UCLA Health

INTERVENTIONAL NEURORADIOLOGY

24/7 Contact & Appointment
(310) 267-8761 or 8762

Patient with first time seizure – Treatment of dural AV fistula

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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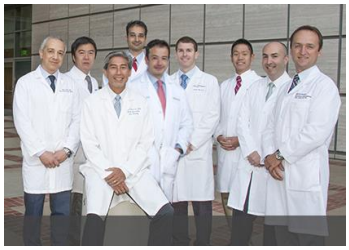

PATIENT PRESENTATION

- 58 year old man, presented with new first time generalized seizure.
- On admission was confused, but slowly recovering.
- Reported having headaches, pressure on the right side, started few weeks prior.

EVALUATION AND IMAGING

- MRA, time-resolved (Fig. 1) and contrast enhanced sequences (Fig. 2A) showed early appearing contrast in perirolandic cortical vein, suggestive of a dural arterio-venous fistula (dAVF).
- Diagnostic catheter angiogram (Fig. 2B, 3) confirmed dAVF, fed from bilateral frontal branches of middle meningeal arteries (MMA).

INTERVENTION PERFORMED

- Endovascular embolization using ONYX liquid embolic material was performed (Fig. 4, 5).
- Final angiograms confirmed complete occlusion of the dAVF (Fig. 6) with ONYX cast bilaterally (Fig. 7).

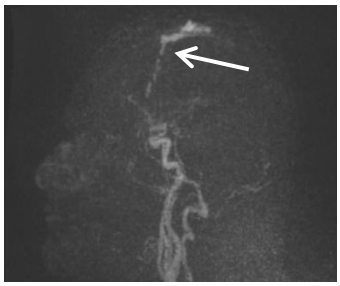

Figure 1: Time-resolved contrast-enhanced MR angiography TWIST, lateral view.
Dural AV fistula in the perirolandic region (arrow).

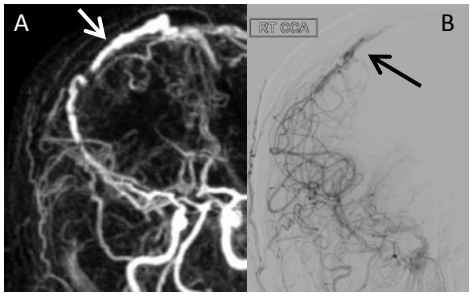

Figure 2, A. contrast-enhanced MR angiography, B. catheter angiogram, antero-posterior view.
Dural AV fistula in the perirolandic region (arrow).

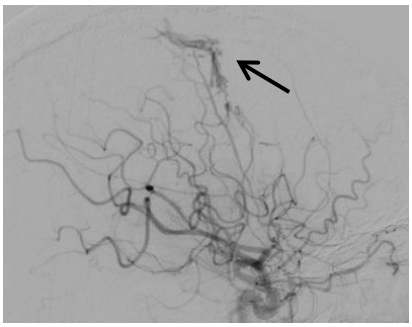

Figure 3. Catheter angiogram, lateral view.
Right common carotid artery injection showing early draining vein, dural AV fistula in the perirolandic region (arrow).

(over)

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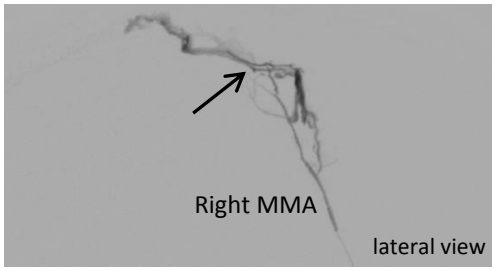

Figure 4. Catheter angiogram, lateral view. *Right Middle meningeal artery (MMA), frontal branch injection showing early draining vein, dural AV fistula in the perirolandic region (arrow).*

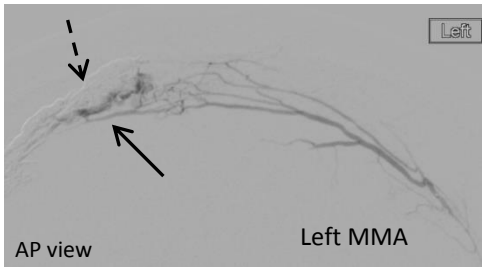

Figure 5. Catheter angiogram, AP view. *Left Middle meningeal artery (MMA), frontal branch injection showing early draining vein, dural AV fistula in the perirolandic region (arrow). Onyx cast is seen as the result of the embolization from the contralateral right MMA.*

PATIENT OUTCOME

- The patient tolerated the procedure well and recovered without complications back to his normal neurological baseline.
- He was discharged home from the hospital in 4 days.
- At the outpatient follow-up, he was doing well, neurologically at his normal baseline.
  Reported no headaches and was ready to return to work.

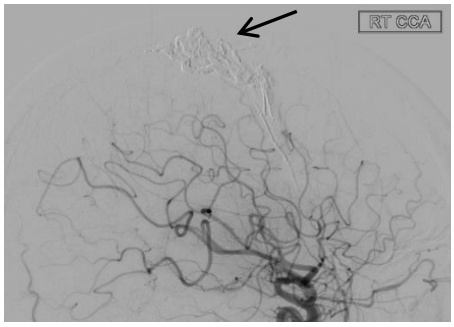

Figure 6. Final post embolization angiogram, lateral view. *Right common carotid artery, no early draining vein, no dural AV fistula. Onyx cast (arrow).*

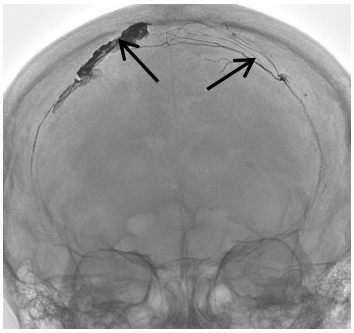

Figure 7. Final unsubtracted fluoroscopy image, AP view. *Onyx cast from the embolization of the right and left side.*

Division of Interventional Neuroradiology – A Leader in Neurovascular Care and Research

- Invented the Merci retriever – the 1st endovascular device for acute stroke therapy
- Invented GDC and Matrix coils – the leading tool for aneurysm treatment around the world
- Developed Onyx liquid embolic material – the leading therapy for brain vascular malformations

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