

Intraventricular clipping of a ruptured third ventricular aneurysm beneath the massa intermedia and concurrent resection of thalamic AVM: A contralateral interhemispheric transcallosal trans-choroidal fissure approach. Case illustration and 3D Video.

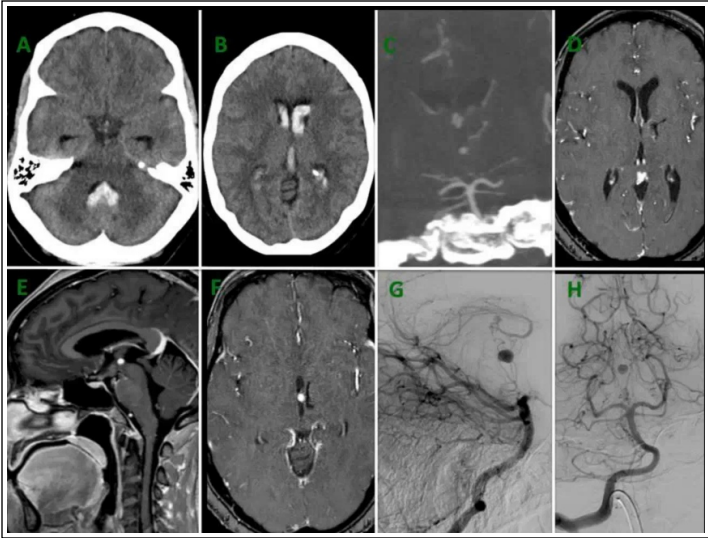
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Objectives:

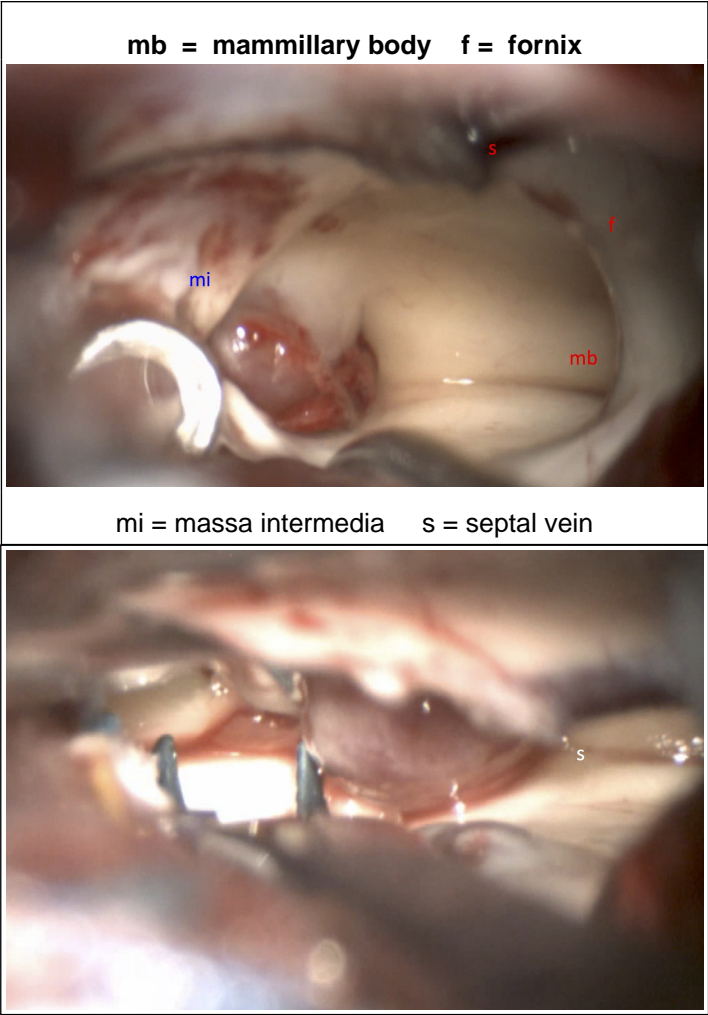
To highlight the trans-choroidal approach to the third ventricle and its application to posterior circulation ruptured aneurysms and AVM's in and around the third ventricle. An operative video is included.

Presentation: A previously healthy 51-year-old female presented with loss of consciousness and sudden headache. On examination, she was confused and lethargic but arousable. She oriented only to self, exhibited hypophonia, and demonstrated hemiparesis of the right side.

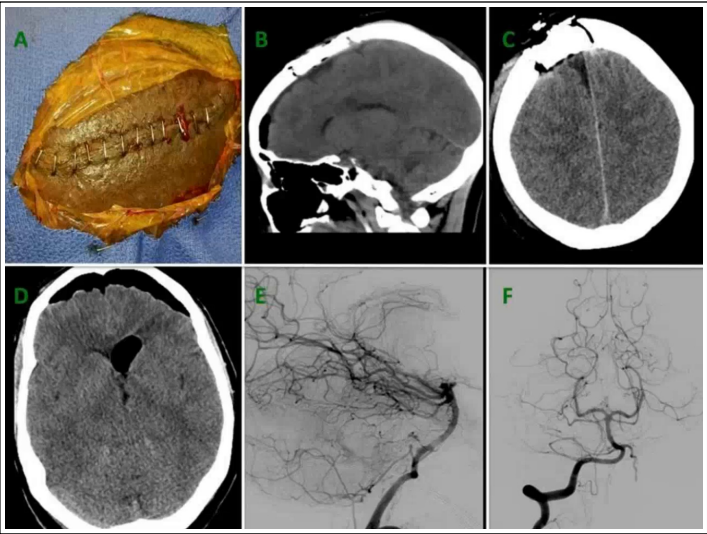
A computed tomography (CT) scan revealed diffuse intraventricular hemorrhage and mild hydrocephalus. Magnetic resonance imaging (MRI) of the brain and a diagnostic cerebral angiogram demonstrated a 5 mm aneurysm adherent to the left inferior thalamus beneath the massa intermedia and a small AVM with a prominent vein draining into the left internal cerebral vein. Encephalomalacia was readily apparent in the left internal capsule and thalamus indicative of prior bleeding.



Surgery: She underwent a transcallosal trans-choroidal fissure surgical approach from the right side and both the aneurysm and AVM were treated simultaneously.



Postoperative course: Her postoperative angiogram demonstrated no residual aneurysm or AVM. Following surgery, the patient had an unremarkable postoperative course and demonstrated recovery of many of her preoperative post-hemorrhage deficits. The patient's strength improved to 4/5 in the right arm and leg and she became more alert. She became oriented to self, place, time, and names of her family members and was discharged on the 7th postoperative day.



Conclusions: The unique findings in this case allowed for concurrent resection of a thalamic AVM during the same surgical approach used for clipping and excision of a pre-nidal aneurysm. The high-risk features of ruptured pre-nidal aneurysm, deep AVM location, deep venous drainage, and evidence of prior hemorrhages made observation unfavorable for either lesion. To the author's knowledge, this case represents the first report of a transcallosal trans-choroidal fissure approach for treatment of an intra-third-ventricular aneurysm.