



Abstract E-065 Figure 1

aneurysms appeared more frequent at older ages (log rank  $p < 0.001$ ), See figure 1.

**Conclusion** Centrally located bAVM, especially when supra-tentorial and with deep or mixed venous drainage are more frequent in patients with ruptured bAVM early in life. On the contrary, arterial or nidal aneurysm is less frequent in younger patients, possibly indicating that these frailty features develop later. Whether their occurrence in adult unruptured bAVM justify treatment need to be confirmed in prospective studies.

**Disclosures** L. Garzelli: None. E. Shotar: None. T. Blauwblomme: None. N. Sourour: None. Q. Alias: None. B. Mathon: None. M. Kossorotoff: None. V. Degos: None. F. Gariel: None. N. Boddaert: None. F. Brunelle: None. P. Meyer: None. O. Naggara: None. F. Clarençon: None. G. Boulouis: None.

#### E-066 ONYX EMBOLIZATION OF CAROTID-CAVERNOUS FISTULAS AND ITS IMPACT ON INTRAOCULAR PRESSURE AND RECURRENCE

F Al Saiegh\*, N Mouchtouris, K Hafazalla, N Chalouhi, S Tjoumakaris, R Gooch, A Stefanelli, R Rosenwasser, P Jabbour. *Neurosurgery, Thomas Jefferson University Hospital, Philadelphia, PA*

10.1136/neurintsurg-2019-SNIS.141

**Introduction** Carotid-cavernous fistulas (CCF) are pathologic arteriovenous shunts into the cavernous sinus (CS) leading to venous congestion. The arterial supply arises from the internal carotid (ICA, type A), meningeal ICA branches (type B), meningeal external carotid branches (type C), or internal and external carotid meningeal branches (type D). Patients usually present with chemosis, proptosis, diplopia, or vision loss. Ophthalmologic examination often reveals an intra-ocular pressure (IOP), greater than 20 mmHg.

**Methods** A prospectively maintained database of all CCF patients with IOP data was reviewed and 48 cases were identified from 2009–2018 and included in the analysis. Patients were followed for an average of 13.2 months.

**Results** Most type A fistulas were treated with transarterial embolization (93%), balloon-assistance was used in 66% of those cases. Most type B-D fistulas were embolized transvenously (69%) via the inferior petrosal sinus, facial vein, or superior ophthalmic vein (SOV). In cases with difficult venous

catheterization, an SOV cutdown was performed. Mean preoperative IOP was  $23.6 \pm 9.1$  mmHg, with highest IOPs noted in type B fistulas ( $32.2 \pm 11.2$  mmHg). In all subtypes, complete occlusion achieved immediate IOP normalization ( $=20$  mmHg) in 79.5% vs. 57.1% with partial occlusion. In type A, complete occlusion achieved IOP normalization in 100% of the cases, but only in 75% of types B-D fistulas. Postoperative increase in IOPs was only noted in type B-D (15.4%). All of these had been completely occluded. Recurrence was noted in 11.3% of all patients, specifically in 7.1% of type A and 12.5% of types B-D. In partially occluded fistulas, recurrence occurred in 33.3% in type A and 9.5% in types B-D. A postoperative increase in IOP was associated with recurrence in only 16.7% of patients. In multivariate analysis, complete occlusion of types B-D CCF was associated with lower odds of recurrence (OR 0.09).

**Conclusions** Most patients with CCF have elevated IOPs and complete embolization a higher rate of IOP normalization in our series. Recurrence of the fistula was only seen in a small proportion of patients and was lower in type A fistulas after complete occlusion.

**Disclosures** F. Al Saiegh: None. N. Mouchtouris: None. K. Hafazalla: None. N. Chalouhi: None. S. Tjoumakaris: None. R. Gooch: None. A. Stefanelli: None. R. Rosenwasser: None. P. Jabbour: None.

#### E-067 ENDOVASCULAR OCCLUSION OF A CAROTID CAVERNOUS ARTERIOVENOUS FISTULA COMPLICATED WITH POSTERIOR COMMUNICATING ARTERY-SPHENOPARIETAL SINUS FISTULA: A CASE REPORT, TECHNICAL CONSIDERATION, AND LITERATURE REVIEW

M Mathkour\*, J Berry, E McCormack, E Valle-Giler. *Neurosurgery, Tulane Medical Center/Ochsner Medical Center, New Orleans, LA*

10.1136/neurintsurg-2019-SNIS.142

**Background** Traumatic injury of the posterior communicating artery causing arteriovenous fistula is rare. Here, we present a complicated case in which a patient presented with a traumatic carotid-cavernous fistula and subsequently developed recurrence. Recurrence was complicated by shunting of the posterior communicating artery to the sphenoparietal sinus post-treatment that was successfully treated endovascularly.