E-065 "RESCUE" INTRACRANIAL STENTING FOR REFRACTORY LARGE VESSEL (RE)OCCLUSION IN ACUTE ISCHEMIC STROKE

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Introduction The use of intracranial stents for symptomatic cerebrovascular stenosis has been limited since the publication of recent clinical trials suggestive of elevated procedural risks. However, the utility of these devices for "salvage" therapy in acute stroke has not been well studied.
Objective To investigate the efficacy of intracranial stenting in acute ischemic stroke patients with large vessel occlusion, who failed to recanalize or continued to reocclude with standard thrombectomy methods.
Methods Retrospective data review and analysis. Data was collected in 2015–2016.
Results We identified 5 patients (3 males; mean age 45.2 years), who received intracranial stents during acute stroke intervention. Stents were utilized if vessel reocclusion occurred after thrombectomy (4 cases), or when recanalization could not be achieved with standard thrombectomy devices (1 case). Self-expanding stents were used in 3, and balloon-mounted stents were deployed in 2 cases. Intraprocedural abciximab, followed by postprocedural dual antiplatelet therapy was used in all cases to prevent in-stent thrombosis. Total procedure time was 116–162 min (mean 134.6 ± 19.8). First recanalization was achieved within 22–106 min (mean 47.8 ± 34.1). Final TICI 2 B or 3 recanalization was achieved in all 5 (100%) patients. Clinical follow-up ranged from 4 days to 8 months. No symptomatic intracranial hemorrhage occurred. Median preprocedure vs follow-up NIHSS were 19 vs 11, respectively. One patient with the longest recanalization time (106 min), and highest preprocedural NIHSS (27) died. Another patient with reocclusion a few hours after a previous thrombectomy procedure did not improve despite TICI 3 final recanalization. The other 3 patients (60%) showed clinical improvement: the median NIHSS has decreased from 14 to 7.
Conclusion Intracranial stent placement for refractory large vessel (re)occlusion in acute ischemic stroke is feasible with high technical success rate, however, this is not always associated with favorable clinical outcome. If refractory vessel occlusion or reocclusion is encountered during acute stroke intervention, early stent placement and recanalization may lead to more favorable outcome. Verification in a larger cohort is necessary.
Disclosures G. Toth: None. **S. John:** None. **M. Elgabaly:** None. **M. Hussain:** None. **M. Bain:** None.

E-066 ENDOVASCULAR TREATMENT OF MCA ANEURYSMS – A SINGLE CENTER CASE SERIES

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Introduction The ideal treatment modality for both ruptured and unruptured MCA aneurysms is a contentious subject. Both clipping and endovascular therapy (EVT) of these aneurysms are viable options. So far there have been no randomized controlled trials that have compared the results of clipping versus endovascular therapy for MCA aneurysms.

We present a consecutive series of 30 MCA aneurysms (ruptured and unruptured) that were treated using endovascular techniques in our center between Jan 2015–Feb 2016. The use of novel endovascular aneurysm treatment techniques and adjunctive devices is discussed. We also describe the procedural complications and the immediate and short-medium term results of their clinical and imaging follow up.
Materials and methods A retrospective analysis of the PACS database at James Cook University Hospital identified 30 episodes of "embolization of MCA aneurysms" performed in 29 patients between 1 Jan 2015–29 Feb 2016.

The relevant admission case notes, angiography and cross-sectional imaging and follow- up clinic data were reviewed.
Results 30 MCA aneurysms in 29 patients (24 Female, 5 male) with an age range from 26–79 years were treated using EVT during this period. There were 14 ruptured and 16 unruptured MCA aneurysms. 10 of the 14 ruptured MCA aneurysms had associated parenchymal haematomata.

The median size of aneurysm treated was 5 mm (range 1.3 mm –13mm). Adjunctive devices were used in 21 patients comprising of balloons in 15 cases, low profile stents in 4 cases, 1 web device and 1 PCONUS device. Novel endovascular techniques were used in 8 cases which included dual balloon remodeling technique in one case, dual micro-catheter in 4 cases, balloon with dual microcatheters in 2 cases and neck remodeling with guidewire support in one case.

There were no intra, peri-procedural or delayed ruptures, coil prolapse/migration in either of the ruptured or unruptured MCA aneurysms groups.

Intra-procedural clot formation was noted in 3/29 (10.3%) patients which was treated with IV absciximab with no sequalae. 1/29 (3.4%) patients had a groin haematoma post stent assisted embolization secondary to failure of groin closure device.

15/16 patients in the unruptured cohort had no change in their mRs score post procedure at discharge. mRs score of 1/16 patients with groin haematoma who needed surgical evacuation, returned to the pre-operative baseline at clinic review in 3 months.

5/14 patients with aneurysmal SAH died as a result of their original hemorrhage. The remaining 9 returned to a mRs score of 0–2 at clinic review.

Follow up imaging at 1 year is available in 10/29 patients, small neck remnants are noted in 5/10 cases. Two of the remnants have developed in patients with aneurysmal SAH with haematoma at presentation. In the other 3 cases deliberate neck remnants were left at the time of original treatment which have not changed.
Conclusion Endovascular treatment of MCA aneurysms is efficacious and has a good safety profile with acceptable immediate and mid-term results. Continues innovation in endovascular techniques and devices has enabled safe and effective embolization of both ruptured and unruptured MCA aneurysms.
Disclosures R. Padmanabhan: None. **S. Power:** None.

E-067 ENDOVASCULAR APPROACH IN THE REPAIR OF THE MIDDLE CEREBRAL ARTERY ANEURYSM INCLUDING THOSE WITH WIDE NECK AND COMPLEX IN MORPHOLOGY-A CASE SERIES

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Background Recent data demonstrated that surgical clipping of the middle cerebral artery aneurysm may be superior to endovascular coiling when modified Rankin Scale (mRS) 2 or less is considered a good outcome. However, it is not clear that how many of the patients in both arms were able to go back to baseline functional states despite being independent. There are minimal data on the outcome of the repair of the MCA aneurysm when mRS 0–1 is considered a good outcome. Additionally, outcome of patients with a complex anatomy and/or wide neck are not well described.
Objectives Primary objective is to evaluate the functional outcomes of MCA aneurysm patients who underwent endovascular repair including those with wide neck and complex in nature. Secondary, objective is to determine the percentage of good outcome (mRS 0–2) patients who may return to the functional status (mRs 0–1).
Methods From a prospectively maintained database, consecutive patients with MCA aneurysm who underwent endovascular treatment were enrolled from 2011 to 2015. Patient's demographics including perioperative events were captured. In addition to the long-term angiographic results, the functions outcome was measured using mRS in 90 days and subsequent visits.
Results 13 patients with median age 60 years (38–76), 83% women underwent endovascular repair of the 14 MCA aneurysms. Off 14 aneurysms (right 9) including 2 ruptured cases (11 were wide neck and 6 had complex anatomy), 11 required stent-assisted coiling representing one ruptured case. Stent was deployed in all but one case due to the extreme tortuosity, which underwent primary coiling of aneurysm. This 67 years old patient with 14 mm symptomatic right MCA aneurysm required treatment prior to initiate chemo and radiation therapy for her breast carcinoma. She developed intraoperative thrombosis of superior division of MCA which was recanalised using 10 mg of intra-arterial eptifibatide resulted in no clinical symptoms or radiographic stroke. Immediate complete and near complete obliteration was observed in 10 and subtotal in 4 cases. One patient lost long term follow-up. Off 4 subtotal cases; two achieved complete and 2 remain subtotal with improvement. Recurrence of aneurysm was observed in two cases that required subsequent coiling and achieve long-term complete obliteration. 90 days Independent functional outcome (mRS 0–2) was observed in all 13 patients including 2 ruptured cases. Long-term normal functional state (mRS 0–1) was observed in 11/12 cases and one ruptured patient remained in mRS 2 and was not able to go back to work.
Conclusions Endovascular repair of the MCA aneurysm inclosing those with wide neck and complex are not only safe and feasible, but associated with high long-term functional outcome. Therefore, endovascular options must be offered to patients prior to surgical clipping of a MCA aneurysm. Further study may be warranted.
Disclosures Y. Lodi: None. **V. Reddy:** None.

E-068 AVAILABILITY OF TRANSCRANIAL MOTOR EVOKED POTENTIAL MONITORING IN THE ENDOVASCULAR TREATMENT OF ANTERIOR CHOROIDAL ARTERY ANEURYSMS

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Introduction In neurosurgical operation intraoperative monitoring is now a essential tool for treatment. Expecialy in craniotomy as in clipping and tumor resection. However in the endovascular treatment it is not so often the case. In our institute we used Transcranial motor evoked potential monitoring (TC-MEP) in endovascular treatment from 2014. We will show the effectiveness from our experience.
Methods We studied 15 patients (n = 16) with Anterior choroidal artery (Anch.A) aneurysms who underwent coiling between September 2014 and February 2016. All patients were fully anesthetized by total intravenous Anastasia (TIVA) and TC-MEP were checked after delivering every each coil. The stimulation strength was set at 120 mA. Electromyograms of the bilateral tibias anterior and abductor policies brevis muscle were obtained.
Results TC-MEP of all patients was recorded successfly. No deficits and no decrease in the voltage was seen in the end of the treatment but in 3 cases we experienced significant decrease during the treatment. In 2 cases of these, the decrease was seen just after we inserted the micro catheter into the aneurysm neck. In the other 1 case the decrease was seen when the coil loop prolapsed and covered the Ach.A inflow. Each cases recovered after repositioning. Interestingly the angiographical appearance of the Ach.A didn't change in any case.
Conclusion We were able to treat the Ach.A aneurysms with endovascular surgery using TC-MEP safely and no deficits were seen. There was no change in the angiographic appearance of the Ach.A but TC-MEP voltage decreased in 3 cases. It suspects that TC-MEP could predict the ischemic changes and contribute to the treatment in the endovascular surgery.
Disclosures S. Hataoka: None.

E-069 FLUOROSCOPY TIME AND RADIATION DOSE IN MECHANICAL THROMBECTOMY: A COMPARISON OF TECHNIQUES

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Introduction/purpose Interventional stroke management has seen a period of explosive growth in the wake of recent trials demonstrating improved outcomes in patients who undergo timely and appropriate procedural management. The two most common interventional techniques involve the use of stent retrieval devices and suction aspiration. In the setting of demonstrable clinical benefit to the patient in these procedures, further exploration of intraprocedural radiation exposure to the patient and operator is warranted. While radiation exposure for the patient in any one procedure is unlikely to produce a clinically-evident adverse event, chronic exposure to the operator may carry significant risk. Our goal is to determine the difference, if any, in fluoroscopy time (FT) and dose area product (DAP) for the use of these devices.
Materials and methods We examined data for interventional stroke management cases performed for M1 segment occlusions at Duke University Medical Center from the period of January 2014 to January 2016 with regards to fluoroscopy time and dose area product. Cases were subdivided into those only utilizing stent retrieval devices (Solitaire^{TM}; Covidien, Dublin, Ireland) and those only utilizing suction aspiration