

**Results** In both assessments, AtlasGPT presented the best rates of all AIs (85–90% correctness and 8–9 in quality of decision), being comparable to the INR fellow and even surpassing the performance of the neurosurgery residents. ChatGPT 4.0 also performed well in the quality of decision assessment. Humans presented a wide arrow of performances, varying from 45–55% in institution A to 85–90% in the INR fellow responses.

**Conclusion** This study highlights the great current decision making potential of AI in complex cases of endovascular treatments for intracranial aneurysms, reinforcing its role as a powerful tool to help medical professionals in their daily activities, despite its clear limitations.

**Disclosures** S. Batista: None. E. Tanus: None. R. Camerotte: None. C. Alves Filho: None. F. Braga: None. P. Lopes: None. G. Galvão: None. G. Vellasques: None. J. Almeida Filho: None. P. Pereira: None. P. Niemeyer Filho: None.

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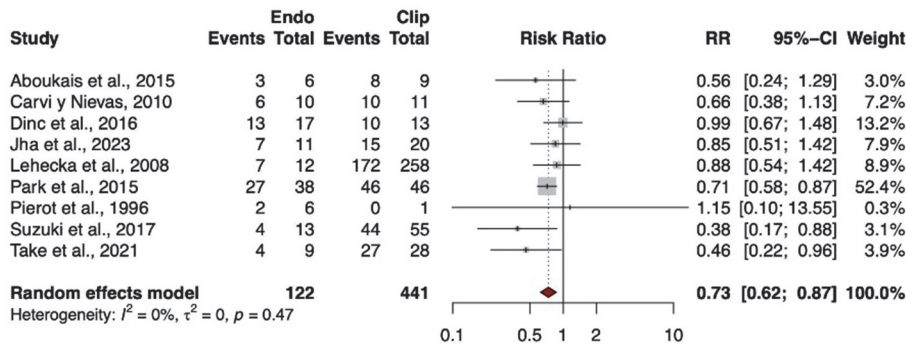
**TEBRAL ARTERY ANEURYSMS: A SYSTEMATIC TREATMENT OF RUPTURED DISTAL ANTERIOR CER REVIEW AND META-ANALYSIS OF DOUBLE-ARMED STUDIES**

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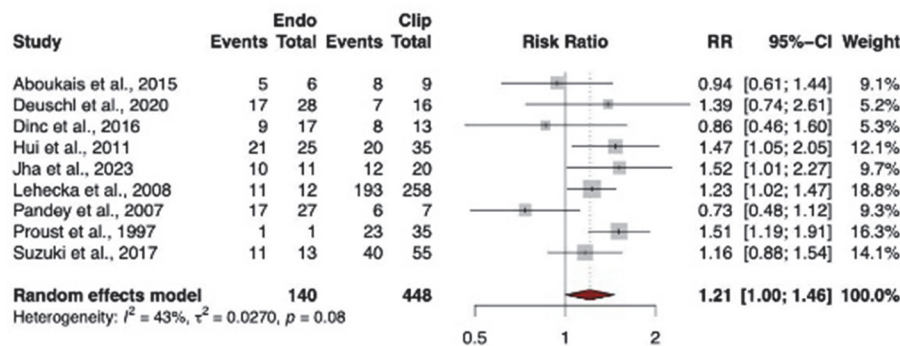
**Introduction** Ruptured distal anterior cerebral artery (DACA) aneurysms present specific technical challenges for both open surgical and endovascular management. We aimed to perform a systematic review and meta-analysis of those studies that compared microsurgical and endovascular treatment of ruptured DACA aneurysms.

**Aneurysm Occlusion Rates**

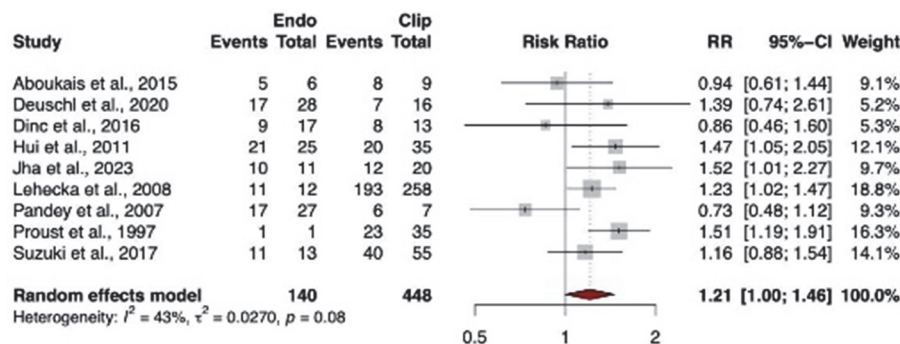


Abstract P-008 Figure 1

**A) Functional Outcomes at Discharge**

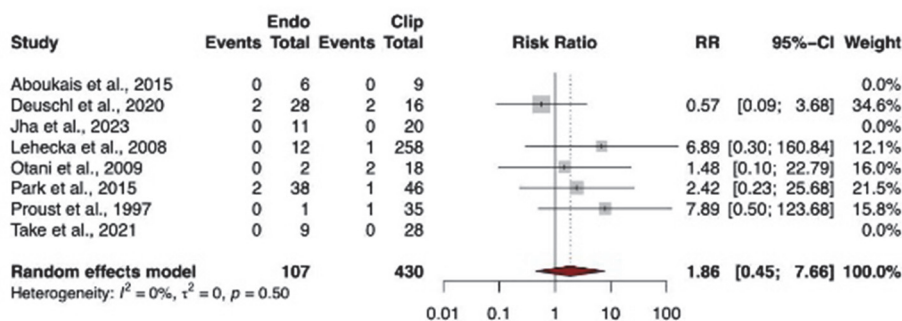


**B) Functional Outcomes at >90 days Postoperatively**

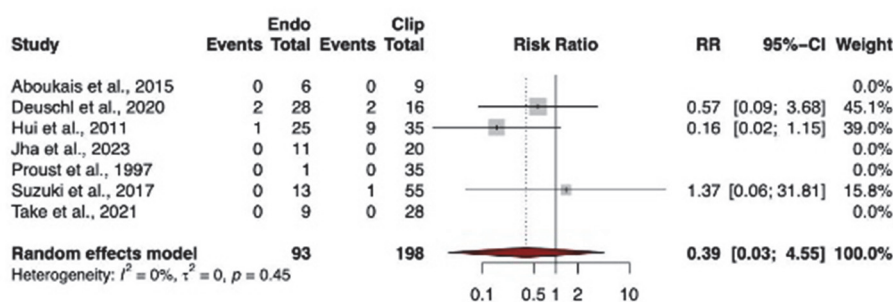


Abstract P-008 Figure 2

## A) In-hospital Mortality



## B) Mortality at &gt;90 days Postoperatively



Abstract P-008 Figure 3

**Methods** Systematic searches of Pubmed, Medline, and Embase were undertaken in December 2023 for published studies reporting microsurgical clipping and endovascular coiling of ruptured DACA aneurysms. Outcomes included aneurysm occlusion rates, clinical outcomes, and mortality.

**Results** Across 15 studies, 577 and 212 patients with ruptured DACA aneurysms were managed with open microsurgery and endovascular treatment, respectively. Endovascular coiling was associated with a lower rate of complete aneurysm occlusion (RR = 0.73, 95%CI:0.62- 0.87) when compared to microsurgical clipping. Due to limited data, no significant difference was found in functional outcomes between coiling and clipping both at discharge (RR = 1.21, 95%CI:1.0-1.46) and greater than 90 days postoperatively (RR = 1.21, 95%CI:1.0-1.46). Furthermore, no significant difference was observed between the two treatment methods in terms of mortality both during the hospitalization (RR = 1.86, 95%CI:0.45-7.66) and within the 90-day postoperative period (RR = 0.39, 95%CI:0.03-4.55)

**Conclusion** Clipping is associated with a higher aneurysm occlusion rate when compared to coiling for ruptured DACA aneurysms.

**Disclosures** M. Motiwala: None. M. Elmarawany: None. K. Lee: None. E. Hayes: None. K. Abhinav: None. M. Teo: None.

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### DIFFERENCES IN OUTCOMES WITH MANUAL ASPIRATION VS ASPIRATION PUMP: EXPERIENCE FROM INSPIRE-S

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**Introduction** Three major mechanical thrombectomy (MT) techniques are currently used: stent retriever (SR) only, aspiration (ASP) only, and combination therapy (CT) with a general goal of achieving first-pass recanalization (FPR: TICI $\geq$ 2c). The superiority of one MT technique over another, as well as the optimal aspiration method (manual aspiration vs. aspiration pump) is poorly understood.

**Methods** INSPIRE-S is a prospective, imaging core-lab/safety clinical events committee adjudicated, global registry of stroke patients treated with Medtronic Neurovascular devices on the first pass and grouped according to initial MT technique. There are some pre-clinical studies assessing differences in outcomes comparing manual vs aspiration pump, however, real-world evidence on differences with aspiration method (manual aspiration vs aspiration pump) are not well known.

**Results** From May 2020 to April 2023, 802 patients (30 sites/13 countries) were enrolled: SR:259, ASP:146 and CT:397. MCA-M1/M2 occlusions were present in 76.1%. Among the 3 technique cohorts, final complete revascularization rates (eTICI $\geq$ 2c) were: 75.9%, 67.8% and 71.6% respectively (p=0.016 comparing ASP vs. SR technique, p=0.049 comparing 3 techniques). Good clinical outcome (mRS $\leq$ 2) at 90 days was achieved in 60.9%, 52.8%, and 57.0% respectively. For aspiration method with ASP technique, use of aspiration pump was associated with improved mRS 0-2 at 90 days compared to manual aspiration (59.8% vs. 36%, p=0.0084) with no significant differences in final revascularization (eTICI $\geq$ 2c; 68.1% vs. 67.3%) or first-pass revascularization (44.0% vs. 46.2%). Similar findings were observed for use of aspiration pump in combination technique in mRS 0-2 (59.1% vs. 49.1%, p=0.062).

**Conclusions** The primary results of real-world data from INSPIRE-S among a large and varied patient population demonstrated comparable outcomes according to first line MT