

Supplemental table 1 Symptom improvement by cranial nerve

| | Improved | Not improved | P value |
|------------------------------|----------|--------------|---------|
| Cranial neuropathies overall | 72 | 17 | |
| Cranial nerve II | 12 (17) | 10 (59) | 0.001 |
| Cranial nerve III | 23 (32) | 4 (24) | 0.571 |
| Cranial nerve IV | 0 (0) | 1 (6) | 0.191 |
| Cranial nerve V | 10 (14) | 0 (0) | 0.198 |
| Cranial nerve VI | 27 (38) | 2 (12) | 0.048 |

Supplemental table 2 Previous studies reporting cranial neuropathy after flow diversion treatment

| References | No. of patients | Mean follow-up* | Improvement | Improvement of each cranial neuropathy | | |
|------------------------------------|-----------------|-----------------|---------------|--|---------------|--------------|
| | | | | II | III + IV + VI | V |
| Tachi et al., 2020 ²⁶ | 18 | 12 | 10/18 (56%) | 3/5 (60%) | 7/14 (50%) | |
| Wang et al., 2019 ¹⁴ | 22 | 25.5 (24-30) | 12/22 (54%) | 9/19 (47%) | 5/7 (71%) | |
| Oishi et al., 2018 ¹⁶ | 40 | 13.5 (1-45) | 18/40 (45%) | 3/10 (30%) | 15/28 (54%) | 0/2 (0%) |
| Miyachi et al., 2017 ⁸ | 6 | 6 | 5/6 (83%) | NA | NA | |
| Silva et al., 2017 ⁹ | 64 | NA | 45/64 (71%) | 45/64 (71%) | | |
| Brown et al., 2016 ¹¹ | 45 | 8.4 (0.1-21.5) | 30/45 (67%) | 6/10 (60%) | 30/35 (86%) | |
| Sahlein et al., 2015 ¹³ | 39 | 6 | 25/39 (64%) | 9/17 (53%) | 17/27 (63%) | 1/3 (33%) |
| Moon et al., 2014 ¹² | 20 | 7 (4-28) | 15/20 (75%) | 2/3 (67%) | 13/16 (81%) | 3/4 (75%) |
| Tanweer et al., 2014 ²⁷ | 19 | NA | 16/19 (84%) | NA | NA | |
| Zanaty et al., 2014 ¹⁰ | 51 | 14.5 (2.2-26.8) | 47/51 (92%) | NA | NA | |
| Szikora et al., 2013 ²⁵ | 16 | NA (12-18) | 15/16 (94%) | NA | NA | |
| O'Kelly et al., 2013 ²⁴ | 27 | NA | 18/27 (67%) | 5/9 (56%) | 13/18 (72%) | |
| Current study | 77 | 40 (12-72) | 62/77 (81%) | 12/22 (55%) | 50/57 (88%) | 10/10 (100%) |
| Total | 444 | | 318/444 (72%) | 94/159 (59%) | 150/202 (74%) | 14/19 (74%) |

*Expressed in months with range in parentheses. If range is not specified, all cases were evaluated at the time noted.

Supplemental Table 3 Univariate analysis for predictors of aneurysmal regression

| Variables | + regression | - regression | P value |
|----------------------------|--------------|--------------|----------|
| No. of patients | 33 | 33 | |
| Age >65 yrs | 20 (61) | 18 (55) | 0.804 |
| Women | 28 (85) | 29 (88) | 1.000 |
| Hypertension | 17 (52) | 20 (61) | 0.620 |
| Dyslipidemia | 14 (42) | 11 (33) | 0.612 |
| Diabetes mellitus | 1 (3) | 3 (9) | 0.613 |
| History of smoking | 14 (42) | 7 (21) | 0.112 |
| Aneurysm size ≥ 20 mm | 14 (42) | 14 (42) | 1.000 |
| Aneurysm neck ≥ 8 mm | 17 (52) | 17 (52) | 1.000 |
| Steroid use | 22 (67) | 25 (76) | 0.587 |
| Adjunctive coiling | 1 (3) | 17 (52) | < 0.0001 |
| Aneurysm occlusion* | | | |
| 6 months | 29 (88) | 20 (61) | 0.023 |
| 12 months | 32 (97) | 24 (73) | 0.013 |

Values shown are medians with interquartile range or numbers with percentage.

*Aneurysm occlusion is defined as O'Kelly-Marotta grade C or D.

Supplemental table 4 Relationship between volume embolization rate and resolution or improvement of cranial neuropathy in patients who underwent adjunctive coiling

| Variable | Improved | Unimproved | P value |
|----------------|-----------------|------------------|---------|
| No of Patients | 9 | 9 | |
| VER | 11.6 (9.8-14.9) | 17.3 (13.9-23.2) | 0.0243 |
| VER<13 | 6 (67) | 1 (11) | 0.0498 |

Values shown are medians with interquartile range or numbers with percentage.