

Late Onset Multiple Sclerosis: An Underlying Disease for Trigeminal Neuralgia

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Abstract

Introduction: Late onset Multiple Sclerosis (LOMS) is a rare condition characterized by the first outbreak of the disease at or above the age of 50 years old. On the other hand, Trigeminal Neuralgia (TN) is a shock-like hemi-facial headache. What both might have in common is the association with the demyelination process. While LOMS is strictly related to loss of myelin sheath, TN is often related to neurovascular compression, but when it doesn't, demyelination stands for a probable implicated pathophysiology. At certain population, TN might be the first symptom of LOMS.

Case Presentation: Our patient is a 65 year-old female who develops a severe hemi-facial shock-like headache. At first, examiners thought to be dealing with a primary form of TN due to absence of motor or other sensorial symptoms referred by the patient. Although, CNS images were not consistent with the initial hypothesis, revealing an impressive LOMS pattern.

Conclusion: physicians should always consider LOMS as an underlying disease for patients, at or above 50 years old, manifesting TN as an isolated symptom. This may alert for earlier MS diagnosis and correct therapy strategies for these patients.

Keywords: LOMS; Multiple Sclerosis; Trigeminal Neuralgia; Headache

Introduction

Late Onset Multiple Sclerosis (LOMS) is the designation given for patients with the first outbreak of the disease at or above the age of 50 years old. This group of patient features a greater prevalence of primary progressive forms of the disease and represents a diagnostic challenge^[1]. On the other hand, Trigeminal Neuralgia (TN) headaches are characterized by recurrent unilateral shock-like pain usually lasting from seconds to no longer than 2 minutes and limited to one or more branches of the fifth cranial nerve. Neurovascular compression, demyelination or tumors are commonly related to its secondary causes^[2]. This case report illustrates a patient that reveals a LOMS manifested by recurrent TN.

Problem of the research

This case report demonstrates that TN at 65 years old was the first symptom of a LOMS. Since this association might provide guidance for clinicians to suspect of Multiple Sclerosis, we bring the hypothesis that: TN might be a red flag for LOMS in the population at or above 50 years old.

Materials and Methods

All the data in this study were obtained through the revision of the patient's medical record, given under consent by the assignment of the Clarification and Agreement term. The image of the subject of study and all ethical principles has been guaranteed.

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Case Presentation

A 65 year-old female with a history of 2 headache attacks during the last few weeks was readmitted after a relapse of the symptom. During evaluation the patient referred right-sided sharp paroxysmal pain, lasting less than a minute each event. She could not relate any trigger or aura and did not feature any autonomic sign. Lamotrigine was immediately prescribed which provided complete improvement of headache over the next few hours.

Magnetic Resonance Imaging (MRI) was conducted to elucidate headache's etiology and revealed neither signs of mechanical impact at trigeminal root nor any expansive mass. However, a demyelination pattern plaque at the pons (precisely at the right trigeminal nucleus), consistent with Multiple Sclerosis (MS), was identified as the underlying cause of the symptoms (figure 1 and 2). The patient underwent a cycle of pulse therapy with intravenous Methyl prednisolone and was discharged after recovery and complete remission. Short after, at follow up, MRI revealed disseminated lesions over the space and time confirming the diagnosis of Late Onset Multiple Sclerosis (LOMS). She had her LOMS target therapy adjusted and did not present any worsening until this report was written.

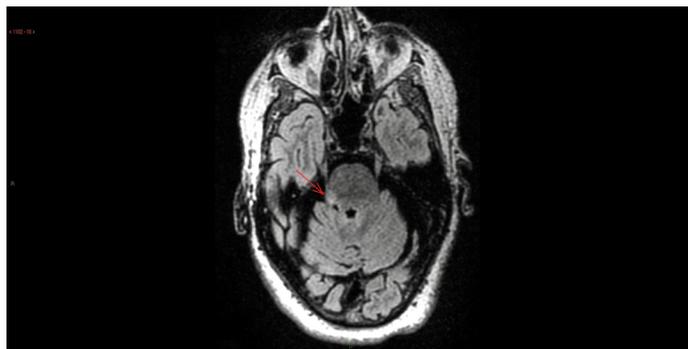


Figure 1: Axial T2-Flair image demonstrating hyper intensity foci at the right pons, nearby the projection of the right trigeminal nucleus

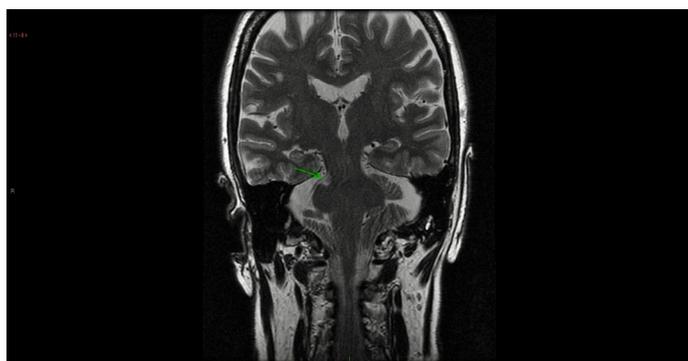


Figure 2: Coronal T2-Weighted image demonstrating hyperintensity foci consistent with a demyelinating pattern

Discussion

Although the association of TN and MS had already been reported for quite a long time, physicians should be alert that TN only precedes MS diagnosis in 15% of occasions. When it happens, patients mean age at TN and MS diagnosis are 35 and 43 years old, respectively^[3]. Besides that, our patient overcame the age

estimates for MS first onset (typically between 20 to 40 years old), characterizing a *very* LOMS: those beyond the age of 60 at disease's first onset.

Presentation of TN as MS initial clinical manifestation has been reported to be the reason of MS delayed diagnoses and LOMS patients are more likely to have primary progressive forms of the disease. A retrospective cohort identified that LOMS has a slightly faster progression to disability, measured by the Expanded Disability Status Scale (EDSS), when compared to MS with initial symptoms between 20 and 40 years of age^[1,4,5]. These same cohort of patients demonstrated that 30% of them reached EDSS 7 within 5 years of disease.

Interestingly, the treatment of headaches related to Multiple Sclerosis follows the same principles as in general population, requiring acute symptomatic treatment and, when required, daily preventive medications^[6]. First line therapy is the Sodium Channel Blockers for prophylactic benefits, such as Carbamazepine^[7-9]. Lamotrigine, Baclofen, Pregabalin or Gabapentin are options to be added or to be used as monotherapy. Second line therapy turns out to be with the surgical approach, with greater benefits for microvascular decompression compared with other techniques^[7,10]. No specific neurosurgical intervention for Multiple Sclerosis is currently described.

Recommendation for Clinicians and Researchers

The analysis of this particular case supports the idea of a probable relation between TN and LOMS. Further studies will be necessary to investigate if the presence of TN at patients older than 50 years old is a reasonable factor to perform a precocious Multiple Sclerosis investigation. Thus, in the absence of evidences, we suggest that clinicians should consider LOMS as an underlying disease of TN at patients at or above 50 years old. When affordable, a MRI of the CNS may provide valuable findings in order to alert for earlier MS diagnosis and treatment.

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