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A Case of Dysphagia: Functional Swallowing Impairment in Eagle's Syndrome

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BACKGROUND

Eagle's syndrome is a clinical condition caused by elongation of the styloid process or ossification of the stylohyoid ligament, generally defined as a length exceeding 3 cm. Radiologic elongation is reported in 4–18% of the population, but only about 4% are symptomatic. The classic type presents with throat pain, foreign body sensation, odynophagia, dysphonia, or dysphagia, whereas the carotid type involves vascular compression causing headache, vertigo, or transient ischemic symptoms.

Despite radiologic recognition, the mechanism of swallowing dysfunction remains unclear, and the relationship between structural elongation and functional impairment has not been fully established. We present a case of dysphagia in a patient with Eagle's syndrome.

CASE REPORT

An 80-year-old male presented with severe throat pain and dysphagia for two months. Laryngoscopy was unremarkable. Neck CT (Figure 1) demonstrated bilateral elongated styloid processes, and Eagle's syndrome was diagnosed. Surgical resection was recommended, and he was referred to our institution.

Previous brain MRI, esophagogastroduodenoscopy, and carotid angiography showed no abnormalities, excluding alternative structural or vascular causes.

Otolaryngologic evaluation determined that surgery was not indicated, and he was referred to the Department of Rehabilitation Medicine for functional swallowing assessment.

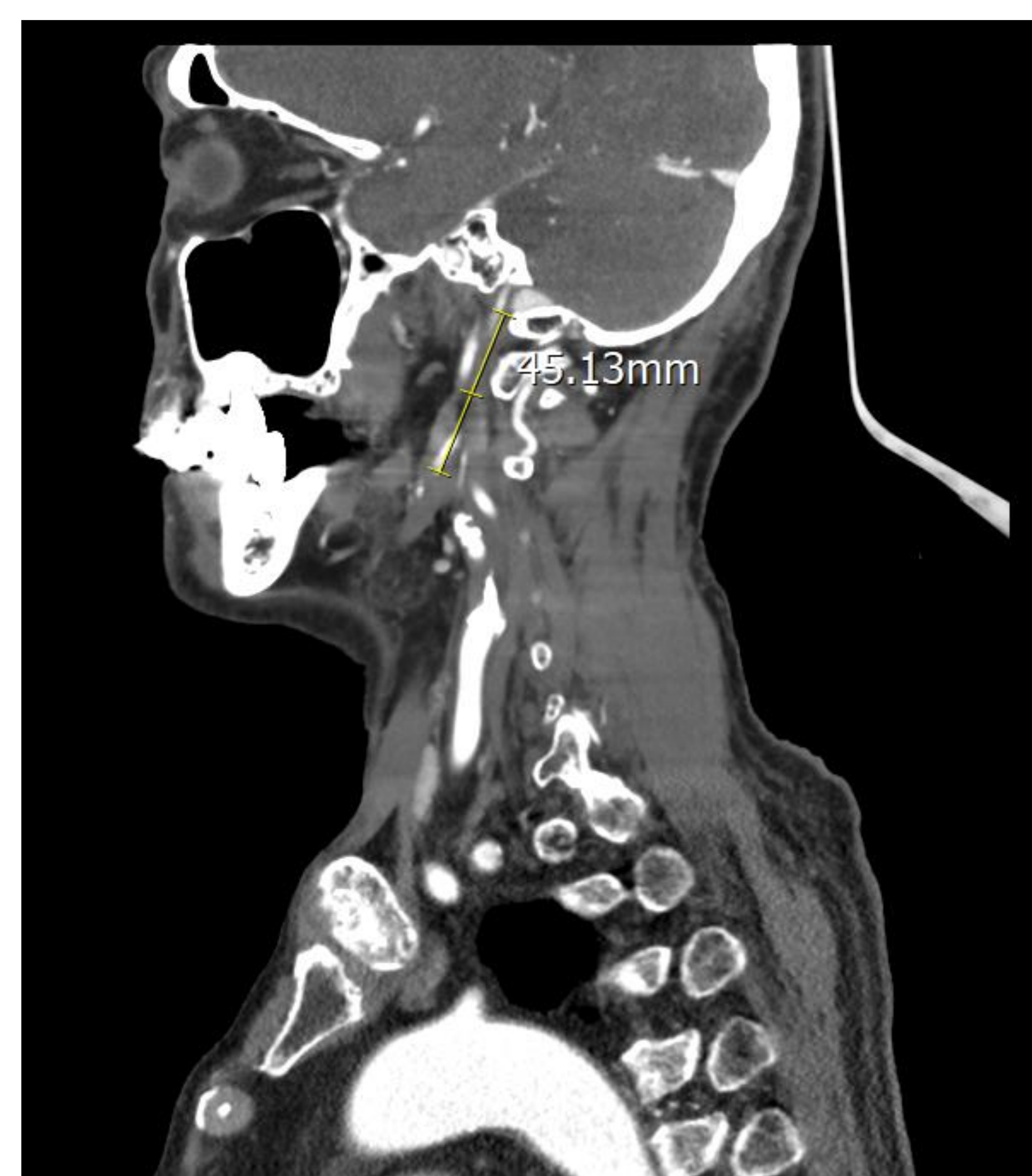

Figure 1. Neck CT, Lateral view demonstrating elongated left styloid process, 4.5 cm.

Initial VFSS showed reduced tongue base retraction, diminished laryngeal elevation, and increased vallecular residue. Posterior laryngeal displacement and decreased pharyngeal contraction resulted in reduced bolus passage. Partial clearance occurred with multiple swallows, and no aspiration was observed, indicating impaired pharyngeal clearance rather than aspiration-dominant dysfunction.

Diet was modified to soft solids, and dysphagia rehabilitation, including pharyngeal strengthening and swallowing exercises, was initiated. Three months later, follow-up VFSS showed persistent pharyngeal weakness and posterior laryngeal displacement, but improved coordination and laryngeal movement. Mild neck extension facilitated gravity-assisted bolus transition, but excessive extension provoked penetration and was not recommended.

As no significant change in residue was observed, a soft diet was maintained. Long-term follow-up VFSS is planned to monitor functional progression.

Conclusion

In this case, VFSS was performed to determine whether dysphagia in a patient with Eagle's syndrome was directly attributable to styloid elongation. The findings suggested that elongated styloid processes may mechanically tether the stylohyoid-laryngeal complex, leading to impaired pharyngeal dynamics.

Although symptom relief after surgical resection has been described in some reports, this patient was managed conservatively with structured dysphagia rehabilitation, and longitudinal follow-up is being pursued without immediate surgical intervention.