



Trigeminal nerve involvement in multiple sclerosis

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Description

This report was approved by the Ethics Committee and the patient signed a consent agreement. A 42-year-old female was diagnosed with Multiple Sclerosis (MS) at age 34. She started treatment with interferon beta 1a and the disease became under control. At age 38, she stopped interferon beta due to pregnancy. She remained without treatment for four years after the baby was born, assuming her disease was under control without therapy. She did not return for routine consultations or Magnetic Resonance Imaging (MRI) during this four-year period.

After 48 months without MS treatment, the patient presented severe facial pain lasting a few seconds. This pain recurred at least a dozen times every day, affecting the lower third of the face. The patient described it as a shock along and restricted to

the right side of the mandible. After several consultations with dentists and other specialists, she returned to our MS Unit and was diagnosed with trigeminal neuralgia.

Her MRI showed linear demyelination of the cerebellum peduncle, exactly at the intra-axial nucleus of the right trigeminal nerve (Figure 1). She was treated with carbamazepine, requiring 1,200 mg/day for control of the paroxysmal pain. She restarted her MS therapy and has had no more relapses or MRI changes over the course of the year. Any attempt to reduce the dose made the pain return.

This case illustrates well the brainstem lesion relating to MS



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demyelination and can be used for neuroanatomy and neuropathology lessons. Trigeminal neuralgia affects circa 4% of patients with MS, starting at a younger age than in the general population [1]. Response to therapy tends to be suboptimal and needs to be managed individually [2]. This case clearly demonstrates the brainstem lesion leading to secondary trigeminal neuralgia manifestation in MS.

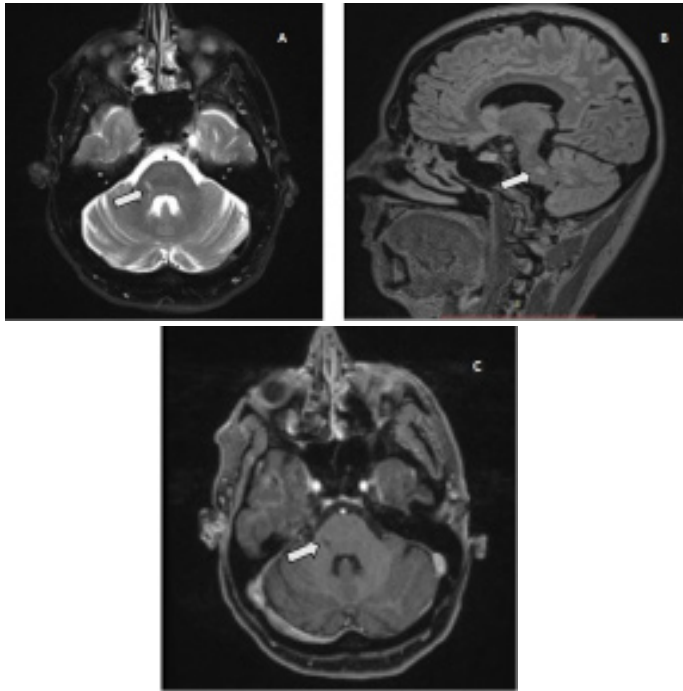


Figure 1: MRI of patient presenting trigeminal neuralgia secondary to MS. (A) Axial T2; (B) Sagittal T2 FLAIR; (C) Axial T1. Arrows point to the demyelinated lesion.

References

1. Zakrzewska JM, Wu J, Brathwaite TS. A systematic review of the management of trigeminal neuralgia in patients with multiple sclerosis. *World Neurosurg.* 2018; 111: 291-306. doi: 10.1016/j.wneu.2017.12.147.
2. Di Stefano G, Maarbjerg S, Truini A. Trigeminal neuralgia secondary to multiple sclerosis: from the clinical picture to the treatment options. *J Headache Pain.* 2019; 20: 20. doi: 10.1186/s10194-019-0969-0.