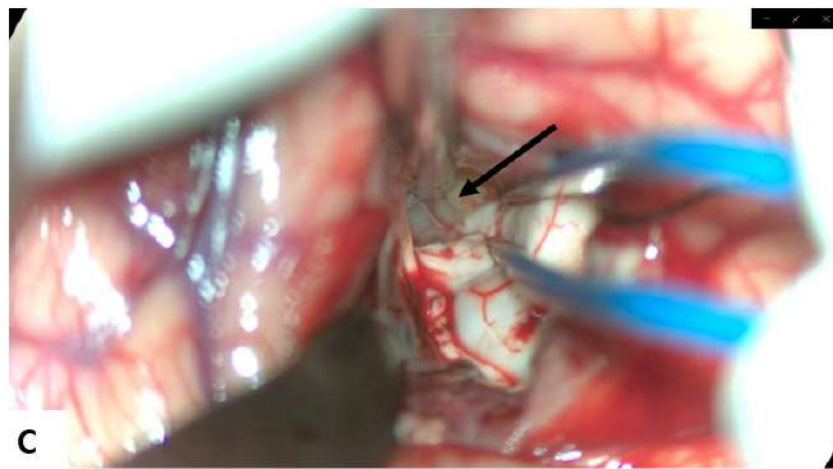
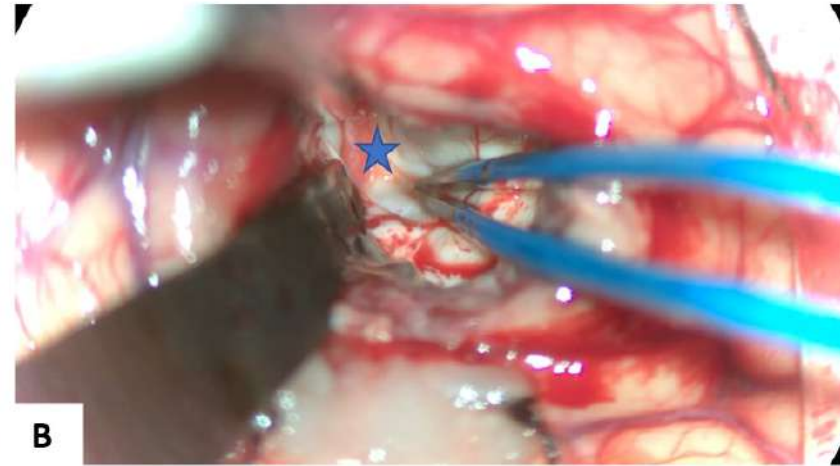
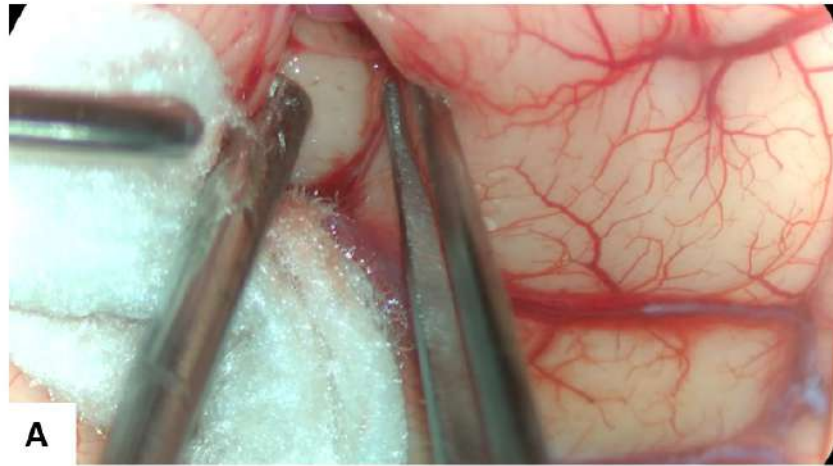


# Surgery

- **Position** – supine; head turned 90 degrees to left side; rigid fixation.
- **Craniotomy** – right temporal craniotomy
- **Approach** – middle temporal gyrus, trans sulcal, trans ventricular, trans choroidal approach
- **Histopathology report: Thalamic Teratoma (Mature)**

**Intraoperative  
Images**

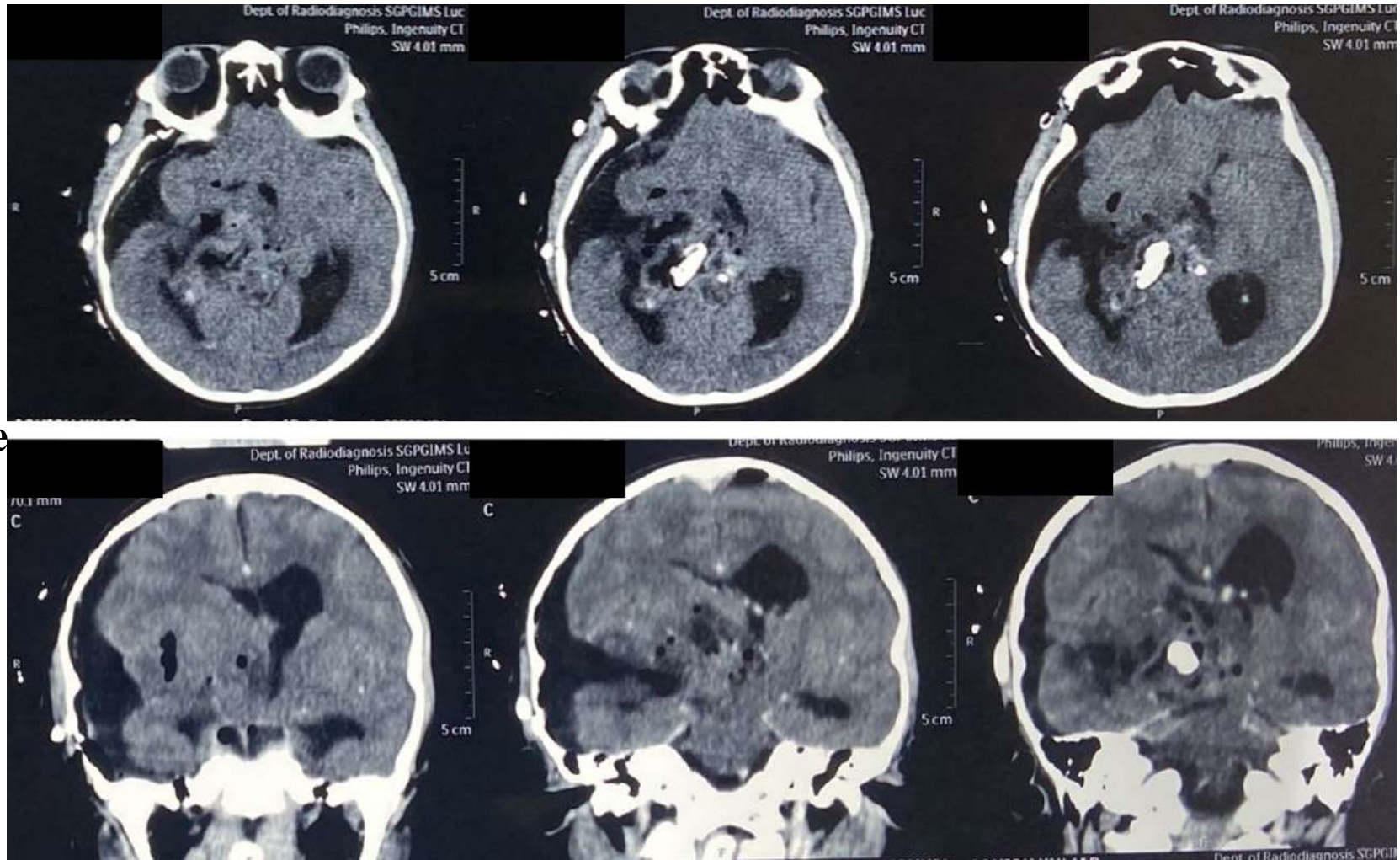


★ Choroidal fissure

→ Tumor reached by splitting the choroidal fissure

**A – Trans sulcal approach; B – Intraventricular stage with choroid plexus seen;  
C – Choroidal fissure split; D – Tumor decompression**

## Post-operative Images



Post-operative status is seen with the surgical corridor taken. Near-complete excision of tumor achieved. Calcified pedicle adherent to deep venous system left behind.

# Case Summary

- This young boy presented with features of raised ICP and left-sided hemiparesis. Radiological evaluation revealed a large mixed intensity lesion with a T1 hyper- and a T2 hypo-intense core, located in the right thalamus, with significant mass effect. DTI showed corticospinal tracts displaced anteriorly. A provisional differential of right thalamic teratoma was considered.
- A right middle temporal gyrus, trans sulcal, trans ventricular, trans choroidal approach taken. Maximal safe surgical resection was achieved.
- The post-operative course was uneventful.

# Relevant literature

- Teratomas are non-seminomatous germ cell tumors derived from pluripotent cells
- Intracranial teratomas are very rare and comprise about 0.5% of all intracranial tumors (Chiloiro et al., 2016)
- Such lesions occur in the suprasellar, parasellar or pineal region, and rarely in an intraparenchymal, intraventricular, or cavernous sinus location
- In 50% of cases, they are so large that an exact origin cannot be ascertained
- Mature teratomas are relatively benign; whereas Immature teratomas are highly malignant

- **Radiological Findings:**

Teratomas contain tissues from two to three embryological layers and can contain a variety of different tissues. As a result, imaging features are heterogeneous. Typical teratomas are mixed cystic and solid masses. MRI is the preferred modality, although CT can be useful to assess for fat and calcification.

T1 signal is a variable ranging from hypointense to hyperintense components due to the presence of cysts and fat, respectively. The soft tissue components are isointense/hyperintense on T2-weighted imaging and demonstrate variable enhancement. Restricted diffusion may be present in the solid components. The presence of tooth elements, fat, and calcification are highly suggestive for a teratoma.

- **Treatment:**

Radical safe surgical resection is preferred in mature teratomas. Adjuvant therapy can be added to immature teratomas.



# Suggested Readings

- Rao, et.al., (2011). Thalamic mixed germ cell tumor: A case report. *Journal of Pediatric Neurology*. 9. 413-418. 10.3233/JPN-2011-0492.
- Kaneko T, et.al. Degenerative thalamic hamartoma: CT and MR imaging features. *AJNR Am J Neuroradiol*. 2004 May;25(5):766-8. PMID: 15140716; PMCID: PMC7974474.