

Patient Name:	Patient ID:
Ref. Phy.:	Study Date:

### **MRI OF THE BRAIN (TRIGEMINAL NEURALGIA PROTOCOL):-**

*The study was performed on high field MR unit*

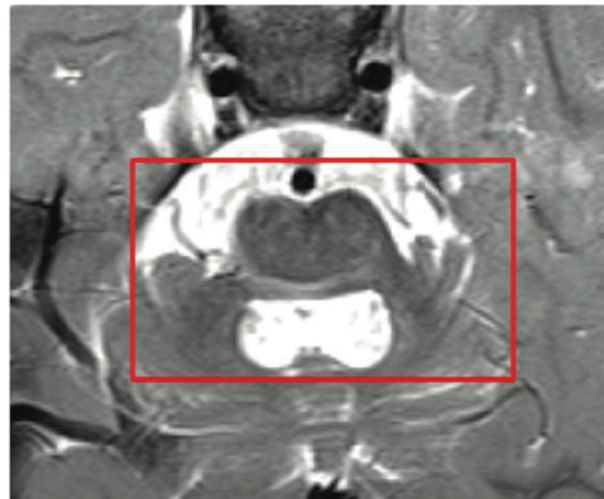
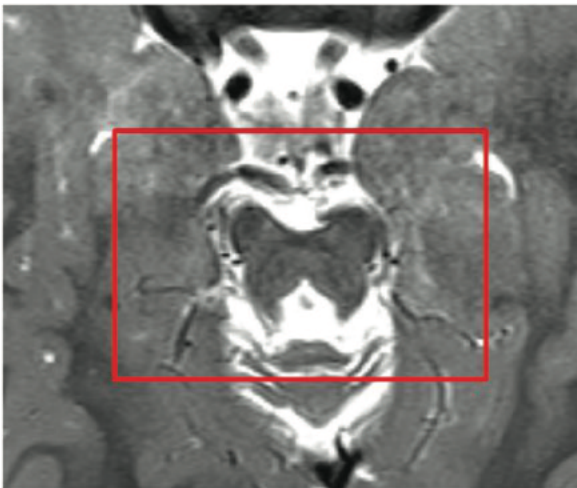
### **Technique:-**

*Multiple pulse sequences were taken before and after IV contrast injection.*

### **FINDINGS:-**

A 3-year-old child male patient with bilateral recurrent corneal ulcer coming for pre-operative mapping for the trigeminal nerve.

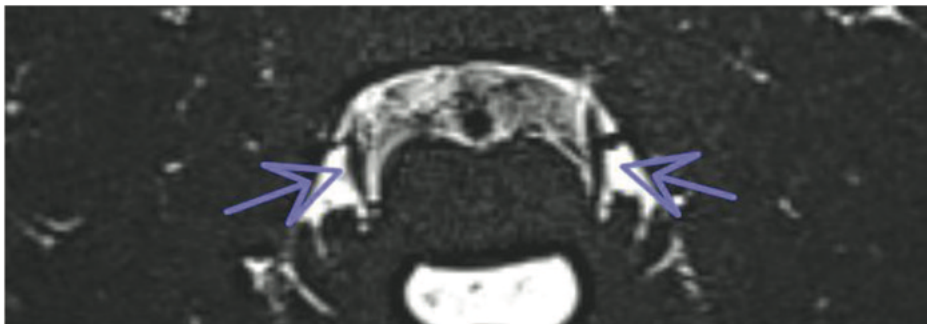
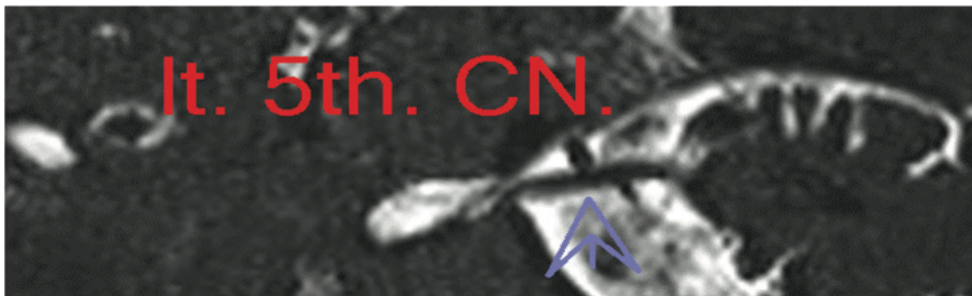
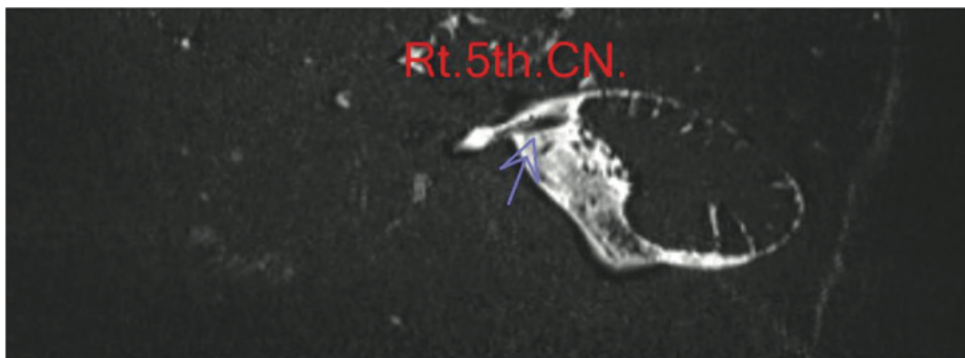
#### **Intra-axial course:**



- Hypoplastic posterior aspect of the brainstem with posterior mid sagittal pontine cleft extending from the floor of fourth ventricle and absent facial colliculi, this cleft is also seen in the posterior aspect of medulla oblongata (red rectangle).

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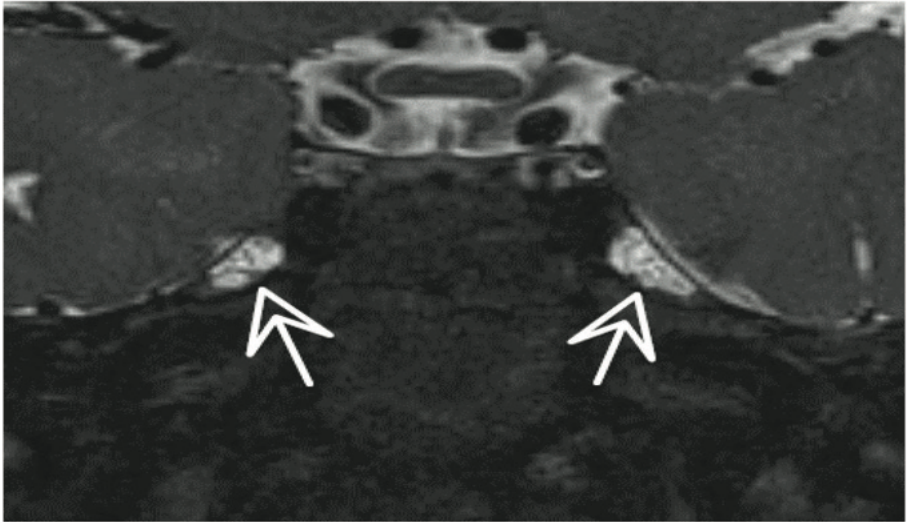
**Cisternal course:**



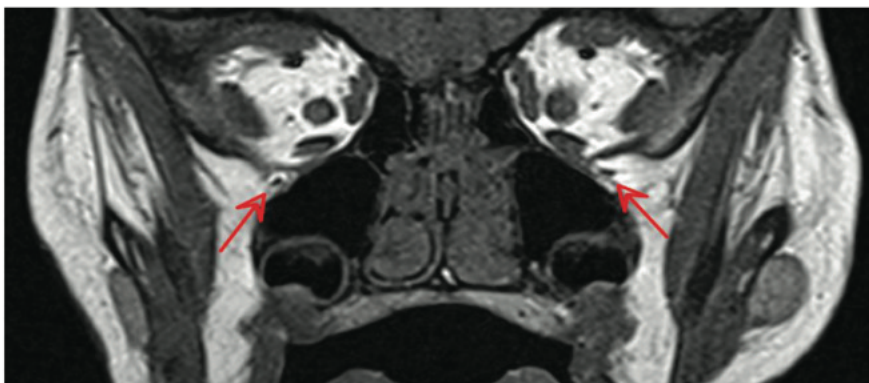
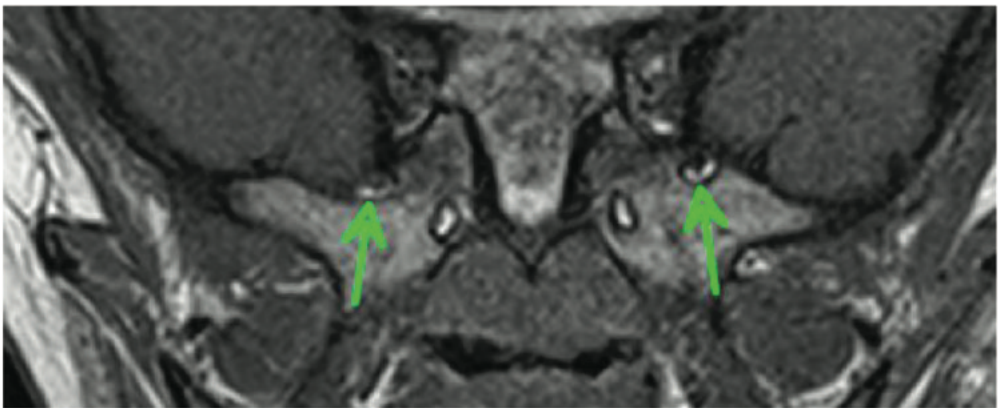
- The cisternal course of trigeminal nerves are well seen with average size and signal extending till passing through the porous trigeminus (violet arrows).

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### Skull base

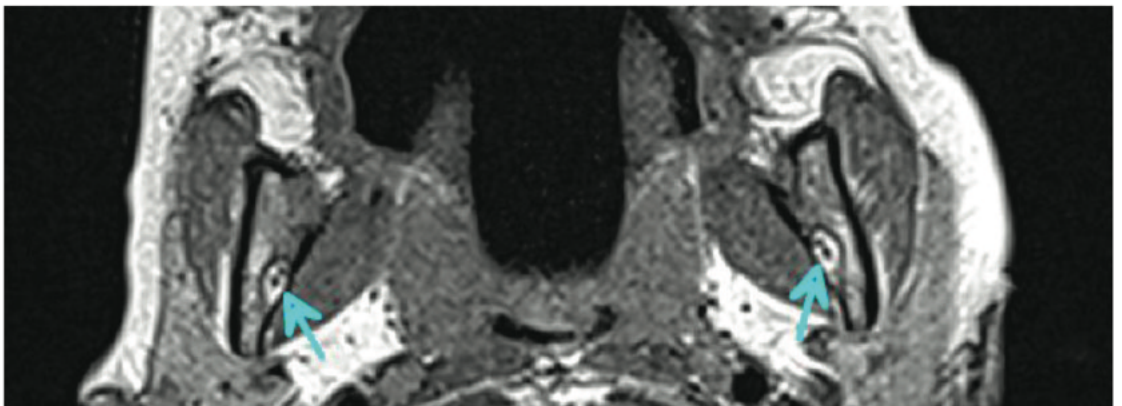
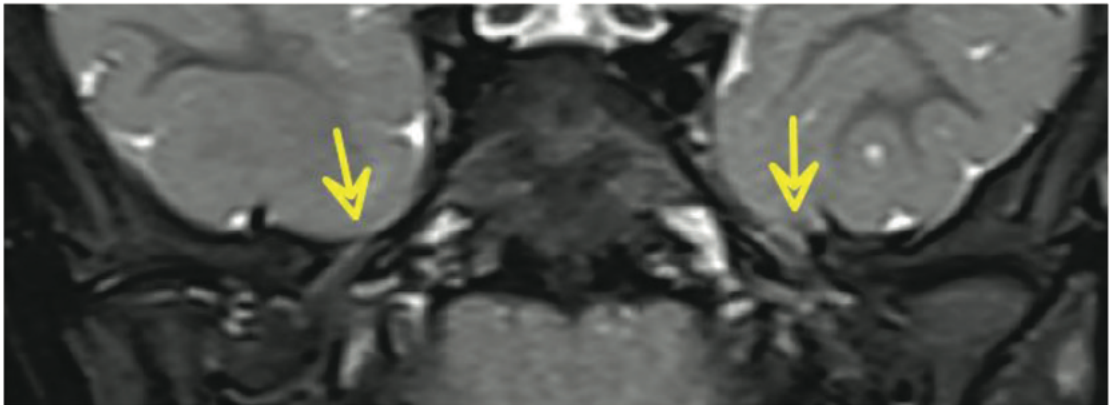


- Normal Meckel's cave housing the gasserian ganglia (white arrows).
- Normal non-contrast appearance of the cavernous sinuses and orbital apex regions.



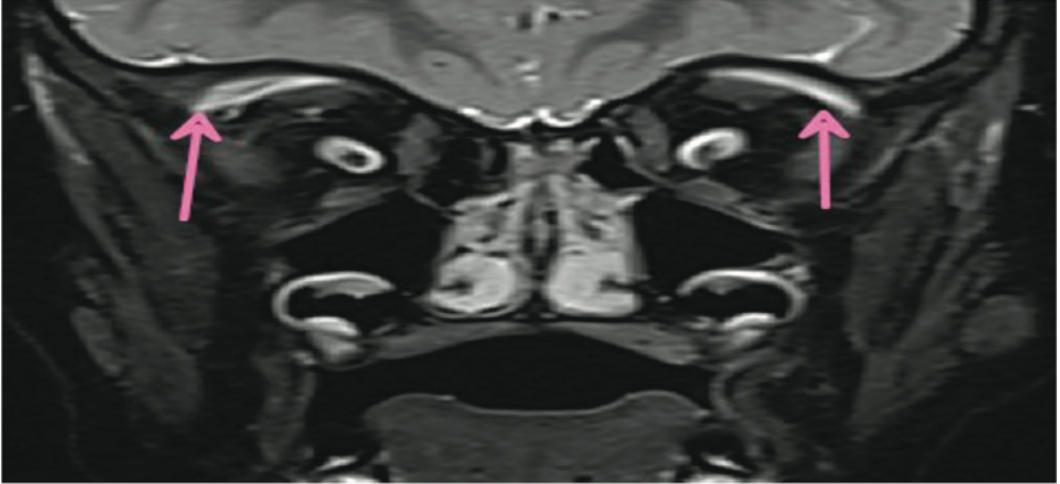
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- **V2 branch (maxillary nerve)** is seen in the skull base course detected in the foramen rotundum (green arrows) and could be traced in the pterygopalatine fossa, reaching to the infra-orbital nerves (red arrows) displaying average size and preserved surrounding pad of fat.



- **V3 (mandibular branches)** are seen at their course in the foramen ovale region (yellow arrow). The related course in the infratemporal fossa could not be evaluated. However, the distal course of the nerves are well seen through the mandibular foramina (blue arrows) with preserved surrounding fat planes. The more distal course of the inferior alveolar nerves was difficult to trace between the un-erupted molar teeth.

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- **V1 (ophthalmic branch)** is not well visualized in the expected course with loss of fat signal between the orbital roof and superior rectus-levator palpebrae superioris muscle likely granulation tissue or sequelae of previous intervention (pink arrows).
- No otherwise significant abnormality in the maxillofacial region.

**Regarding the brain:**

- Dysplastic cerebellar folia are noted.
- Normal ventricular system.
- No recent intra-cerebral hematoma or extra-axial collection.
- No shift of midline structures.

**OPINION:-**

- Well visualized trigeminal nerves, maxillary and mandibular nerve branches as individually detailed above.
- Non-visualized ophthalmic nerves possibly hypoplastic or absent.
- Brainstem hypoplasia.

**MUCH OBLIGED**

**PROF. DR. TOGAN TAHA**

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A.B.