Patient with first time seizure – Treatment of dural AV fistula

**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).
**Patient Outcome**

- The patient tolerated the procedure well and recovered without complications back to his normal neurological baseline.
- He was discharged 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.

**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