
</tr>
<tr>
<td>2:10 - 2:20 pm</td>
<td>Outcomes of Thrombectomy in Tandem Compared to Isolated Intracranial Occlusions</td>
<td>Diogo C.</td>
<td>Haussen</td>
</tr>
<tr>
<td>2:20 - 2:30 pm</td>
<td>Question &amp; Answer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Improving Utilization Rates of Comprehensive Stroke Services; The Impact of a Regional Approach

Stacey M Lang¹

Corazon Neuroscience Division, Pittsburgh, PA, USA

Introduction:
One third of Americans do not have access to a primary stroke center by ambulance within one hour. Research demonstrates that specialized care has the potential to decrease rates of death and disability in stroke. Timely access to care continues to be a complex issue requiring a multi-pronged approach. While comprehensive capabilities are an essential component of full spectrum stroke care, utilization of these services in many rural regions of the U.S. is lagging. Comprehensive Stroke Centers are often challenged to establish cohesive partnerships with community hospitals necessary for maximum patient capture. The rural nature of much of the U.S., a lack of pervasive public awareness of stroke, and limited access to specialized stroke clinicians by many rural healthcare facilities present a significant challenge. Advances in stroke have grown exponentially over the past decade, however, the ability to deliver this care consistently across all geographic regions is lagging. A national perspective with respect to access to care variability is crucial in developing a sustainable regional network.

Methods:
Through an evaluation of the variability in access to care and contributing factors at a national level, standardized assessment and implementation tools were developed. A formal data request to evaluate available clinical infrastructure, geographic transport considerations, the use of technology, and clinical best practice recommendations are included.

Results:
The three regional care delivery systems demonstrated a 50% increase in tPA administration rates, increased patient transfer rates, and improved outcomes measures within six months of project implementation.

Conclusions:
Patient capture rates and outcomes through the use of a standardized assessment of regional nuances and a customized workplan designed to drive best practice performance is key to ensuring sustainability for regional networks of care.

Keywords: Health economic, Medical management

Financial Disclosures: The author had no disclosures.

Grant Support: None.
Implications of Adherence to 2015 AHA Guidelines for Mechanical Thrombectomy (MT) in Emergent Large Vessel Occlusion (ELVO)

Rohini Bhole¹, Nitin Goyal¹, Katherine Nearing¹, Andrey Belayev¹,², Vinodh Tommy Doss¹,², Lucas Eliovich¹,², Daniel A Hoit¹,², Georgios Tsivgoulis¹,³, Anne W Alexandrov¹, Adam S Arthur¹,², Andrei V Alexandrov¹

¹University of Tennessee Health Science Center, Memphis, TN, USA, ²Department of Neurosurgery, Semmes-Murphey Brain and Spine Institute, Memphis, TN, USA, ³Second Department of Neurology, “Attikon University Hospital”, School of Medicine, University of Athens, Athens, Greece

Introduction:
Recent 2015 AHA guidelines for MT in ELVO have been deemed too restrictive. Our aim was to determine how many patients would not have qualified for MT if 2015 AHA Class I Level A criteria are upheld as well as safety and outcomes of patients treated in routine clinical practice outside of AHA recommendations.

Methods:
We conducted a retrospective chart review of consecutive ischemic stroke patients who underwent MT with or without intravenous thrombolytic as standard of care. MT was performed with primary deployment of stentrievers or large bore clot aspiration catheter. Outcomes were assessed by investigators unaware of the purposes of this analysis.

Results:
A total of 126 patients received MT from January 2012 to June 2015 (age range 31-89, NIHSS range 2-38). Of these, 62 patients (49%) would have been excluded if AHA Class I Level A criteria were applied: pre-treatment NIHSS < 6 (6 patients, 10%), ASPECTS < 6 (4, 6.5%), premorbid mRS > 2 (17, 27%), M2 occlusion (6, 10%), posterior circulation occlusions (19, 31%), symptom to groin puncture > 360 min (36, 58%) and subjects with multiple above mentioned exclusions (26, 42%). Rate of sICH was identical (8%) in both groups (p = 0.979) and serious hemorrhage was 8% vs 10% respectively, p = 0.731. Mortality at 3 months was 45% vs 26%, p = 0.044, and favorable functional outcome mRS 0-2 at 3 months was achieved by 33% vs 46% respectively, p = 0.158. In multivariate analyses adjusting for potential confounders, MT according to AHA guidelines was not associated with neurological improvement during hospitalization [β: -8.2; 95%CI: -24.6—8.2; p = 0.321], 3 month mortality (OR 0.38; 95%CI: 0.08-1.41; p = 0.135) and 3 month favorable functional outcome (OR: 0.97; 95%CI: 0.28-3.35), p = 0.963).

Conclusions:
Adherence to 2015 AHA Class I Level A criteria could exclude one half of patients from MT. Our data indicate no increased risk sICH and potentially higher mortality that is largely due to treatment of patients with basilar occlusions and those at an extended time window. Despite this, good functional recovery is possible and consideration of MT beyond strict recommendations may be warranted.

Keywords: Acute Ischemic Stroke Intervention, Mechanical thrombectomy, Endovascular therapy, ASPECTS, Door to groin puncture

Financial Disclosures: The authors had no disclosures.

Grant Support: None.
Preliminary Results of the Prospective Trevo Retriever Registry

Joey D English1, Rishi Gupta2, Ronald Budzik3, Blaise Baxter4, Erol Veznedaroglu5

1California Pacific Medical Center, San Francisco, CA, USA, 2Wellstar Medical Group, Marietta, GA, USA, 3Riverside Methodist Hospital, Columbus, OH, USA, 4Erlanger Health System, Chattanooga, TN, USA, 5Capital Health, Pennington, NJ, USA

Introduction:
The Trevo Registry is a prospective real world evaluation of procedural times, reperfusion rates, adverse events and clinical outcomes in patients undergoing Trevo mechanical thrombectomy.

Methods:
The aim is to enroll consecutive patients in whom a Trevo device is used as the first mechanical thrombectomy device, with a planned enrollment of 1000 patients at 75 international sites. Data are locally adjudicated and submitted to the sponsor for analysis. Data regarding key time points of the processes, reperfusion grade, adverse events and 90 day modified Rankin scores are collected.

Results:
As of June 15, 2015, 386 patients had been enrolled, with a target enrollment of 1000 by September 2016. Data has been completed on 225 patients, with a plan to present data on 300 patients. The mean time from last known normal to hospital arrival was 3.8 ± 5.3 hours, and 45.5% of all patients received IV tPA. 65% of patients were treated within 6 hours and 15% beyond 12 hours. Most were treated for ICA or M1 MCA occlusions (67%). General anesthesia was utilized in 66%. The mean procedure time was 60 ± 40 minutes with an average of 1.7 ± 1 device passes. The rate of TICI 2B or 3 was 87% and TICI 3 was achieved in 45%. A favorable neurological outcome (mRS 0-2) at 90 days was noted in 52.5% of patients, with a 90 day mortality rate of 16%.

Conclusions:
The Trevo Retriever Registry represents real world data with Trevo stent retriever use in the era of clinical trials showing overwhelming benefit of this approach in acute ischemic stroke. The analysis of the initial 225 patients demonstrates rates of procedural success and favorable clinical outcomes that are similar to recently published clinical trials. Ongoing analysis of this large cohort will enable future research to further enhance outcomes with stent retriever mechanical thrombectomy.

Keywords: Acute Ischemic Stroke Intervention, Mechanical thrombectomy, Stentretreiver, Clinical investigations,

Financial Disclosures: All co-authors are on the steering committee of this industry sponsored prospective registry and all have performed consulting work for the sponsor (Stryker Neurovascular).

Grant Support: None.
Friday, October 16, 2:00 - 2:10 pm

Mechanical thrombectomy in pediatric patients with large vessel occlusion – clinical case series.

Viktor Szeder1, Tomas Bryndziar2, Nestor R. Gonzalez1, Satoshi Tateshima1, Neal Rao3, Jason D. Hinman3, Latisha Ali3, Reza Jahan1, David S. Liebeskind3, Gary R. Duckwiler3, Jeffrey L. Saver3

1Division of Interventional Neuroradiology, UCLA, Los Angeles, CA, USA, 2ICRC/Department of Neurology, Faculty of Medicine, Masaryk University, Brno, Czech Republic, 3Department of Neurology, UCLA, Los Angeles, CA, USA

Introduction:
Mechanical thrombectomy in children is not a well-established clinical practice. In addition, pediatric patients were excluded from the recent successful thrombectomy trials. There is a need to build evidence on endovascular therapy in pediatric population. In this case series, we report our experience in a large academic center.

Methods:
We retrospectively analyzed prospectively collected data from our UCLA acute stroke database from 2000 to present time. Patients < 18 years old with large vessel occlusion, who underwent acute endovascular mechanical thrombectomy were included in this analysis. Demographic and clinical information as well as pre-/post-intervention imaging and the interventional procedure data were analyzed. The Pediatric National Institutes of Health Stroke Scale (PedNIHSS) score at presentation, at discharge as well as pediatric-modified Rankin Scale (Ped-mRS) up-to 90 days was used. Periprocedural complications are also reported.

Results:
We identified 5 patients (ages 2-15) in our database. Three had known congenital heart disease and one repeated episodes of syncope and bradycardia. No risk factors other than PFO were seen in the fifth patient. IV tPA was used in 1 case. Occlusion was identified in ICA-M1 (n=2), M1 (n=2) and M1-M2 (n=1). Collaterals seen on angiography were scored as grades 2-3. Time intervals from last known well to reperfusion ranged from 3h to 9h 28min. Final AOL score of 3 was achieved in all cases, TICI 2a in two and TICI 2b in three cases. Merci was used in 2 cases; Penumbra, Solitaire and Mindframe Capture were used each in 1 case. One patient developed intracerebral hemorrhage that required hemicraniectomy. The PedNIHSS score at discharge ranged from 0 to 8 and the Ped-mRS score up-to 90 days ranged from 0 to 4, with 80% of children having Ped-mRS ≤3.

Conclusions:
Endovascular mechanical thrombectomy in children for acute large vessel occlusion may be a safe and feasible treatment option.

Keywords: Pediatric intervention, Mechanical thrombectomy, Recanalization, Acute Ischemic Stroke Intervention, Revascularization

Financial Disclosures: Nestor R. Gonzalez: Significant Grants from the NIH and AHA, Satoshi Tateshima: consultant—Covidien and Stryker Neurovascular, Reza Jahan: consultant—Covidien, David S. Liebeskind: NIH grants (significant) and consultant to Stryker and Medtronic (modest), Gary S. Duckwiler: consultant—Stryker Neurovascular (Concentric Medical) and Covidien Jeffrey L. Saver: consultant—Covidien, CoAxia, Stryker, BrainsGate, Genervon, Grifols, and Lundbeck.

Grant Support: None.
Outcomes of Thrombectomy in Tandem Compared to Isolated Intracranial Occlusions

Diogo C. Haussen¹, Andrey Lima¹, Mikayel Grigoryan², Jonathan Grossberg¹, Michael Frankel¹, Samir Belagaje¹, Aaron Anderson¹, Leticia C. Rebello¹, Raul G. Nogueira¹

¹Emory University / Grady Memorial Hospital, Atlanta, GA, USA, ²Atlanta Medical Center, Atlanta, GA, USA

Introduction:
Patients with tandem extracranial and intracranial occlusions have limited response to IV tPA. The data on the treatment of the endovascular treatment of tandem lesions is scarce. We aim to compare the outcomes of patients with anterior circulation tandem versus isolated intracranial occlusions.

Methods:
This was a retrospective review of a prospectively collected thrombectomy database between February 2011-April 2015. A total 685 patients treated within the study period. Seventy-eight patients with tandem extracranial sten-occlusive carotid disease and intracranial occlusions were identified and compared 535 controls (posterior circulation and isolated extracranial carotid disease cases were excluded).

Results:
Tandem patients were younger (62±12vs65±15;p=0.04), more commonly male (63vs49%;p=0.01) and hypertensive (70vs48%;p< 0.01), and had less atrial fibrillation (15vc 45%;p< 0.01) and lower ASPECTS (7.3±1.6vs7.7±1.6;p=0.04). NIHSS was similar (17±5vs18±5;p=0.38). Tandem patients had more commonly ICA-terminus occlusions (36vs19%;p< 0.01) and carotid dissections (14vs1%;p< 0.01). Stentretriever were used similarly (66vs62%;p=0.12), with a longer procedural length (104±43vs80±50min;p>0.01) in tandems, and similar mTICI2b-3 rates (85vs81%;p=0.52). Parenchymal hemorrhage-2 (PH2) (4vs6%;p=0.31), 3-month mRS0-2 (44vs43%;p=0.70) and mortality (23vs23%;p=0.79), as well as final infarct volumes (66±70vs62±80cc; p=0.60) were similar amongst groups. Multivariate analysis indicated age, gender, dyslipidemia, NIHSS, ASPETCS, successful reperfusion, procedure length, and final infarct volume predicting good outcome. Tandem occlusions were not observed to impact outcome even after being forced into the model.

Conclusions:
Mechanical thrombectomy for anterior circulation tandem occlusions leads to similar clinical outcomes and final infarct volumes compared to isolated intracranial occlusions.

Keywords: Carotid stenting and angioplasty, Acute Ischemic Stroke Intervention, Endovascular therapy, Stroke,

Financial Disclosures: The authors had no disclosures.

Grant Support: None.