



## Welcome to Neuroradiology

**CASE # 0378254961**

**Titulo:** Trigeminal schwannoma

**Case:** 0378254961

**Sections:** [Brain](#)

**Author:**

Donato, Angel MD. Huapaya, Janice MD. Figueroa, Ramon E. MD. FACR

Augusta University. Augusta, GA 30912 USA

Email: donatoangel@yahoo.com

**Patient:** M, 43 year(s)

### CLINICAL HISTORY

R sided facial weakness improving presented as code stroke, concern

CVA/TIA v. 7th nerve inflammation

### IMAGING FINDINGS

There is a 8.1 x 5.7 x 6.3 mm enhancing nodular structure at the right trigeminal nerve cisternal portion in keeping with a trigeminal schwannoma, unlikely to explain patient's right sided facial nerve palsy.

### DISCUSSION

Trigeminal schwannomas are uncommon slow growing encapsulated tumors composed of Schwann cells(1). They are the second most common intracranial schwannoma, far less common than acoustic schwannoma, and has a predominantly benign growth. Schwannomas arising from the trigeminal nerve constitute only 0.1â€“0.4% of all intracranial tumors and 1â€“8% of all intracranial schwannomas. Only a couple of large case series of trigeminal schwannoma (TS) have been reported(3).Â

Facial hypesthesia or paresthesia was the initial symptom for most TS (50%, 21/42) in our series. The early symptoms were usually too mild to be detected sooner; therefore, 50% of the admitted cases demonstrated a tumor larger than 40 mm in diameter. Facial pain may be detected earlier, but in our study only three cases presented with facial pain as the initial symptom. The clinical presentations of TS were related to tumor origin and to the direction in which tumors had extended(2).

Trigeminal schwannomas Can involve preganglionic (cisternal) segment, Meckel cave, CNV1, CNV2, CNV3. Frequently has components in both posterior and middle fossa. It May extends extracranially via CN5 exit foramina. The Classifiedis based on intracranial location. Type A is located in the Middle fossa, Type B in the Posterior fossa, type C in the Middle and posterior fossa, and type D in the Trigeminal branches. The Morphology is a Dumbbell shape secondary to constriction at porus trigeminus or skull base foramen(2).

Imaging plays an important role in the diagnosis and pre-surgical planning. MRI is the imaging modality of choice and is usually diagnostic in the appropriate clinical setting. Tumors usually appear as isointense or hypointense on T1-weighted images, hyperintense on T2-weighted images with avid enhancement after contrast injection. Sometimes the lesion may be mixed solid-cystic or predominantly cystic on imaging. In addition to routine MRI sequences, it is important to acquire thin T2-weighted CISS 3D axial sequence in patients with clinical suspicion of a trigeminal nerve lesion for better evaluation of the cisternal segment of the nerve. CT scan is supplementary to the MRI imaging, particularly for tumors located in the skull base. On CT scan, they usually appear as uniformly enhancing masses with remodeling of the adjacent bone(4).

The fact that trigeminal neurinomas are benign and occur in young people has led to a universal agreement that total removal is the best chance for cure. Microsurgical techniques and standardized approaches have led to the achievement of total removal with minimum mortality and morbidity(1).

## **FINAL DIAGNOSIS**

Trigeminal schwannoma

## **DIFFERENTIAL DIAGNOSIS LIST**

acoustic schwannoma

meningioma

ependymoma

metastasis

Non-Hodgkin lymphoma

## REFERENCES

- 1] Agarwal A. (2015) Intracranial trigeminal schwannoma.. *Neuroradiol J.* 2015 Feb;28(1):36-41.
- [2] Zhang L, Yang Y, Xu S, Wang J, Liu Y, Zhu S. (2009) Trigeminal schwannomas: a report of 42 cases and review of the relevant surgical approaches.. *Clin Neurol Neurosurg Apr*;111(3):261-9.
- [3] Sharma BS, Ahmad FU, Chandra PS, Mahapatra AK. (2008) Trigeminal schwannomas: experience with 68 cases.. *J Clin Neurosci.* 2008 Jul;15(7):738-43.
- [4] Kouyialis AT, Stranjalis G, Papadogiorgakis N, Papavlassopoulos F, Ziaka DS, Petsinis V, Sakas DE. (2007) Giant dumbbell-shaped middle cranial fossa trigeminal schwannoma with extension to the infratemporal and posterior fossae. *Acta Neurochir (Wien)* 2007;149(9):959-63; discussion 964.

## CITACION

### Author:

Donato, Angel MD. Huapaya, Janice MD. Figueroa, Ramon E. MD. FACR

Augusta University. Augusta, GA 30912 USA

Email:donatoangel@yahoo.com

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## URL

<http://neuroradiologysilan.com/case/0378254961>

