

Gradenigo's Syndrome Mimicking Trigeminal Nerve Schwannoma

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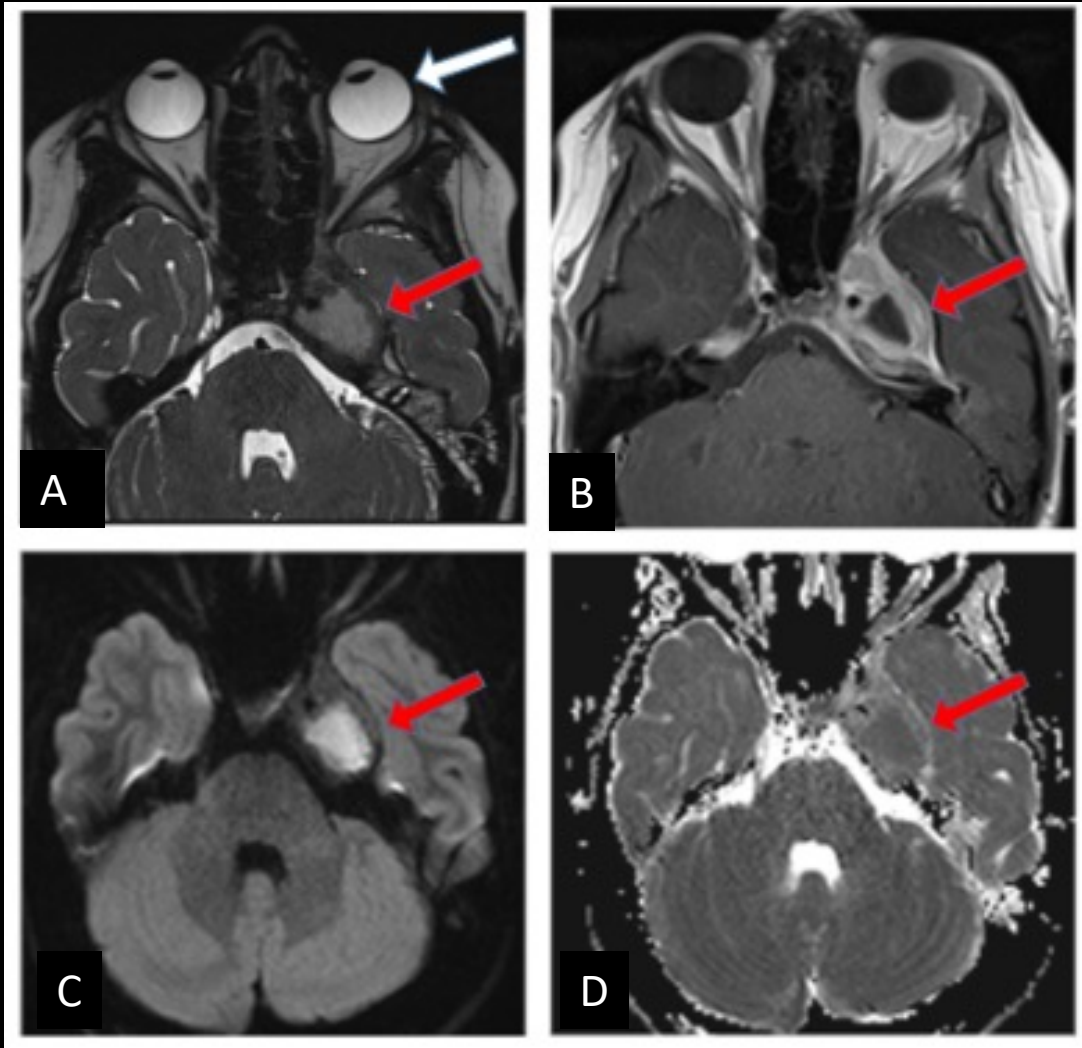


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Clinical Presentation

- A 10 year old female presented to ED with double vision and left periorbital pain which has developed 1 week after an upper respiratory infection with fever and runny nose. Neurologic exam was significant for left 6th nerve palsy.

Imaging Discussion

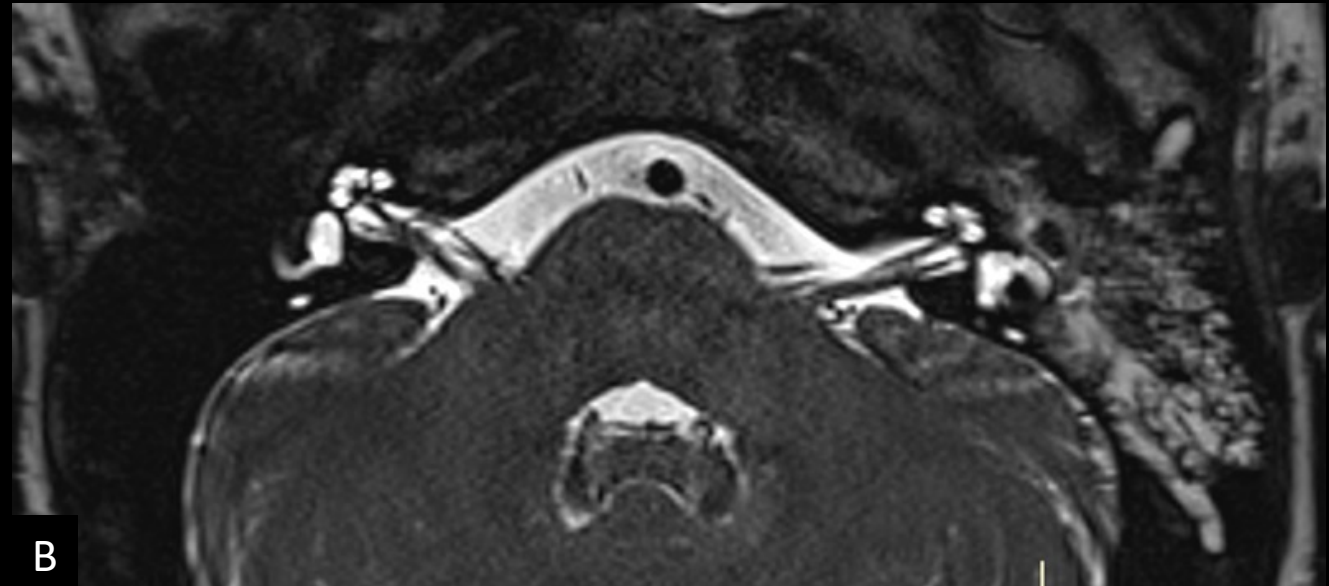


A. T2WI B. T1 post contrast C. DWI D. ADC

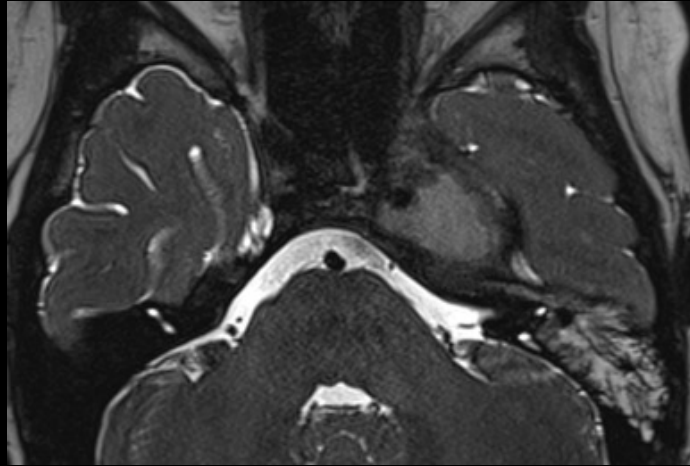
Rim enhancing T2 hyperintense lesion in the left petrous apex with central diffusion restriction (red arrows).

Internally rotated left globe (white arrow)

Imaging Discussion



- A. Post contrast T1WI. Solid enhancing portion of the lesion extends along left trigeminal nerve as dumbbell shape (red arrow). Left trigeminal nerve is not appreciated separate from lesion.
- B. T2WI. Left mastoid and middle ear effusion.



Interval spontaneous improvement of diplopia and periorbital pain after two months.

Management and Outcome

- Conservative treatment with Augmentin completed for 10 days.

Take Home Points

- Gradenigo's syndrome is a clinical triad of petrous apicitis, which is a complication of suppurative otitis media.
 - Otorrhea
 - Diplopia (abducens nerve involvement in Dorello's canal)
 - Periorbital pain (trigeminal nerve involvement in Meckel's cave)

- First described in pre-antibiotic era (1904) by Dr Gradenigo. It occurs as an extension of middle ear and/or mastoid infection.
- The occurrence of Gradenigo's syndrome has decreased significantly with widespread and timely use of antibiotics.

- Presentation may also be due to extension of inflammatory/infective changes beyond the petrous apex.
- It is important to treat petrous apicitis to prevent further complications including sinus vein thrombosis, meningitis, epidural abscess, subdural empyema and cerebral abscess.

References

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- Gadre AK, Chole RA. The changing face of petrous apicitis-a 40-year experience. *Laryngoscope.* 2018 Jan;128(1):195-201. doi: 10.1002/lary.26571. Epub 2017 Apr 5. PMID: 28378370.