SAFETY, EFFICACY AND OCCLUSION RATES FOR DIRECT ASPIRATION THROMBECTOMY AS A FIRST-PASS J NeuroIntervent Surg

Disclosures

no direct comparisons with other embolic agents.

In our study. There is limited evidence in literature evaluating efficacy for ECA targets, played major role in the safety achieved in our study. Improved arterial pedicles were successfully embolized (100%) without any intra procedural complications. There were no complications between the embolization procedure and surgical resection. Median estimated blood loss volume was 200 mL (IQR 100–350). Gross total resection was achieved in 20 patients (76.9%). Tumor necrosis was observed in 50% of tumors. In our systematic review, only 5 studies were included, comprising 54 patients. The information extracted from these studies is summarized on Table 1.

Conclusions Preoperative embolization of meningiomas with Onyx alone was successful in all of our cases without any intra procedural or post-procedural complications. Improved control with this embolic agent, in association with a preference for ECA targets, played major role in the safety achieved in our study. There is limited evidence in literature evaluating Onyx in the preoperative embolization of meningiomas and no direct comparisons with other embolic agents.

Disclosures

J. Cappuzzo: None. A. Monteiro: None. M. Waqas: None. M. Ghannam: None. W. Khawar: None. A. Khan: None. A. Siddiqui: 2; C; Amnis Therapeutics, Apellis Pharmaceuticals, Inc., Boston Scientific, Canon Medical Systems USA, Inc., Cardinal Health 200, LLC, Cerebrotech Medical Systems, Inc., Cerenovus, Cerevatech Medical, Inc., 4; C; Amnis Therapeutics, and along the MCA (n=14). Twelve aneurysms were seen in the posterior circulation with the basilar tip and superior cerebellar artery being the most common locations (n=4 for both). Mean aneurysm size was 3 mm and mean neck with was 2.4 mm. In addition to a single coil placed a balloon was used in 5 cases, a stent was placed in 13 cases and a stent in combination with a PulseRider was placed in 1 case. One patient showed acute clot formation in a downstream vessel which was successfully removed. Another patient showed sub-occclusive clot in the ICA that was dislodged from a previously treated aneurysms due to catheter manipulation along the neck of that previously treated aneurysm. The clot nearly completely resolved upon completion of the procedure. Three to 6 months follow up was available for 25 cases. Ten patients did not reach their follow up time point yet. Seven patients did not schedule a follow up and/or were lost to follow up, two patients underwent CT angiogram evaluation which was inconclusive. Angiogram follow up showed complete aneurysm occlusion in 21 cases (84%) and partial occlusion in 4 cases. Of these 4 cases, 3 patients showed coil compaction. Two patients were retreated, and 1 patient was lost to follow up. Another patient showed coil migration and was also retreated.

Conclusion Complete occlusion of very small and small aneurysms can be achieved using a single coil. Adequate coverage of the aneurysm neck with coil loops will result in a barrier for blood flow to enter the aneurysm sac (flow disrupting effect) and lead to intrasaccular thrombosis.

Disclosures

A. Kuhn: None. J. Singh: None. F. Massari: None. A. Puri: 1; C; NIH, Microvention, Cerenovus, Medtronic Neurovascular and Stryker Neurovascular. 2; C; for Medtronic Neurovascular, Stryker NeurovascularBalt, QApel Medical, Cerenovus, Microvention, Imperative Care, Agile, Merit, CereVasc and Arsenal Medical. 4; C; InNeuroCo, Agile, Perfuze, Galaxy and NTI.

E-072 SAFETY, EFFICACY AND OCCLUSION RATES FOR EMBOLIZATION OF VERY SMALL AND SMALL ANEURYSMS USING A SINGLE COIL

A Kuhn, J Singh, F Massari, A Puri. Division of Neuroradiology, Department of Radiology and New England Center for Stroke, University of Massachusetts, Worcester, MA

10.1136/neurintsurg-2022-SNIS.183

Introduction/Purpose Historically, aneurysm packing density was considered the most crucial factor in predicting successful aneurysm occlusion after coil embolization. We dare to challenge this concept and the need for multiple coils to achieve aneurysm obliteration in aneurysms ≤10mm.

Materials and Methods We retrospectively reviewed our neurointerventional database between January 2017 and December 2021 and identified all patients who underwent coil embolization for treatment of a ruptured or unruptured intracranial aneurysms. Of those, we further selected the ones in whom only one single coil was used. Patient characteristics, procedural data, complications, and imaging follow up information was also collected.

Results We identified a total of 47 patients (35 females) with a mean age of 59 years (range 36 to 84 years). Fourteen aneurysms were ruptured. The procedure was performed via femoral access in 30 cases and transradial access in 17 cases. Most aneurysms were seen in the anterior circulation (n=35) and along the MCA (n=14). Twelve aneurysms were seen in the posterior circulation with the basilar tip and superior cerebellar artery being the most common locations (n=4 for both). Mean aneurysm size was 3 mm and mean neck with was 2.4 mm. In addition to a single coil placed a balloon was used in 5 cases, a stent was placed in 13 cases and a stent in combination with a PulseRider was placed in 1 case. One patient showed acute clot formation in a downstream vessel which was successfully removed. Another patient showed sub-occclusive clot in the ICA that was dislodged from a previously treated aneurysms due to catheter manipulation along the neck of that previously treated aneurysm. The clot nearly completely resolved upon completion of the procedure. Three to 6 months follow up was available for 25 cases. Ten patients did not reach their follow up time point yet. Seven patients did not schedule a follow up and/or were lost to follow up, two patients underwent CT angiogram evaluation which was inconclusive. Angiogram follow up showed complete aneurysm occlusion in 21 cases (84%) and partial occlusion in 4 cases. Of these 4 cases, 3 patients showed coil compaction. Two patients were retreated, and 1 patient was lost to follow up. Another patient showed coil migration and was also retreated.

Conclusion Complete occlusion of very small and small aneurysms can be achieved using a single coil. Adequate coverage of the aneurysm neck with coil loops will result in a barrier for blood flow to enter the aneurysm sac (flow disrupting effect) and lead to intrasaccular thrombosis.

Disclosures

A. Kuhn: None. J. Singh: None. F. Massari: None. A. Puri: 1; C; NIH, Microvention, Cerenovus, Medtronic Neurovascular and Stryker Neurovascular. 2; C; for Medtronic Neurovascular, Stryker NeurovascularBalt, QApel Medical, Cerenovus, Microvention, Imperative Care, Agile, Merit, CereVasc and Arsenal Medical. 4; C; InNeuroCo, Agile, Perfuze, Galaxy and NTI.