Massively Enlarged and Completely Ossified Stylohyoid Chain with Associated Neck Pain

Jonathan W. Hafner, M.D., Rajanya Petersson, M.D., Kerry D. Olsen, M.D.
Department of Otolaryngology-Head and Neck Surgery
Mayo Clinic School of Medicine, Rochester, MN

Abstract

Multiple radiologic and anatomic studies have shown variable ossification of the stylohyoid chain. There have been varied reports about increasing ossification with advancing age. Potential ossification can be seen early in the white double ossification towards the hyoid bone in more characteristic of advancing age. Removal of the stylohyoid chain for pain-related symptoms was first reported in 1872. Pathologic states can be evaluated as abnormal length of the stylohyoid ligament and ossification of the stylohyoid ligament, that latter which typically presents as pain when moving.

Study Design & Setting

Single case report with a review of the literature; tertiary academic referral center.

Case Report & Literature Review

A 62-year-old woman presented with a two-year history of left neck pain, mild dysphagia, and otalgia. The pain was intermittent, especially when she sneezed, turned her head to the left, or had extreme movements such as yawning. The pain localized to an area inferior to her left ear, extending under the left hemimandible. Physical examination revealed an enlarged, firm left stylohyoid ligament with tenderness to palpation, and left hyoid prominence. Computed tomography showed a calcified, significantly enlarged left stylohyoid chain, from the level of the skull base to the lesser cornu of the hyoid bone. This was surgically resected from the skull base and hyoid via a transoral approach. The specimen measured approximately 3.5 cm in length and 2 cm in greatest diameter, and pathological examination showed a segment of bone with bone marrow elements consistent with ossified cartilage. The patient reported some improvement in symptoms on short-term follow-up.

Conclusions

Though partial ossification is not uncommon, complete ossification of the stylohyoid chain is rare. Ossification of the stylohyoid chain is associated with non-specific symptoms, including throat pain, dysphagia, otalgia, foreign body sensation, and pain along the carotid artery distribution. There are several anatomic variations, and symptom correlation is not always obvious. Due to the impressive enlargement of this patient’s stylohyoid chain, surgical resection was reasonable in an attempt to alleviate the patient’s symptoms.

References