



Patient with previous history of ruptured brain AVM presents with severe migraine headaches

DIVISION OF INTERVENTIONAL NEURORADIOLOGY
Presents a patient case treated by the team members of the division and physicians and staff of the UCLA Comprehensive Stroke Center

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PATIENT PRESENTATION

- 25-year-old woman with history of ruptured cerebellar arteriovenous malformations at age 5, underwent embolization and resection at that time. The patient was lost to follow up and had no imaging until recently when onset of severe migraine headaches led to a brain MRI showing possible residual malformation.

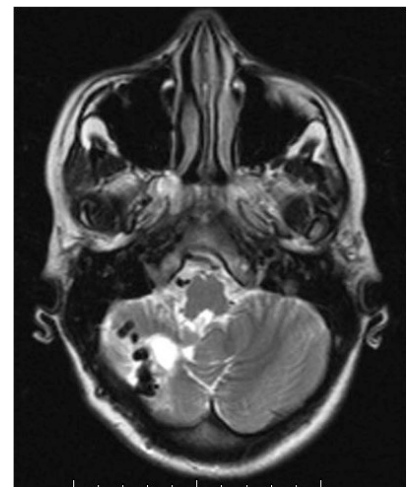


Figure 1: T2W MRI of the brain shows flow voids in the right cerebellar hemisphere in the area of previous resection cavity.

EVALUATION AND IMAGING

- MRI of the brain (Figure 1) shows flow voids in the right cerebellum.
- Cerebral angiogram (Figure 2) shows the vascular malformation fed by the right superior cerebellar artery (SCA).
- Further evaluation (Figure 3) shows this to be a direct arteriovenous fistula with single feeding artery and draining vein.

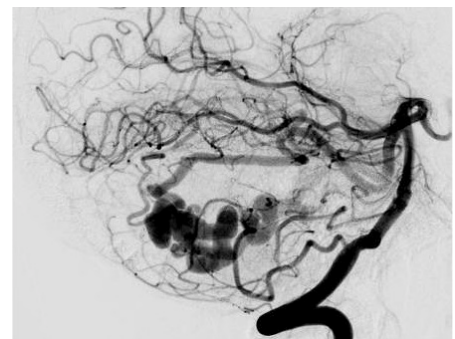


Figure 2: Selective angiogram of the left vertebral artery shows an enlarged right superior cerebellar artery feeding vessel with drainage into enlarged cerebellar cortical veins.

(over)

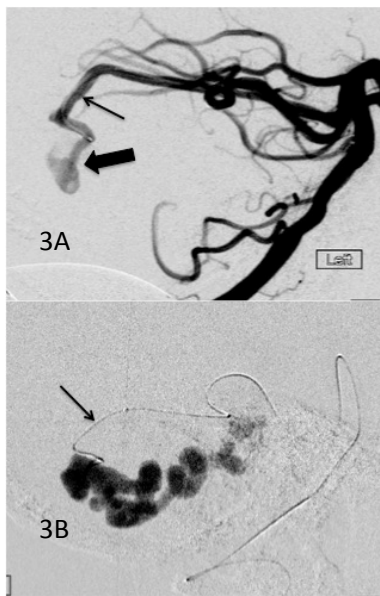


Figure 3A. Vertebral artery angiogram shows enlarged SCA (thin arrow) with direct connection to draining vein (thick arrow shows site of arteriovenous connection). **Figure 3B.** Selective injection through the microcatheter (arrow) shows enlarged draining veins of this fistula.

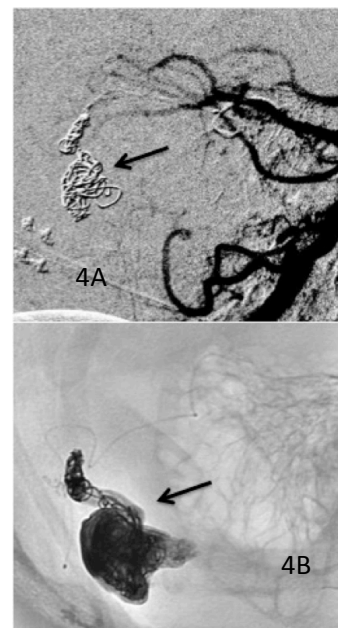


Figure 4A. Coils (arrow) are introduced through the microcatheter to occlude the large draining vein and the arterial feeder of the fistula. **Figure 4B.** Unsubtracted image shows coils and liquid embolic agent (arrow) within the arterial feeder and draining vein of the fistula.

Procedures provided by DINR for adult and pediatric patients

Acute Ischemic Stroke

- Acute Thrombectomy/Thrombolysis
- Extra/Intracranial Angioplasty/Stenting

Brain Hemorrhage, Aneurysm/AVM/fistulae

- Aneurysm coiling
- Stent/balloon assisted aneurysm coiling
- Flow diverter stent device embolization
- AVM/Dural fistulae embolization
- Venous Sinus Thrombectomy/Thrombolysis
- Direct transcatheter embolization

Chronic Occlusive Cerebrovascular Disease

- Extra/Intracranial Angioplasty/Stenting
- Venous Sinus Angioplasty/Stenting

Head/neck/orbit tumors & vascular malformations, epistaxis

- Endovascular embolization
- Direct percutaneous embolization

INTERVENTION PERFORMED

- Endovascular embolization entailed microcatheterization and coil embolization of the draining vein and SCA followed by liquid embolic injection to completely occlude the fistula site (Figure 4).
- Final post procedure angiogram shows complete occlusion of the fistula (Figure 5).

PATIENT OUTCOME

- The patient was discharged home on post operative day #1 neurologically intact.
- Follow up angiogram to ensure complete cure is planned in 6 months.

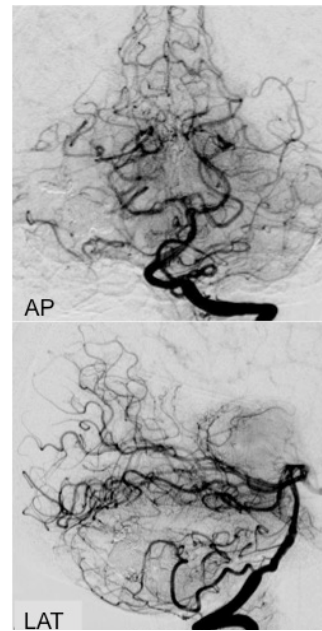


Figure 5: Post embolization AP and Lateral views of left vertebral artery angiogram show complete occlusion of the arteriovenous fistula.



American Heart Association
American Stroke Association
CERTIFICATION
Meets standards for
Comprehensive Stroke Center

