

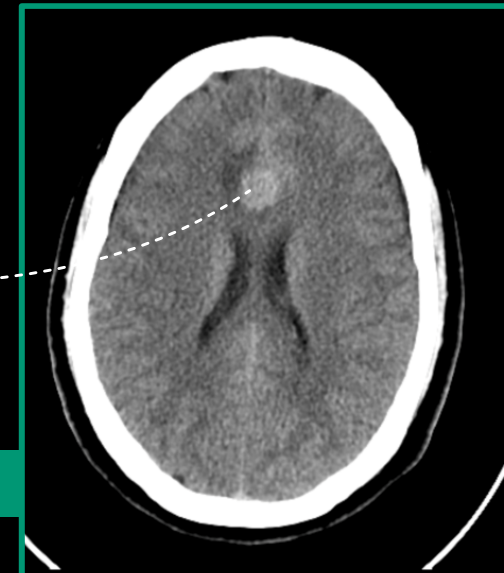
# Case 8: Dissecting Aneurysm

A dissecting aneurysm is an aneurysm that occurs with a tear in the artery wall that separates the 3 layers of the wall, rather than ballooning out the entire wall. Because an aneurysm may continue to increase in size, along with progressive weakening of the artery wall, emergent intervention is usually needed. Spontaneous intracranial dissecting aneurysms have been reported as a cause of subarachnoid hemorrhage (SAH) and stroke in young patients. They occur most commonly in the vertebro-basilar circulation whereas the anterior circulation is less commonly involved. Dissecting aneurysms and pseudoaneurysms are challenging to treat with conventional microsurgical and endovascular techniques. The established treatment strategies include stenting, trapping, bypass, parent vessel sacrifice and reconstruction with Flow Diverters. The FDs are the supportive enough to allow reconstruction of the parent artery but still flexible enough to conform to the tortuosity of vertebrobasilar regions.

## 45 YEAR OLD FEMALE

- Presented with acute severe headache with vomiting on the day of admission
- On examination - BP was normal, except for neck stiffness there were no focal neurological deficits
- CT brain showed parafalcine haemorrhage with diffuse thin SAH & cerebral edema

Parafalcine haemorrhage with diffuse thin SAH



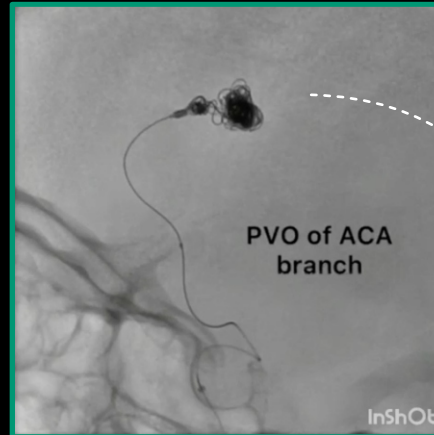
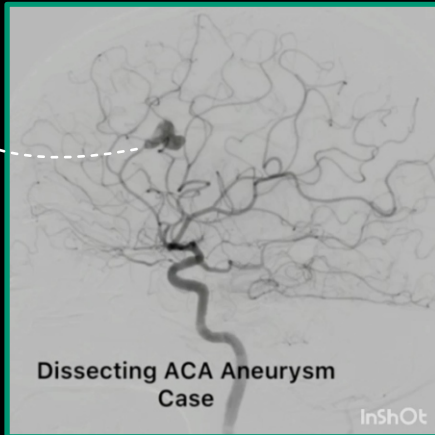


Scan/click to view  
Cath Images



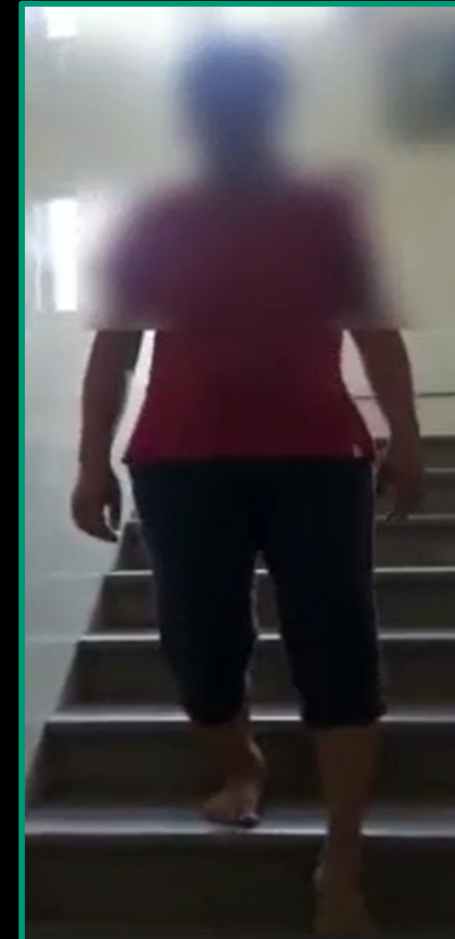
Scan/click to view is  
Patient's clinical status

### Dissecting Aneurysm



Inside out coiling of dissecting aneurysm with parent vessel occlusion

### Post Coiling



- She underwent DSA which showed right ACA dissecting aneurysm
- She underwent inside out coiling of the aneurysm with parent vessel occlusion
- Post procedure she had left hemiparesis - upper limb grade 2-3 & lower limb grade 0 which improved over a period of 3 months

# FLOW DIVERTER TREATMENT FOR ANEURYSM

Flow Diversion is an endovascular technique where, instead of placing coils inside the aneurysm sac, a cylindrical, metallic, mesh stent is placed in the parent blood vessel across the aneurysm neck. These stents differ from traditional stents in that they divert blood flow away from the aneurysm dome. These stents disrupt the intra-aneurysmal blood flow, providing significant rheologic effects with potential changes in transmural pressure gradient and progressively create intra-aneurysmal thrombosis. Flow diverters take advantage of hemodynamics, thrombosis, inflammation, healing, and endothelial regrowth to achieve endoluminal reconstruction and aneurysm obliteration. The presence of a metallic stent within the artery lumen increases the risk of thrombosis and stroke, and requires the patient be maintained on two anti platelet agents for at least six months until the stent is incorporated into the artery wall. One of the main concerns with flow diversion is related to the patency of side-branch and perforating vessels in the vicinity of treated aneurysms. Despite the low porosity and higher metal content of the flow-diversion device, outflow into perforators is usually maintained as long as there is a pressure gradient from the high-pressure parent artery branch to the low-pressure perforator territory. Flow diverters represent a major paradigm shift in the endovascular treatment of intracranial aneurysms.