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Glossopharyngeal neuralgia resulting from eagle syndrome

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Introduction

Eagle syndrome is a rare and often underdiagnosed cause of craniofacial pain, typically resulting from calcification of the stylohyoid ligament or elongation of the temporal styloid process.The congenital variant, commonly referred to as stylohyoid syndrome, is characterized by pain and symptoms of carotid compression (such as presyncope, syncope, and transient ischemic events) due to an ossified stylohyoid ligament. The syndrome can be mistaken for other conditions like temporomandibular joint disorders or nonspecific glossopharyngeal and occipital nerve neuralgia.

Objective

Provide a comprehensive overview of glossopharyngeal neuralgia associated with Eagle syndrome, emphasizing the importance of early diagnosis and an integrated therapeutic approach.

Case Report

A 55-year-old female teacher with controlled hypertension and diabetes presented with severe, stabbing, shock-like pain lasting several seconds, occurring multiple times daily in the throat and base of the tongue. The pain also affected her cheek and was sometimes accompanied by hoarseness. She had experienced these symptoms for over six years, occasionally accompanied by coughing and syncope. Physical examination revealed no lesions in the oropharynx and tongue, and her neurological exam was normal, leading to a preliminary diagnosis of glossopharyngeal neuralgia. Anticonvulsants were prescribed, resulting in a 50% reduction in symptoms. Further investigation with cranial MRI showed no intracranial lesions. A 3D CT scan with bone window revealed elongation of the temporal styloid process, confirming Eagle syndrome. The elongated styloid process caused intermittent, shock-like pain by compressing the glossopharyngeal nerve, and its proximity to the vagus nerve led to symptoms like hoarseness, syncope, and bradycardia. Surgical treatment was chosen, successfully controlling symptoms and allowing discontinuation of anticonvulsants. The patient remained symptom-free postoperatively.

Conclusion

Glossopharyngeal neuralgia resulting from Eagle syndrome is a rare but significantly debilitating condition, highlighting the complexity of anatomical and neurological interactions in the human body. This case underscores the necessity for a high index of clinical suspicion and careful differential diagnosis to accurately identify the source of craniofacial and oropharyngeal pain. Detailed imaging, such as computed tomography, is crucial for identifying styloid process elongation or calcification characteristic of Eagle syndrome.