

# 1.1. Aneurysms

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## TREATMENT OF VERTEBRAL ARTERY DISSECTING ANEURYSMS WITH FLOW DIVERSION: A COMPARATIVE SYSTEMATIC REVIEW AND META-ANALYSIS

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**Introduction** Intracranial vertebral artery dissecting aneurysms (VADAs) are rare and complex. Treatment strategies remain debated due to the involvement of branching arteries.

**Aim of Study** This study was conducted to assess the safety and efficacy of flow diversion (FD) compared to alternative methods for VADAs through systematic review and meta-analysis.

**Methods** In December 2023, we conducted a systematic search in Pubmed, Scopus, and Web of Science following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Our objective was to compare occlusion rates, favorable mRS (0-2), and complication rates. Additionally, we directly compared the FD group with other interventions. We employed a weighted random-effect model for meta-analysis.

**Results** 23 articles and 422 patients were included. The immediate occlusion rate was 5.8% for FD, which is significantly lower than stenting methods (OR= 0.03, *P* value< 0.0001). The final complete occlusion rate was 79.87% similar to the stenting group (OR= 1.01, *P* value= 0.98) and lower than deconstructive treatment (OR= 0.16, *P* value= 0.005). Favorable mRS was recorded in 95.31% which was comparable to the stenting group (OR= 1.57, *P* value= 0.47), but significantly higher compared to the deconstructive group (OR= 4.27, *P* value= 0.002). Complication rates were low (9.7%) without a significant difference compared to the other two groups (*P* value= 0.19, *P* value= 0.68). Adverse events were reported in 17.3% when the posterior inferior cerebellar artery was covered by FDs.

**Conclusion** This study highlights FDs as a potentially effective initial treatment choice for VADAs, especially for unruptured cases.

Disclosure of Interest no.

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## ECLIPS IN THE ENDOVASCULAR TREATMENT OF BIFURCATION ANEURYSMS – A SINGLE CENTER EXPERIENCE

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**Introduction** It is challenging to achieve a durable occlusion in endovascular treatment of aneurysms at the basilar and carotid tip.

eCLIPS is a non-tubular device designed to retain coils and divert flow away from bifurcation aneurysms.

**Aim of Study** To evaluate the results of eCLIPS treated bifurcation aneurysms.

**Methods** Between 2015 and 2022 we identified all patients treated with eCLIPS.

**Results** 39 patients, average age 60 years. 22 patients had planned treatment with the eCLIPS device. Aneurysm characteristics: 30 (77%) basilar tip (BT), 6 (15%) carotid terminus (CT), 3 (8%) anterior communicating (ACA);10 (26%) recurrent after prior treatment; 7 (18%) previously ruptured. eCLIPS implant was successful in 34/39 (87%) of cases. Failure to implant was due to malalignment in 4, microguidewire trauma in 1.

No patient had regression of mRROC score on follow-up imaging.

**Abstract P096 Table 1** Efficacy modified Raymond Roy Occlusion Classification (mRROC)

mRROC	eBRs (n = 19) Median followup 37 mo (range 9 – 69 mo)	eB (n = 13) Median followup 10 mo (range 8 – 32 mo)
1	16 (84%)	13 (100%)
2	2 (11%)	0
3A	1 (5%)	0
3B	0	0

**Abstract P095 Table 1** Meta-analysis of safety and efficacy of FD compared with other treatment modalities

	FD	COMPARED WITH STENTING GROUP	COMPARED WITH THE DECONSTRUCTIVE GROUP
<b>Immediate Complete Occlusion</b>	5.8% (95% CI: 3.37–10.07) I <sup>2</sup> : 0.0%	OR: 0.03 (95%CI: 0.01-0.08) P-value: <0.0001, I <sup>2</sup> : 0.0%	-
<b>Final Complete Occlusion</b>	79.87% (95% CI: 71.63–86.18) I <sup>2</sup> : 49.0%	OR: 1.01 (95% CI: 0.62–1.63) P-value: 0.98, I <sup>2</sup> : 0.0%	OR: 0.16 (95% CI: 0.04–0.57) P-value: 0.005, I <sup>2</sup> : 0.0%
<b>Favorable mRS</b>	95.31% (95% CI: 85.39–98.60) I <sup>2</sup> : 70.1%	OR: 1.57 (95% CI: 0.46–5.38) P-value: 0.47, I <sup>2</sup> : 0.0%	OR: 4.27 (95% CI: 1.67–10.91) P-value: 0.002, I <sup>2</sup> : 0.0%
<b>Complication Rate</b>	9.7% (95% CI: 5.54–16.46) I <sup>2</sup> : 57.9%	OR: 0.61 (95% CI: 0.3–1.27) P-value: 0.19, I <sup>2</sup> : 0.0%	OR: 0.73 (95% CI: 0.16–3.29) P-value: 0.68, I <sup>2</sup> : 0.0%