Superior Thyroid Cornu Syndrome: An Unusual Cause of Neck and Throat Pain

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ABSTRACT

Objectives: Ossification and malpositioning of the superior thyroid cornu has been shown in case reports and small case series to commonly cause the symptoms of dysphagia, odynophagia, and globus sensation. We will describe a patient presenting with left-sided neck pain, throat pain, and odynophagia. Method: Single subject case report. Result: This case report details the diagnosis and treatment of a 43 year old male presenting to clinic with 3 months of left neck pain, throat pain, and odynophagia. On flexible laryngoscopy, the patient was found to have a left-sided submucosal mass just above the left pyriform sinus at the level of the aryepiglottic fold that came into view with phonation. CT scan of the neck showed a slight asymmetry to the superior thyroid cornu, with the left being elongated, but otherwise unremarkable. The patient was taken to the operating room for endoscopic removal. Conclusion: This is the first report of throat pain and one of the few presenting with unilateral neck pain at rest in a patient with the superior thyroid cornu syndrome. Careful attention should be made to evaluate the lateral pharyngeal walls during flexible laryngoscopic examination in order to screen for this etiology. Key Words – odynophagia, neck pain, thyroid cartilage, superior cornu

INTRODUCTION

Odynophagia may be caused by a wide differential including abscesses, thyroid disease, trauma, and malignancies. More recently, a new etiology has been described related to the medial displacement of the superior cornu of the thyroid cartilage into the pharynx due to trauma or unknown reasons. This medially displaced cartilage can cause impingement of the pharynx by leading to bothersome symptoms including odynophagia and dysphagia. As stated earlier, this superior thyroid cornu syndrome is relatively young, with the first case reported in 1980 of a 44 year old female who began to have right neck pain three months after mandibular teeth were extracted.1 Her pain was refractory to treatment so a neck exploration was performed which revealed a posteriorly directed right superior cornu. It was removed sub-perichondrially and the woman’s pain disappeared.

The thyroid cartilage continues to change with age, and around puberty the thyroid cartilage continues to change and the patient was referred to the author. Odynophagia and dysphagia are the most common symptoms, but patients may also complain of ear pain, baseline throat pain, globus, throat clicking, constant choking or throat clearing.3 The abnormal cartilage is usually visualized as a hypopharyngeal outpouching on flexible nasopharyngoscopy, and when palpated may exacerbate the symptoms.3

We present a unique case of odynophagia and unilateral neck pain in a patient with a medially displaced superior cornu of the thyroid cartilage that was subsequently treated with endoscopic surgical removal.

CASE REPORT

A 43-year-old male non-smoker, non-drinker was referred to the otolaryngologist for complaints of left-sided throat pain at rest that radiated to the lateral neck and up through his head. He noticed it for the first time just after mandibular dental work for a fractured tooth on the same side that was performed 3 months prior. He also complained of mild odynophagia but denied any problems tolerating food or drink.

The diagnosis was unclear at a walk-in clinic, as well as at a separate otolaryngologist who ordered a CT. The CT (see Figure 1) was read as normal and the patient was referred to the author. On flexible nasopharyngoscopy, the patient was noted to have a left-sided submucosal mass just above the left pyriform sinus at the level of the aryepiglottic fold that came into view with phonation (see Figure 2). A closer look at the original CT revealed an elongated and medially positioned left superior cornu.

RESULTS (continued)

The patient was taken to the operating room for endoscopic removal, with immediate improvement and eventual resolution of the symptoms. The specimen was composed of only cartilage and bone. The patient was subsequently seen in follow-up and had total resolution of symptoms. Figure 3 depicts the office endoscopic exam obtained 4 months postoperatively.

DISCUSSION

The thyroid cartilage articulates with the greater cornu via the superior cornu and the associated lateral thyrohyoid ligament. The average length of the superior cornu is roughly 14.5-14.9mm as described in Eckel et al’s dissection of 28 cadavers to determine the normal measurements of the laryngeal framework.2 Radiographic studies have also shown that there is a general trend for laryngeal cartilages to ossify as patients age, with the thyroid cartilage more frequently ossifying than the cricoid.3 These basic science findings as well as clinical findings on radiography have led some authors to postulate that ossification of the superior cornu puts people at risk for displacement due to minor laryngeal trauma due to this site being the weakest point in the articulation between the thyroid and hyoid cartilages. In their study, they had 4 patients aged 48-61 that all had minor laryngeal trauma, ossified and displaced superior cornu cartilages, and symptoms of odynophagia and globus.4 Other studies have not been able to link any laryngeal trauma with the clinical finding but most patients in the larger series are older than 40 years of age which would support the theory of cartilage ossification as a risk factor for this syndrome.4,5,6 However, whether or not a traumatic event is identified, the symptoms are similar.7,8 Surgery will often resolve the symptoms, and both external and endoscopic approaches have been successful.9,10 While the superior thyroid cornu syndrome is rare and newly classified, it can also be easily appreciated upon flexible laryngoscopic exam as well as CT radiographs. While it is not malignant and some authors have depicted most patients as not wanting surgery,5 it has also been described as easily removed via external or endoscopic approach. One series showed the endoscopic approach improved symptoms in 75% of patients.4 Therefore, careful attention should be given to the detection of asymmetry in flexible laryngoscopic exam especially when seen in dynamic movement as our patient only produced his finding when phonating.

Our case is unique in that while most patients complain of symptoms such as odynophagia and globus sensation, only one other patient in the literature1 has complained of ipsilateral neck pain.

CONCLUSION

Otolaryngologists should be mindful of the diagnosis of superior thyroid cornu syndrome in the workup of middle-aged and elderly patients with the constellation of symptoms possibly including odynophagia, globus, dysphagia, and neck pain, especially when presenting after known laryngeal trauma.

REFERENCES