Stylohyoid Complex Syndrome: A New Diagnostic Classification

Candice C. Colby, MD; John M. DelGaudio, MD
Emory University School of Medicine

ABSTRACT
We have seen that 3 different pathologies, elongated styloid process, calcified stylohyoid ligaments, and elongated hyoid bone, can cause the same symptom complex. Symptoms can include lateral neck pain especially with chewing, swallowing, and head movement, and pain in the area of the submandibular space and deep to the angle of the mandible. We believe that the symptoms are related to the tension of the stylohyoid complex that makes narrowing structures and causes pain when the tension becomes so high in the complex as to create too much pressure. Here we will present a series of cases of patients with Stylohyoid Complex Syndrome.

INTRODUCTION
Stylohyoid Complex Syndrome is a pain condition caused by tension along the complex and treatment to interrupt this complex to improve pain symptoms is frequently successful in dramatically reducing or eliminating pain.

METHODS
A retrospective review was performed at an academic tertiary care center of patients with lateral neck/facial pain due to Stylohyoid Complex Syndrome who underwent surgical intervention between June 2006 and September 2009.

RESULTS
Seven patients (6 males) were identified with Stylohyoid Complex Syndrome. CT findings included elongated styloid processes, calcified stylohyoid ligaments (2), and elongated hyoid bones (3). All patients showed evidence of elongation or ossification on radiologic examination.

CONCLUSIONS
The term Stylohyoid Complex Syndrome is best used to designate either an elongated styloid process, elongated hyoid bone, or calcified stylohyoid ligament as a cause of facial, lateral neck, and/or throat pain due to any pathologic structure within the complex. Pain symptoms are likely caused by tension in the complex with restriction of blood flow to the affected structures, especially with movement. Surgical intervention directed to disrupt the complex relieves tension and other patient relief of symptoms.

REFERENCES
Camarda et al previously classified this constellation of symptoms into three distinct entities: Eagle's syndrome as classically described with prior trauma, stylohyoid syndrome, and pseudostyloid syndrome. Stylohyoid syndrome was most common of the three, and applied when a patient's symptoms appear earlier in life due to a developmental abnormality in the styloid complex. Pseudostyloid syndrome is caused by tendinosis at the junction of the stylohyoid ligament and the lesser cornu of the hyoid in older individuals, with no history of trauma, and no evidence of elongation or ossification on radiologic examination.

Dr. Watt Eagle was an otolaryngologist who first described a syndrome as a cause of vague occasional pain in 1907. His first two cases were patients with symptoms of elongated and calcified styloid processes. He considered any styloid process longer than the normal adult length of 25mm to be elongated, but 20% of people have elongated styloid processes but only 4% of these individuals complained of any symptoms. The incidence of elongated styloid processes has been estimated as low as 1.4% by Gossman and Tarsitano, who analyzed 4200 panoramic radiographs of men between 18 and 22 years old, and 9.6% by Keur et al in a study on 1135 patients. Eagle believed the only proper treatment was a surgical shortening of the pathologic styloid process, calcified stylohyoid ligaments, or elongated hyoid bones.

We advocate the term Stylohyoid Complex Syndrome to include an elongated styloid process, elongated hyoid bone, or ossified stylohyoid ligament as a cause of facial, lateral neck, and/or throat pain due to any pathologic structure within the complex. Surgical intervention directed at any pathologic point to disrupt this complex relieves tension and offers patients relief of symptoms.