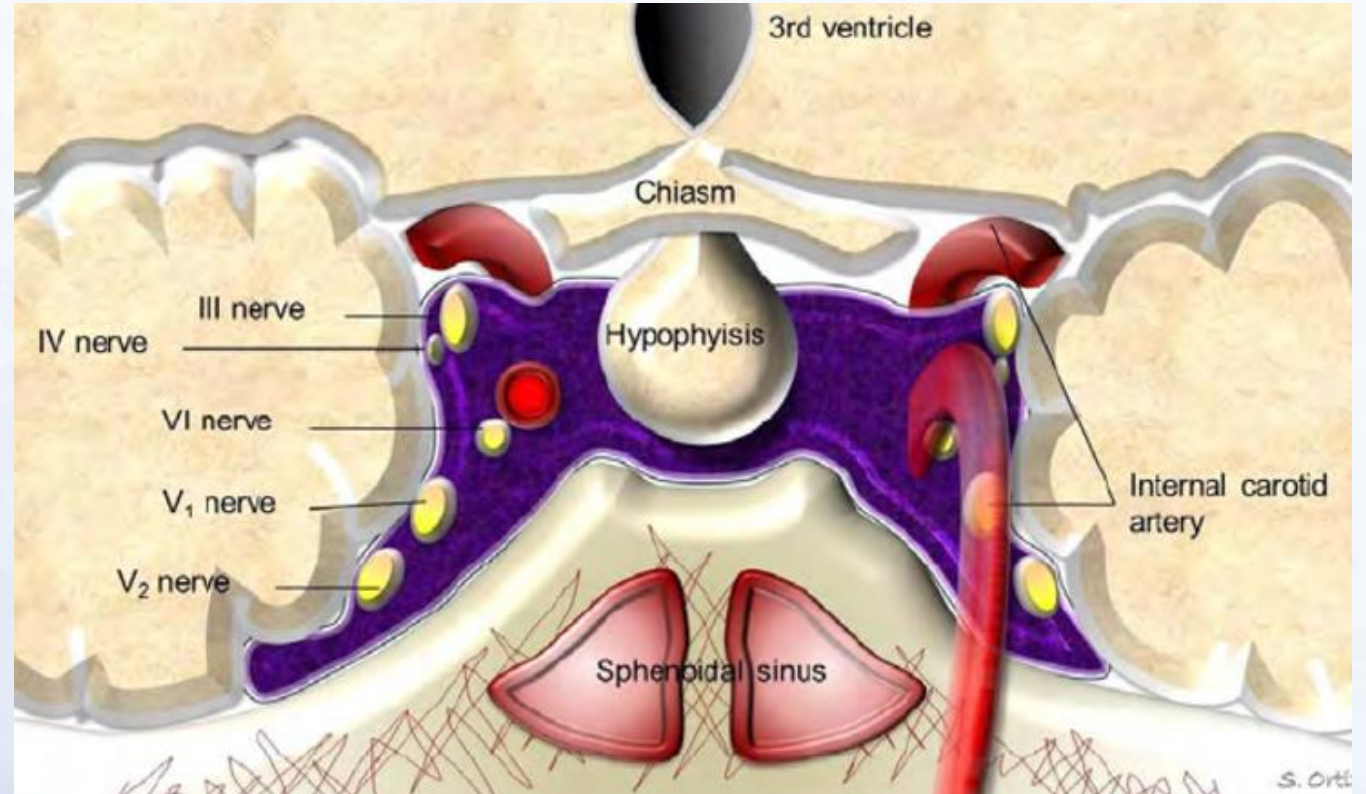


CT brain with contrast





Diagnosis

- Macroprolactinoma with apoplexy
 - Secondary hypothyroidism and hypogonadism
- Impending/concealed ruptured left cavernous sinus aneurysm

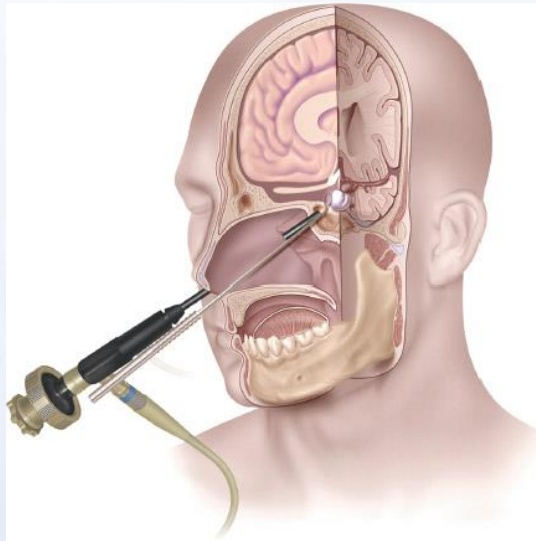




Pituitary adenoma with cavernous sinus aneurysm



Management of pituitary adenoma: Endonasal transsphenoidal approach

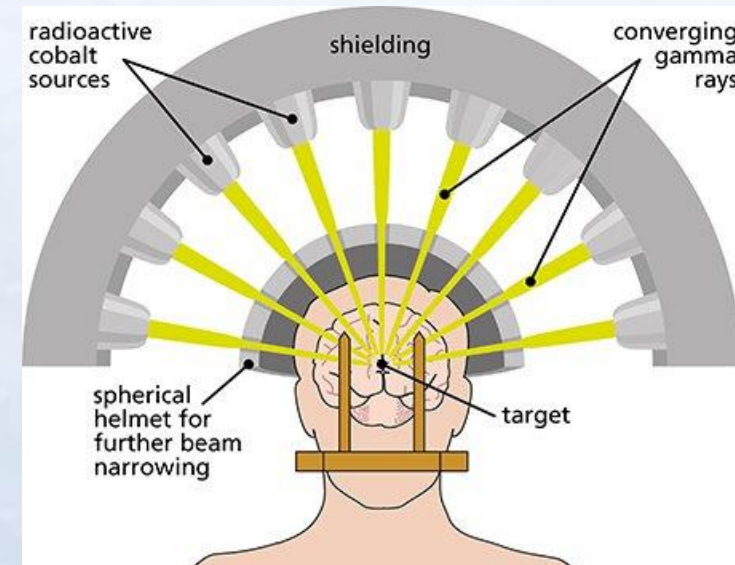
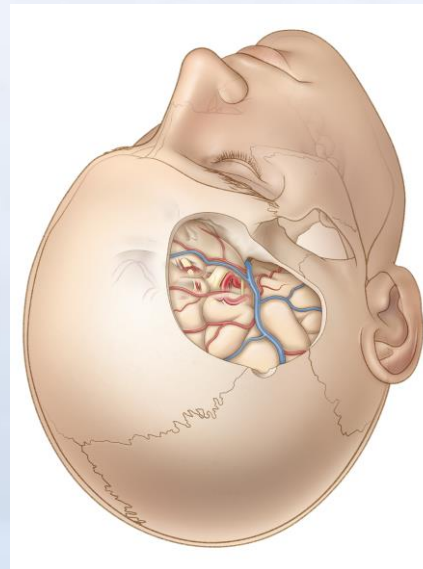
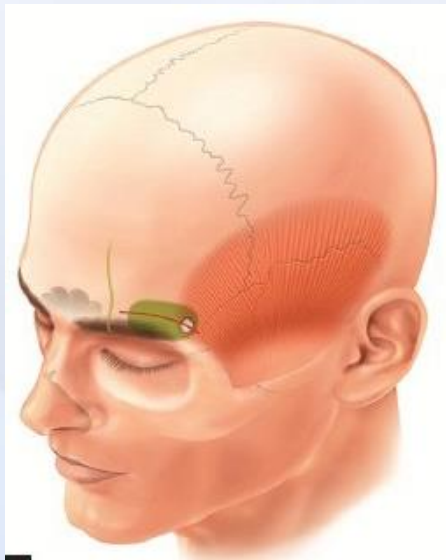


- The endonasal transsphenoidal approach to the pituitary fossa is a safe procedure with low morbidity and mortality.
- If the aneurysm was not detected preoperatively, ruptured aneurysm can occur during the operation.
- The preoperative imaging of the vasculature around the pituitary fossa is necessary.

Aneurysm embedded within a pituitary adenoma



- Very rare, no standard treatment protocol.
- Microsurgical Rx of the aneurysm and the adenoma through a frontotemporal or supraorbital keyhole approach
- Two stage procedures combined with gamma knife radiosurgery, and transsphenoidal microsurgery after embolization.



A case of macroprolactinoma encasing an internal carotid artery aneurysm, presenting as pituitary apoplexy

Anushka Soni · Samantha Roshani De Silva ·
Kate Allen · James V. Byrne · Simon Cudlip ·
John A. H. Wass

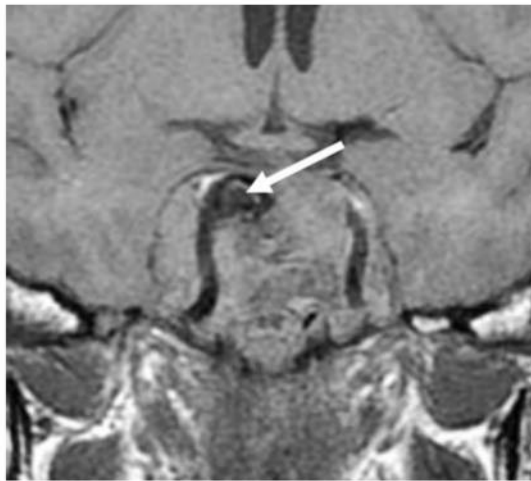


Fig. 1 MRI T1 W (coronal view) illustrating aneurysm (arrow)

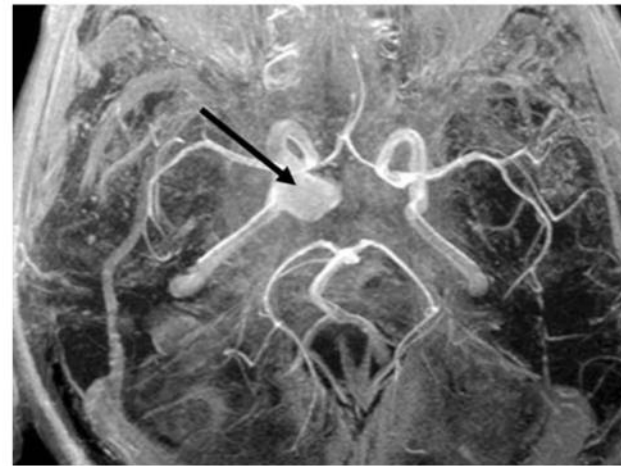


Fig. 3 MRA (TOF) showing the aneurysm (arrow)

- A 53-year-old male, with a previous history of NHL presented with severe right sided frontal headache, decreased visual acuity, and ophthalmoplegia due to a third nerve palsy.
 - Long history of erectile dysfunction with loss of libido
 - Prolactin level 25248.4 ng/ml
-
- MRI pituitary: 4.8 cm mass in the pituitary fossa, which extended into both cavernous sinuses
 - MRA: an aneurysm arising from the intra-cavernous portion of the right ICA.
 - A trans-nasal biopsy: Prolactinoma



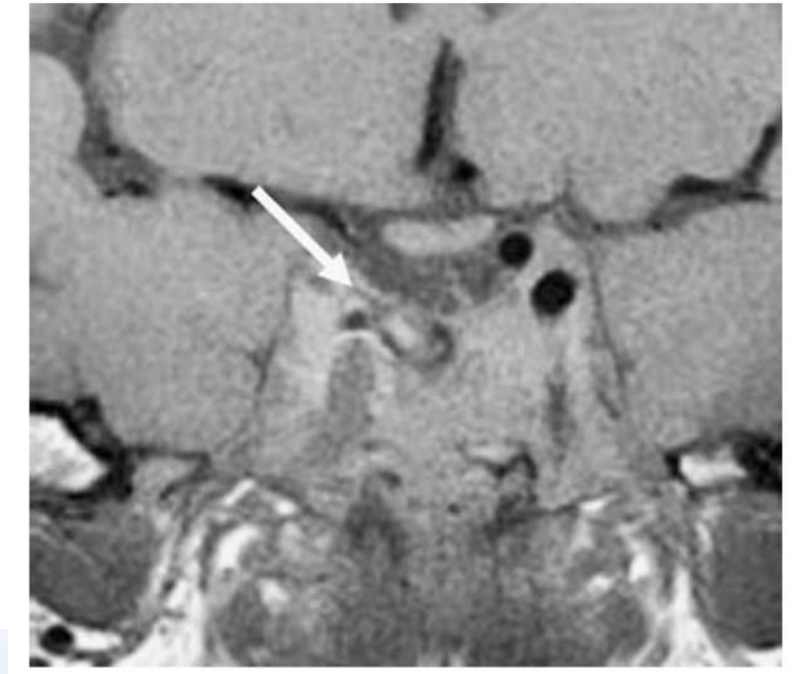
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Cabergoline



	Day 1	Day 9	Day 20
Prolactin (mU/l)	573200	78148	1476



- Steroid replacement therapy
- Cabergoline, with rapid dose titration to 4 mg/week
- The aneurysm was treated by endovascular occlusion of the right carotid artery under radiological control.
- No conventional surgical intervention

8 weeks after cabergoline Rx, showed a considerable reduction in the overall size of the destructive lesion.

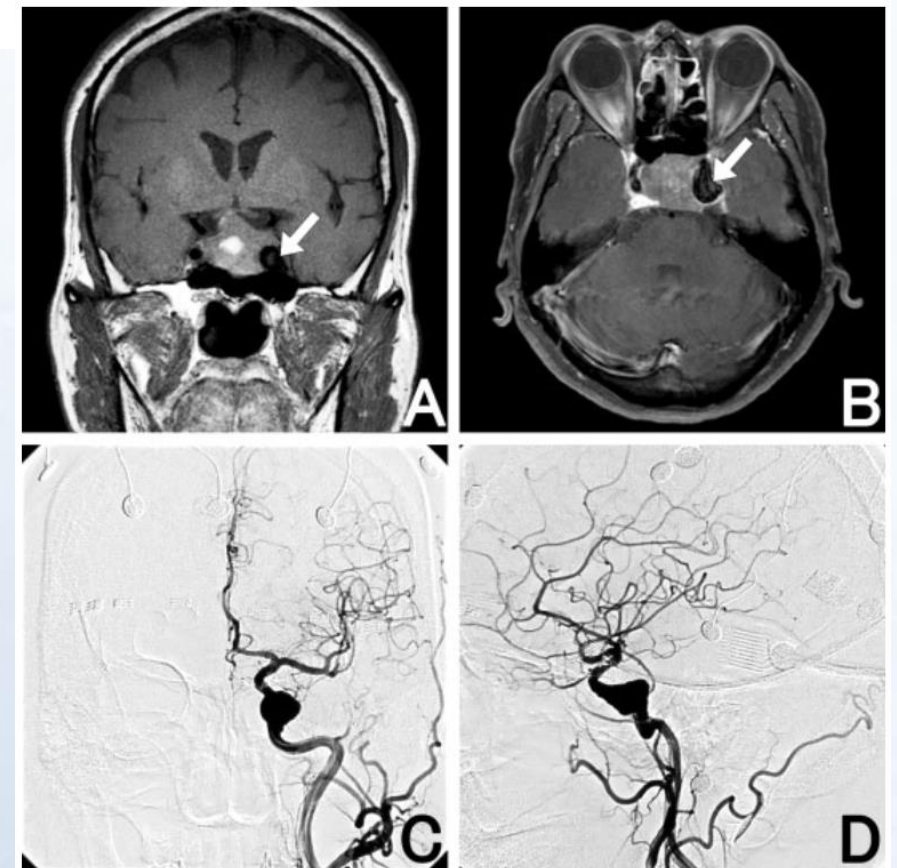


Subarachnoid Hemorrhage Due to Rupture of an Intracavernous Carotid Artery Aneurysm Coexisting with a Prolactinoma under Cabergoline Treatment

[Nobuyuki Akutsu](#),¹ [Kohkichi Hosoda](#),¹ [Kohei Ohta](#),¹ [Hirotomo Tanaka](#),¹ [Masaaki Taniguchi](#),¹ and [Eiji Kohmura](#)¹

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- A 58-year-old man presenting with diplopia was found to have a left intracavernous carotid artery aneurysm encased by a suprasellar tumor with intratumoral hemorrhage on MRI.
- serum prolactin level was 5036 ng/mL
- Cabergoline at a dose of 0.25 mg once a week.
- One month after administration of cabergoline, the diplopia was improved; serum prolactin was decreased to 290 ng/ml.



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Mahidol University
Faculty of Medicine Ramathibodi Hospital

- Six weeks after starting the cabergoline, the patient underwent a left frontotemporal craniotomy to treat the aneurysm.
- When the dura mater was opened, the brain swelled and an SAH was clearly observed.
- CT after the surgery revealed a thick SAH
- Proximal ligation of the left ICA with a Superficial Temporal Artery to Middle Cerebral Artery anastomosis and cranioplasty were completed.
- No new neurologic deficits developed after the procedure.
- MRI confirmed tumor regression and disappearance of the left intracavernous flow void.

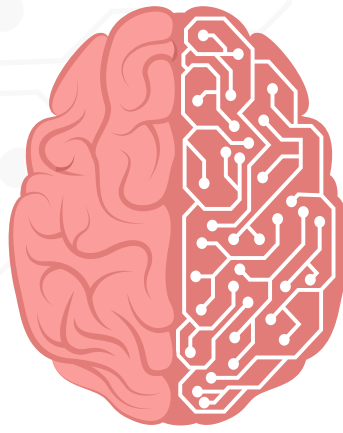


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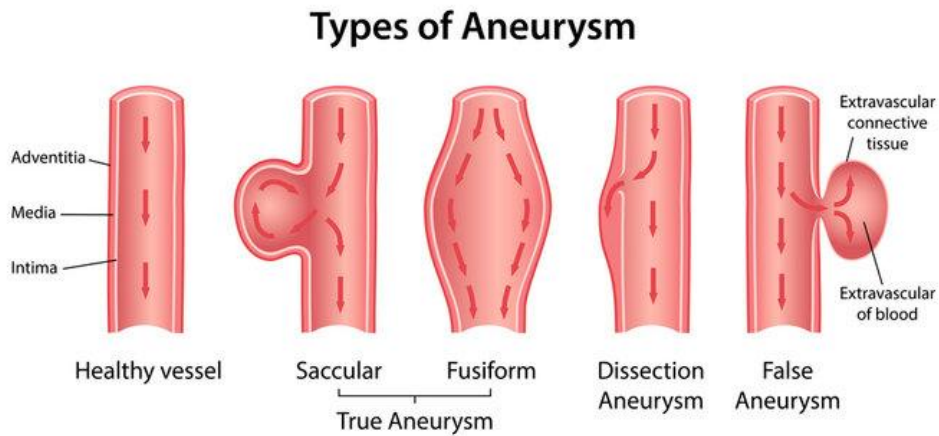
- The tumor might have invaded and weakened the aneurysmal wall, causing the aneurysm to grow and subsequently rupture into the tumor
- The effect of adenoma shrinkage as a result of medical therapy on a coexisting intracavernous aneurysm has been unclear
- In our case, we speculate that an aperture between the adenoma and intracavernous aneurysm was created and widened by shrinkage of the prolactinoma by cabergoline.
- Medical therapy should be started only after treatment for the coexisting intracavernous aneurysm has been completed, to avoid any life-threatening hemorrhagic complications.



NEUROIMAGING:

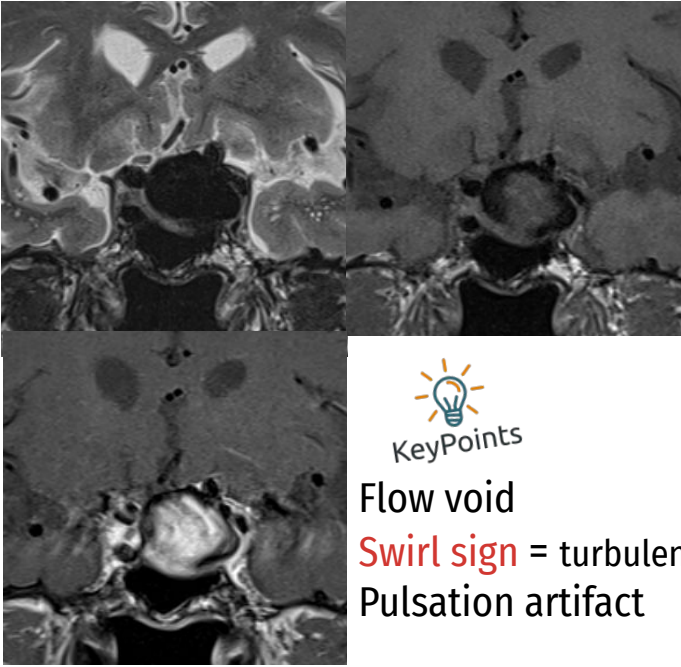
Pseudoaneurysm/False aneurysm

- Product of damaging vessel wall resulting in an encapsulated hematoma in communication with the ruptured artery



Aneurysm

Aneurysm



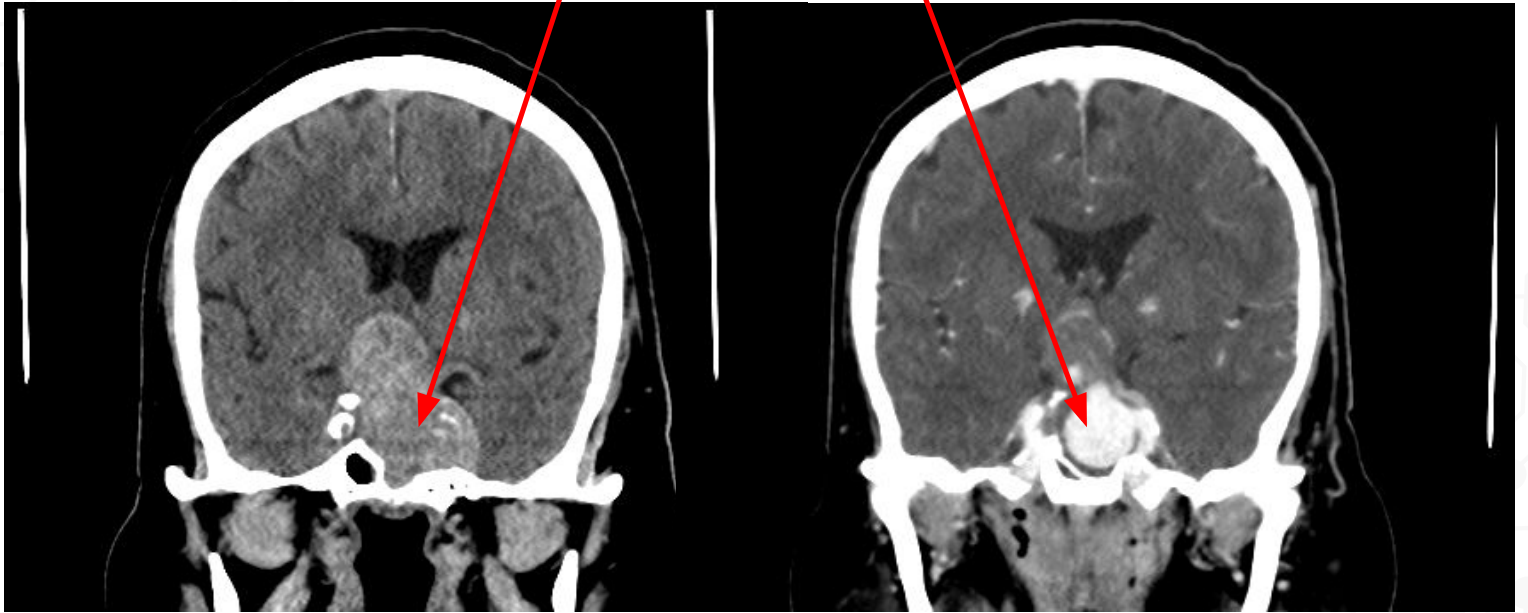
Flow void
Swirl sign = turbulence
Pulsation artifact

Aneurysm

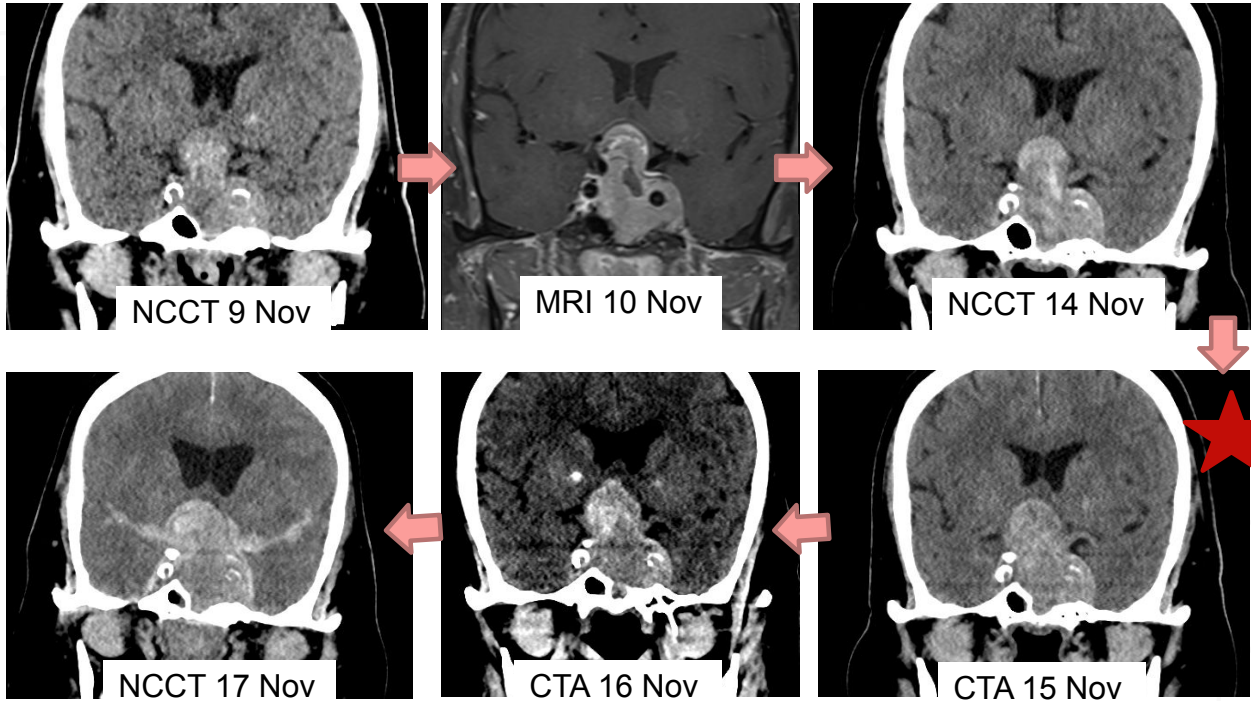


Vivid enhancement = Artery

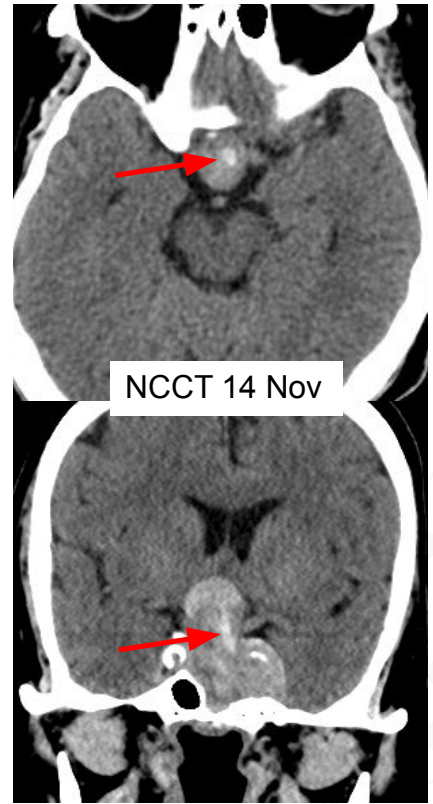
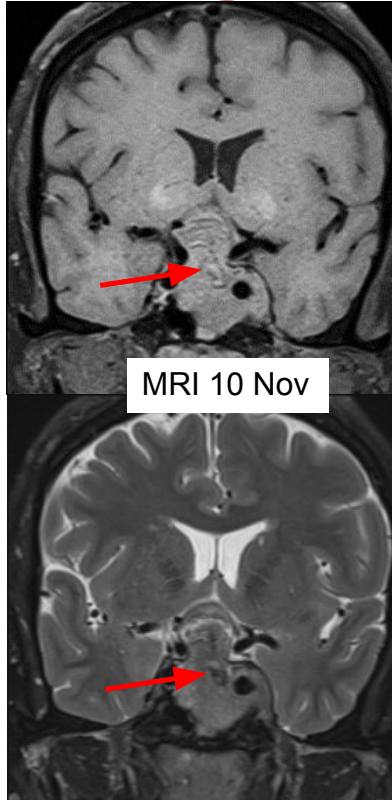
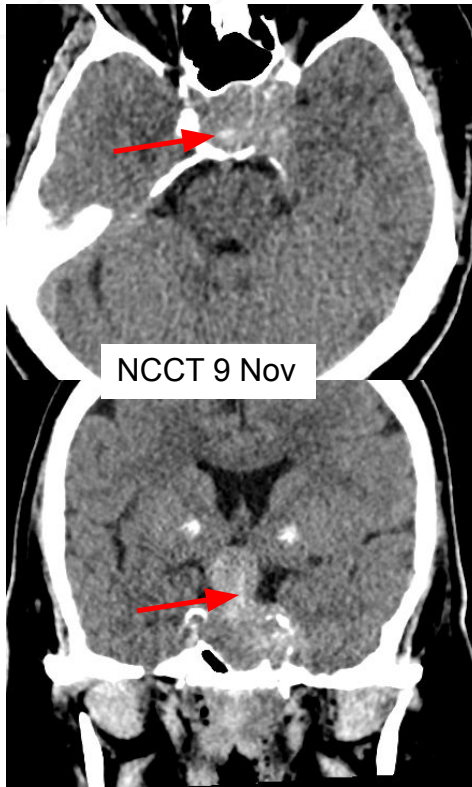
Enhancing arterial pouch
Not hyperdense blood



Serial Imaging: size changes : 14 -> 15 Nov

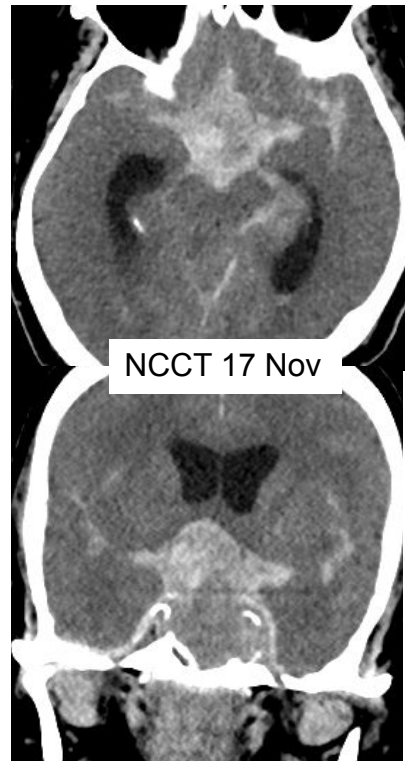
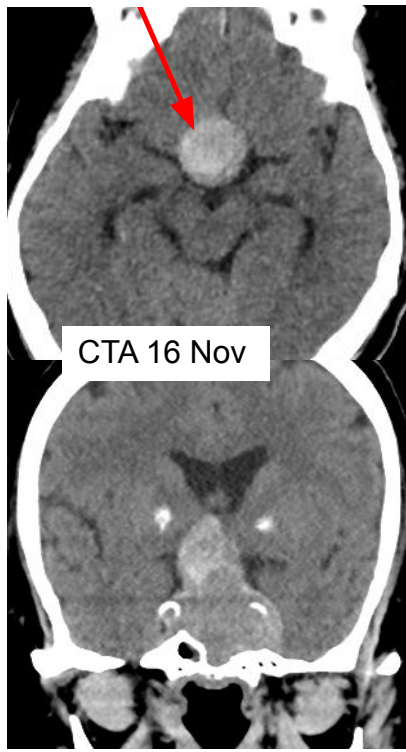
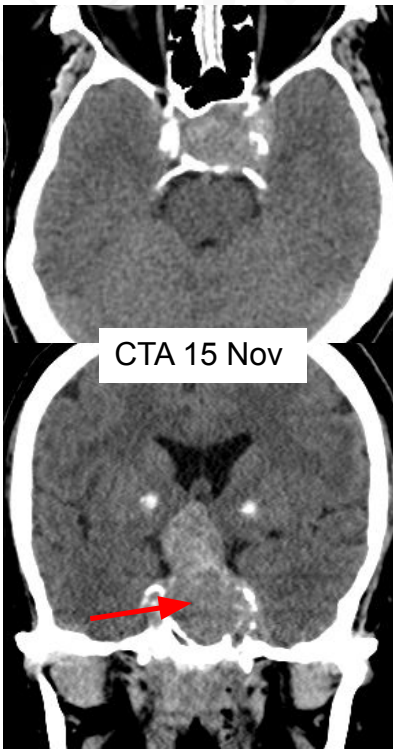


Serial Imaging: Hemorrhage



Serial Imaging: Hemorrhage

Contrast?? From CTA



Signal Intensity of Blood

