

Isolated dural arteriovenous fistula treated with transvenous coil embolization via direct puncture of transverse sinus: case report

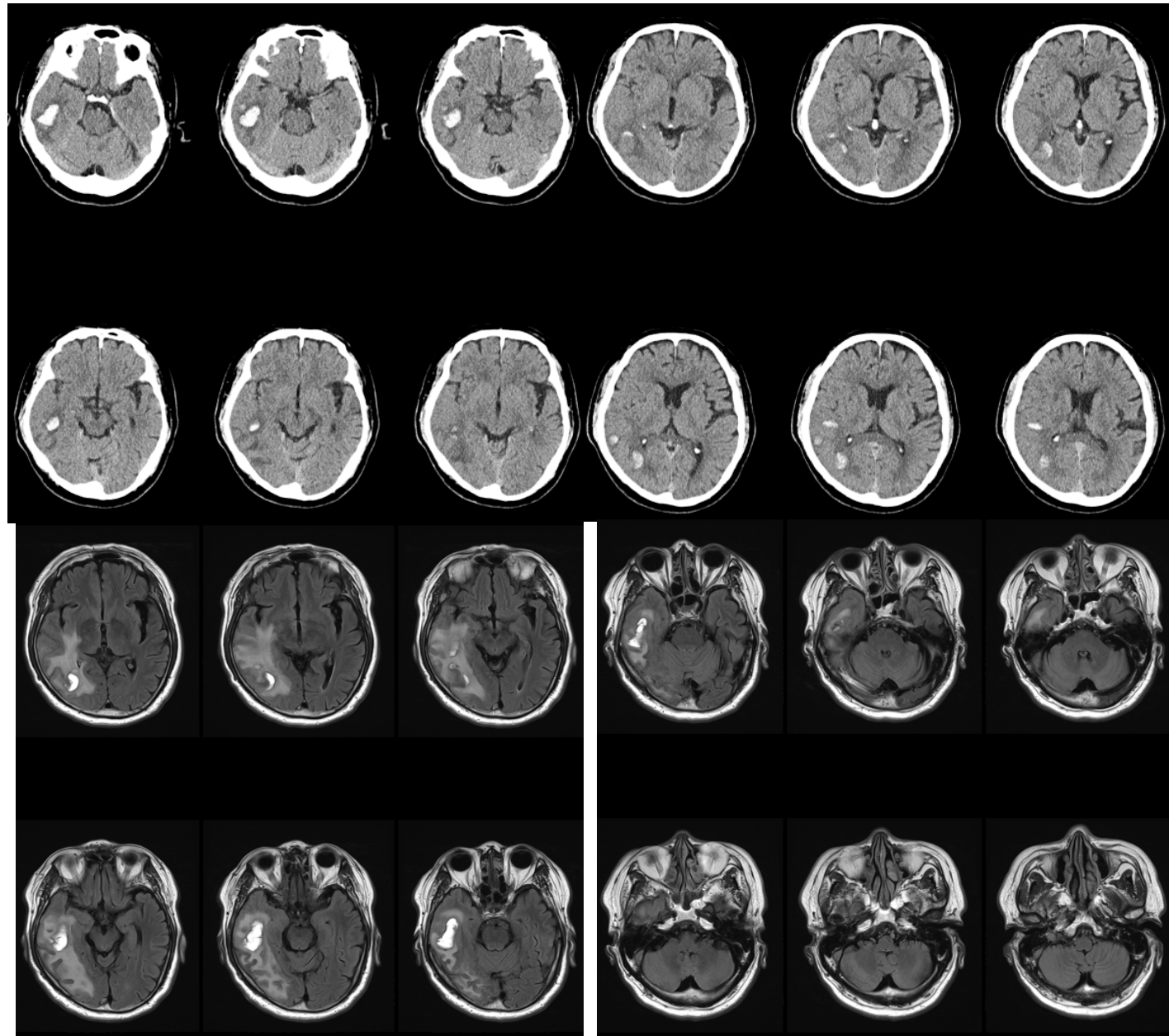
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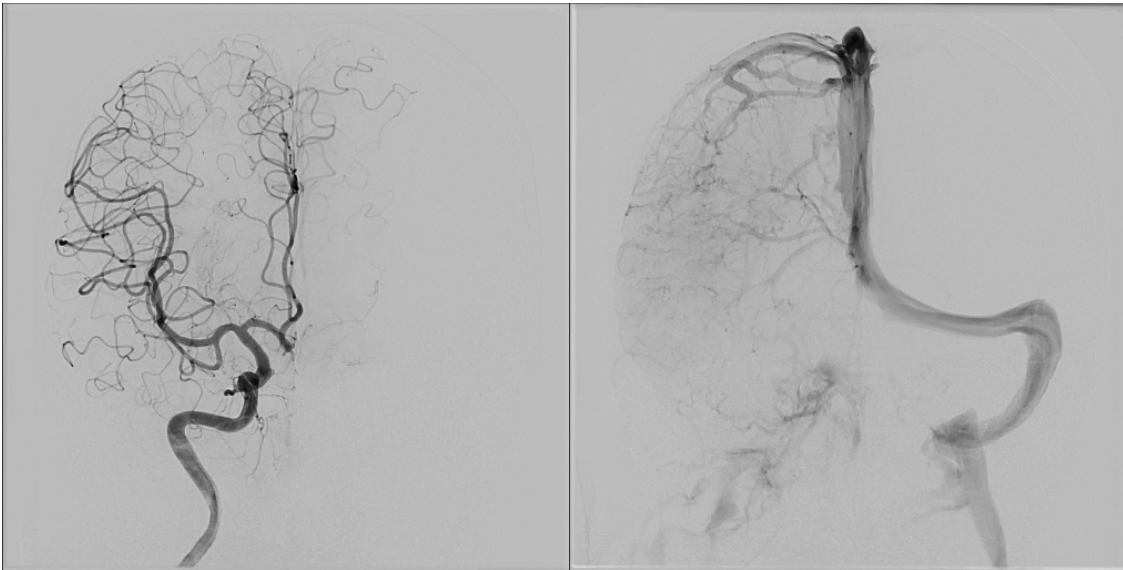
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Patient information

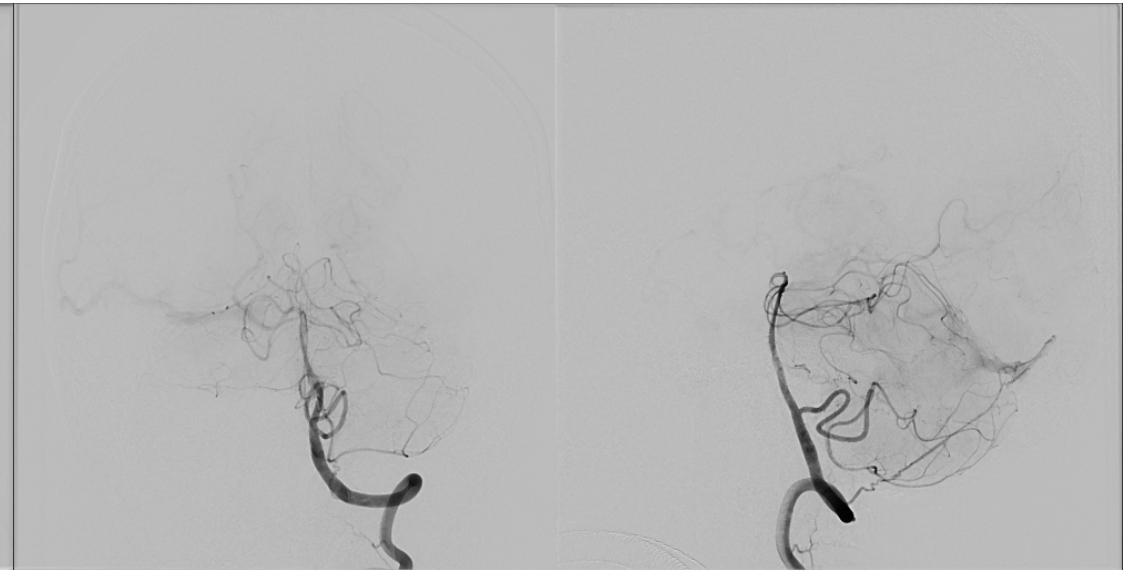
- M/71
- GTC seizure, Dysarthria
- Rt. tinnitus 7 years ago
- HTN (+)



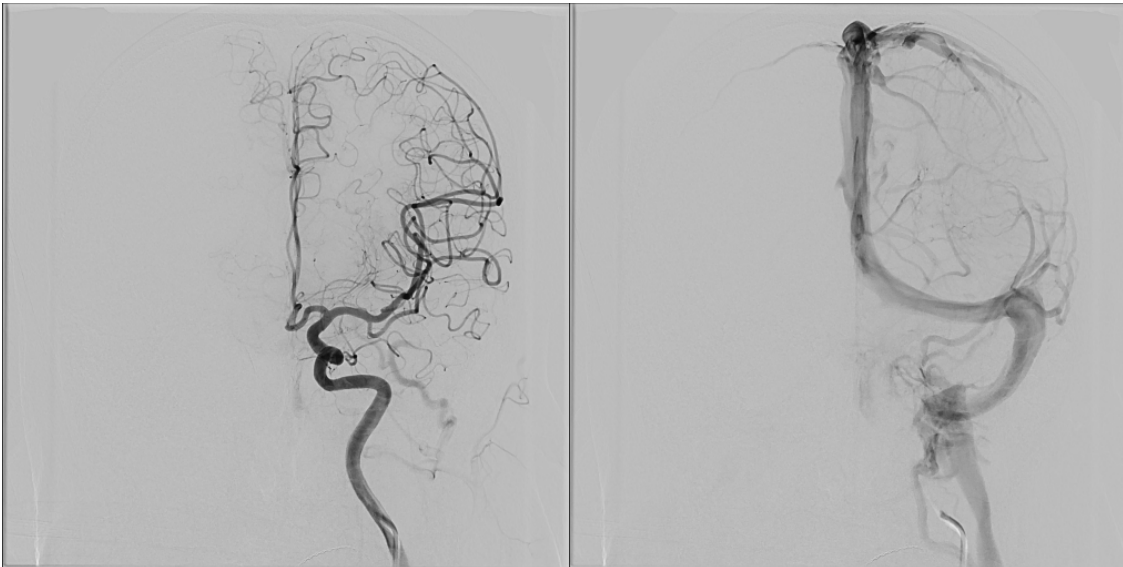
Rt ICA angiography



Lt VA angiography



Lt ICA angiography

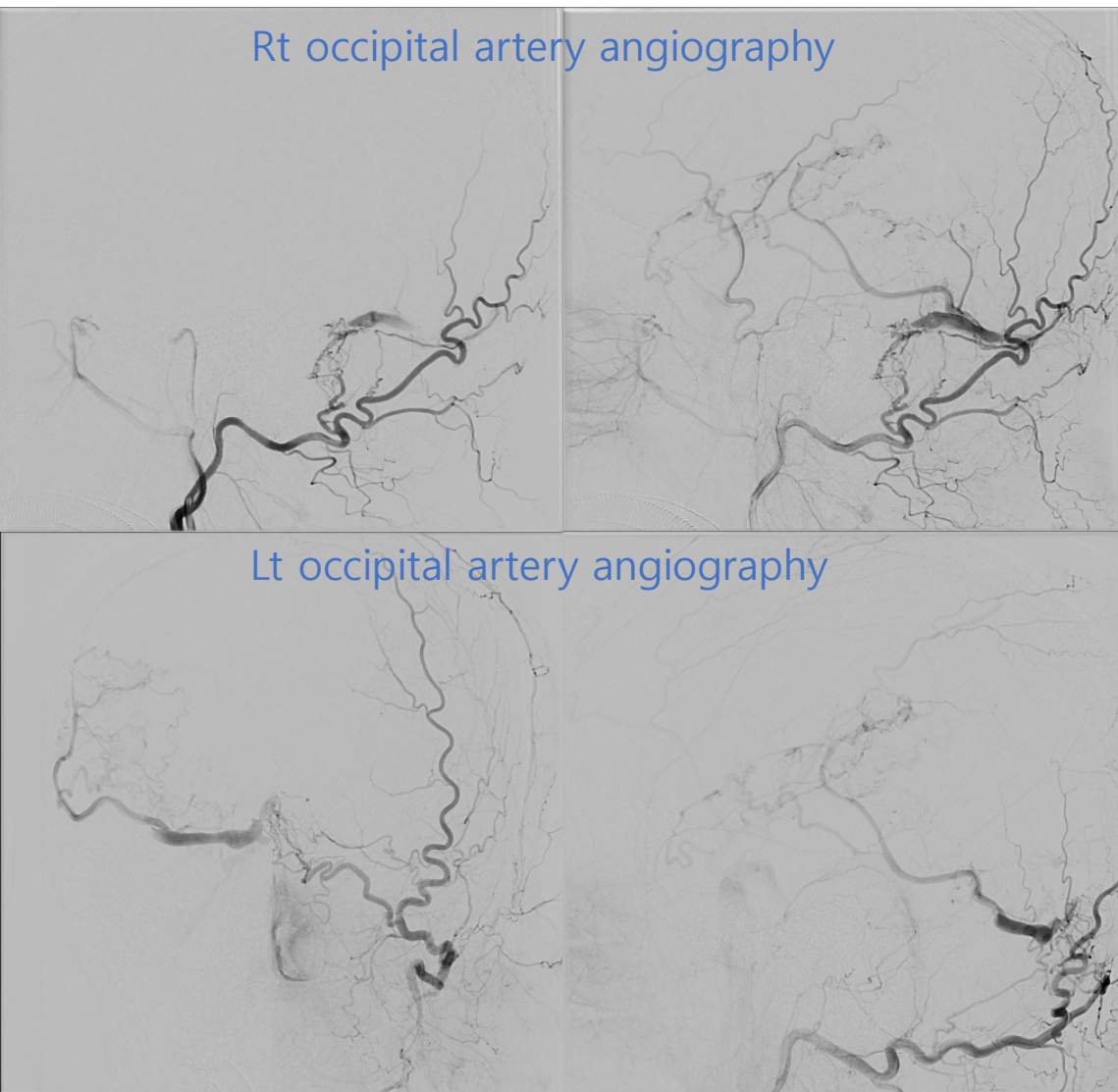


No normal drainage to Rt transverse sinus was confirmed → non-functioning sinus

Delayed contrast washout from Rt hemisphere noted

Small contribution to the dural AVF from left posterior meningeal artery to the Rt transverse sinus with cortical venous reflux noted

OA → Rt transverse sinus → Vein of labbe →
Cortical venous reflux without antegrade flow



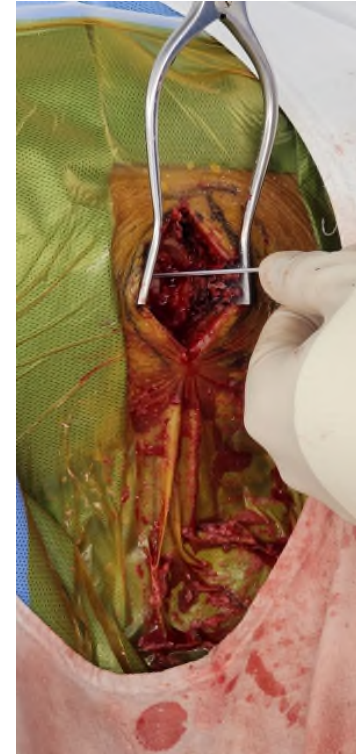
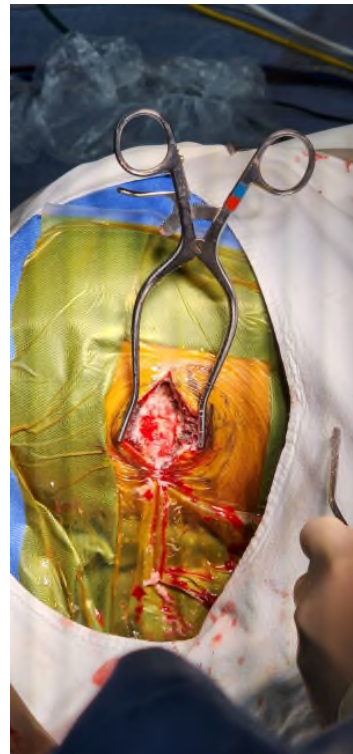
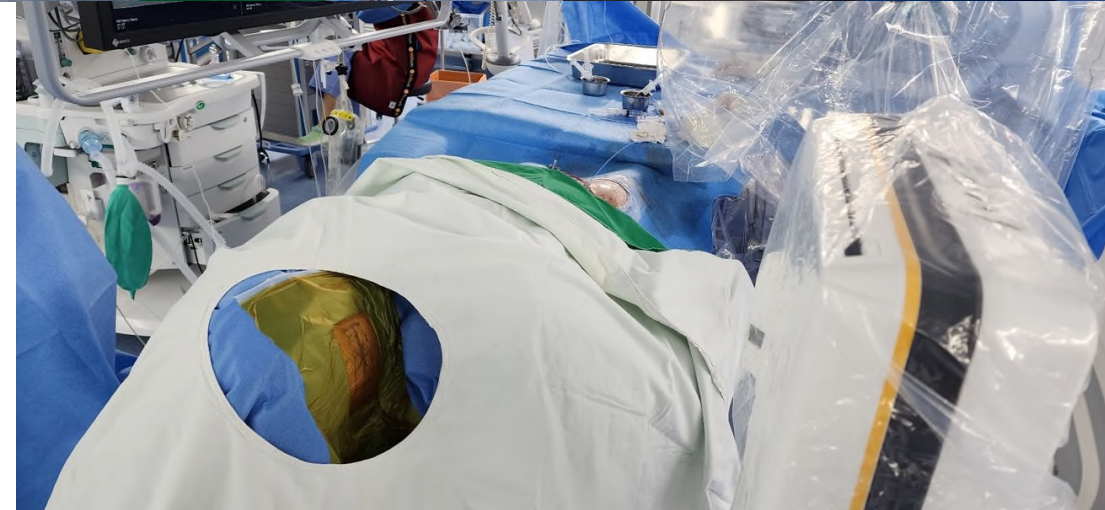
- Feeding artery
 - Rt OA
 - Lt OA
 - Rt VA meningeal artery
- Draining vein
 - Rt sigmoid-transverse sinus → Rt vein of labbe → cortical venous reflux
- Borden classification type III
- Cognard classification type IV
- No arterial or venous route to approach Rt transverse sinus
- Treatment of choice: Direct puncture to Rt transverse sinus and coil embolization

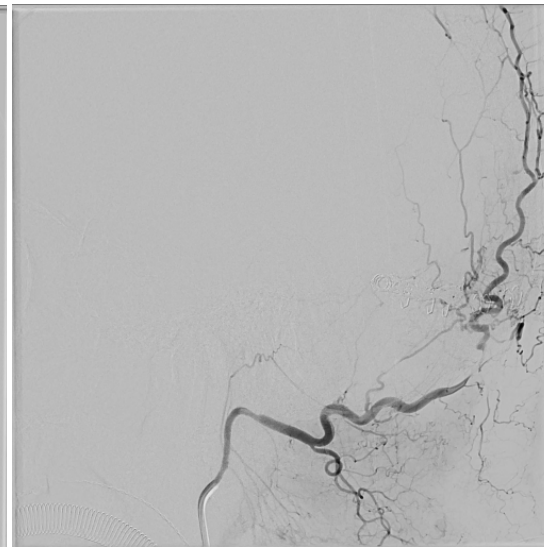
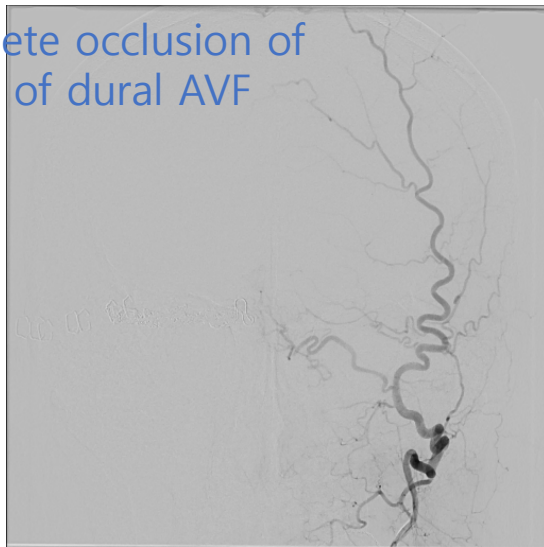
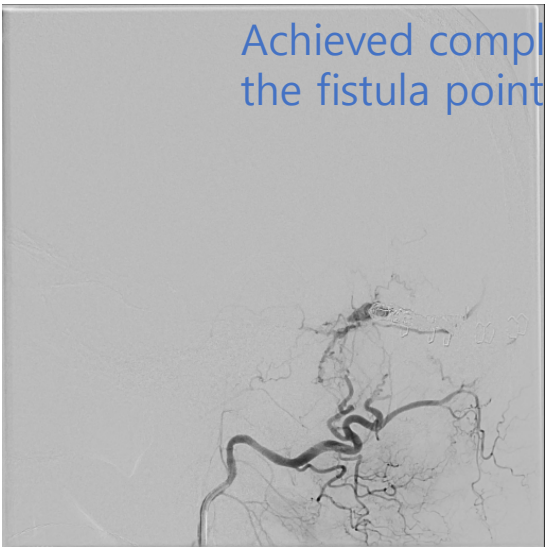
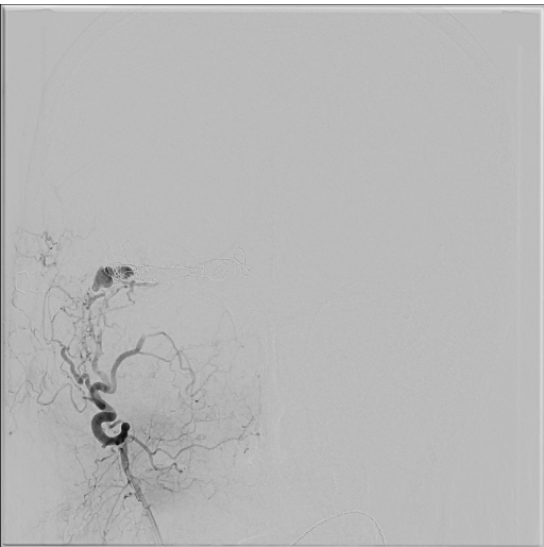
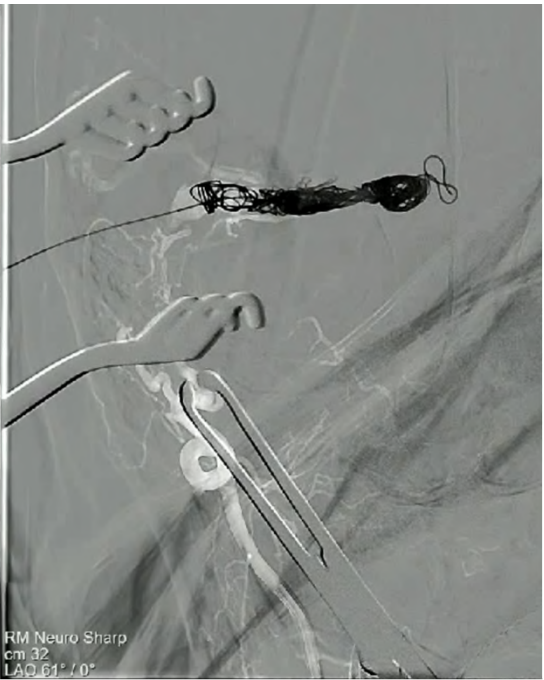


Head placed at surgical pad with Lt side rotation at hybrid OR

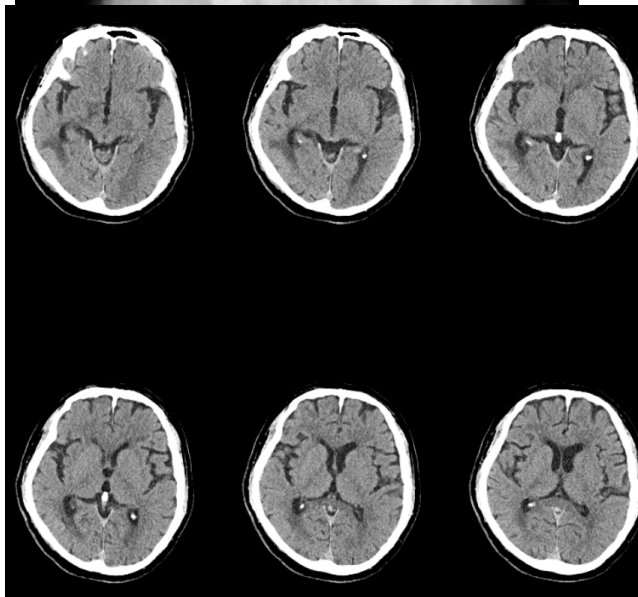
Single burrhole trephination with guidance with fluoroscopy

Direct puncture with plastic needle





Achieved complete occlusion of the fistula point of dural AVF



2 months after surgery: symptom free of patient and cerebral edema vanished

Sometimes, direct puncture is the only route to access the fistula point of the dural AVF, especially for direct cortical venous reflux cases