Pain and Paralysis: A Unique Case of Concurrent Trigeminal Neuralgia and Bell's Palsy

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Introduction

Trigeminal neuralgia (TN) and Bell's palsy are two distinct yet debilitating conditions that affect the cranial nerves, leading to severe pain, facial weakness, and functional impairment. While each condition alone poses significant diagnostic and therapeutic challenges, their coexistence is exceedingly rare, complicating both the clinical evaluation and management. This case explores the unique difficulties encountered in diagnosing and treating a patient with concurrent trigeminal neuralgia and Bell's palsy, highlighting the complexities of identifying and addressing these conditions in tandem.

Case Description

A 69-year-old male with past medical history of coronary artery disease and a family history of TN, presented with one-week history of severe unilateral facial pain and weakness. His symptoms began with a headache localized to the left temple, which subsequently radiated to the cervical region. The pain intensified over the next few days into a persistent, sharp, needle-like sensation in the left lower jaw extending beneath the jawbone and inside his mouth. Approximately one week after the onset of the headache, he developed left-sided facial droop and inability to close his left eye. He denied any preceding respiratory illness but notes symptoms began shortly after lifting a heavy object.

The patient visited the emergency room where CT Head ruled out a stroke. He was treated with Methylprednisolone taper, Gabapentin, and Valacyclovir with no improvement in pain. At follow-up with neurology/pain medicine, his exam demonstrated left facial nerve palsy, diminished sensation in left V1 distribution, and absent left corneal reflex. He was prescribed carbamazepine and high dose prednisone taper with instructions to wean off gabapentin. MRI of the brain with a focus on Meckel's cave and brainstem was negative. Labs including CBC, CMP, and ESR were unremarkable. He is pending further evaluation with lumbar puncture and Lyme testing. The patient initially showed improvement in facial weakness and pain while on steroids. However, once the steroid taper was completed, the patient's neck pain worsened, and balance issues developed. An MRI of the cervical spine has been ordered to further evaluate for cervical nerve impingement. The patient will follow up once imaging is completed.

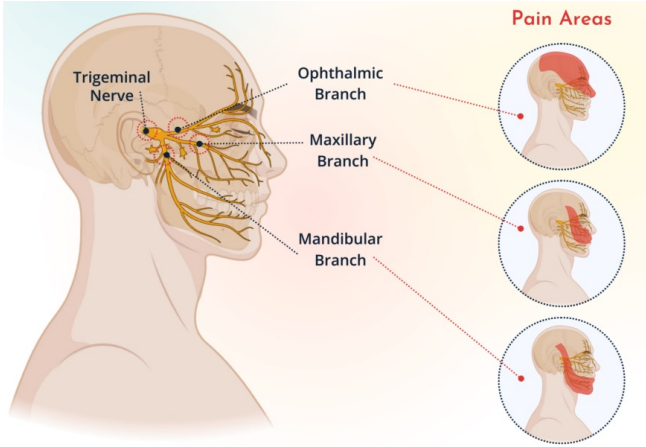

Figure 1. Overview of the trigeminal nerve anatomy, highlighting the ophthalmic (V1), maxillary (V2), and mandibular (V3) divisions, along with the corresponding painful areas present in TN [3].

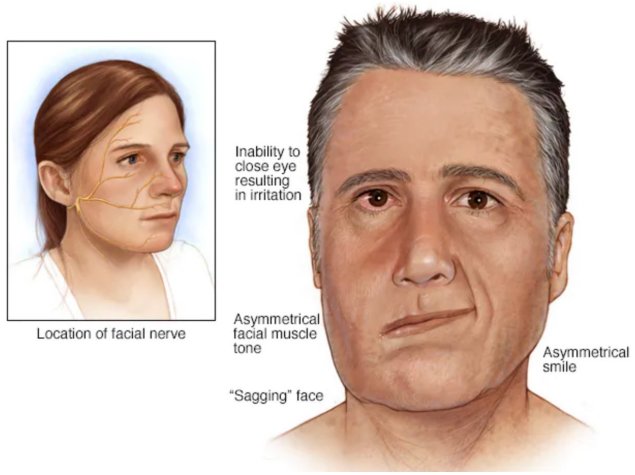

Figure 2. Illustration depicting facial nerve anatomy and common symptoms associated with Bell's Palsy [4].

Discussion

The patient's facial weakness is consistent with Bell's palsy; however, his severe, sharp, "needle-like" facial pain and family history of TN raise the possibility of this condition. Concomitant Bell's Palsy and TN is exceedingly rare, with only one other case report documented to our knowledge [2]. TN is characterized by sudden, intense facial pain along the distribution of the trigeminal nerve, often triggered by activities like chewing or brushing teeth. The cause is often unknown, though vascular compression leading to demyelination is common. A family history may indicate a genetic predisposition. Treatment options include carbamazepine, oxcarbazepine, baclofen, and lamotrigine, while severe cases may require surgical intervention (e.g. microvascular decompression) [1,2]. Bell's palsy, an idiopathic lower motor neuron facial paralysis, typically presents with unilateral facial droop and inability to close the eye, as seen in this case. Additional symptoms may include taste disturbance, hyperacusis, xerostomia, xerophthalmia, and facial sagging. The etiology is unclear, though viral etiology is suspected. Bell's palsy is typically self-limiting, improving within 2-3 weeks and resolving in 3-4 months. Treatment often includes corticosteroids, with or without antiviral medications [1, 2]. The chronic pain and facial changes caused by these conditions can severely impact patients both physically and emotionally, significantly reducing their quality of life.

Conclusion

This case highlights the challenges faced when diagnosing and managing the rare coexistence of trigeminal neuralgia and Bell's palsy. Comprehensive diagnostic workup and thoughtful management strategies are essential to ensure that both conditions are addressed appropriately. Continued follow-up and further imaging are necessary to refine the diagnosis and tailor the management plan to the patient's evolving symptoms.

References

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