Case Report: Recurrent Bell's Palsy and Genetics

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Background

Bell's palsy, also known as Idiopathic Facial Paralysis (IFP), is a generally common condition, occurring up to 20-30 cases per 100,000 individuals in the general population. Its occurrence can be influenced by a variety of factors such as exposure, immunocompromised states and genetic susceptibility. While uncommon, Bell's Palsy can recur spontaneously in up to 15% of patients. Here, we present a case of chronically recurrent Bell's palsy in an individual, and explore the possibility of a genetic component.

Case Presentations

Our case involves a 39 year old woman with no significant past medical history who presented with a one day history of neck pain and right facial weakness. She also endorsed a 4 day history of constant unilateral right-sided headache in the parietal region, rated 4/10 with frequent right-sided tearing. Upon further questioning the patient stated this is the third time she has had Bell's Palsy symptoms, and they have occurred in 10 year intervals, first in 2001, 2011, and now in 2021. The patient noticed similarities of the symptoms throughout each episode, which resolved shortly after each hospital visit with no significant residual symptoms. Past family history revealed a younger sibling who also had multiple episodes of Bell's palsy, suggesting a possible genetic susceptibility. Physical exam demonstrated mild right-sided facial weakness in a facial nerve distribution. All other cranial nerves were intact. The patient did not demonstrate significant loss of sensation or motor function. All other physical exam findings were unremarkable. Laboratory studies revealed elevated TSH, all other studies within normal limits. Noncontrast CT of the head revealed no significant findings indicative of an acute intracranial process. Patient responded well to Valcyclovir and Prednisone, and was discharged after improvement of symptoms one day post-admission.

Discussion & Conclusions

Little is known about the risk factors or genetic susceptibility that can predispose individuals to multiple episodes of Idiopathic Facial Paralysis over a lifetime Careful history taking and identification of patterns of recurrence can necessitate therapeutic considerations that would not be considered in isolated episodes. Genetics play a large role in our immunity, and can dictate susceptibility to various microorganisms or disease processes. Multiple recurrences in patients that suffer from Idiopathic Facial Paralysis are uncommon, and identification of multiple family members suffering from the same pattern of recurrence can explore the idea of a genetic component to the pathology. Patients with recurrent familial episodes of Idiopathic Facial Paralysis should require thorough diagnostic exploration to exclude any underlying autoimmune, anatomical, neurological or developmental disorders.