

Glossopharyngeal Hyperesthesia-Related Dysphagia Post Anterior Cervical Discectomy and Fusion Managed with Glossopharyngeal Nerve Block

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Introduction

Glossopharyngeal nerve block is utilized for neuralgia, hyperesthesia, and gag reflex suppression.

This nerve, with its sensory and motor functions, is approached by carefully inserting a needle adjacent to the nerve traditionally via the intraoral route under fluoroscopy, ultrasound or landmark guidance.

Local anesthetic and steroids can be injected in order to alleviate glossopharyngeal hyperesthesia, a distressing syndrome manifesting in otic and/or oropharyngeal pain.

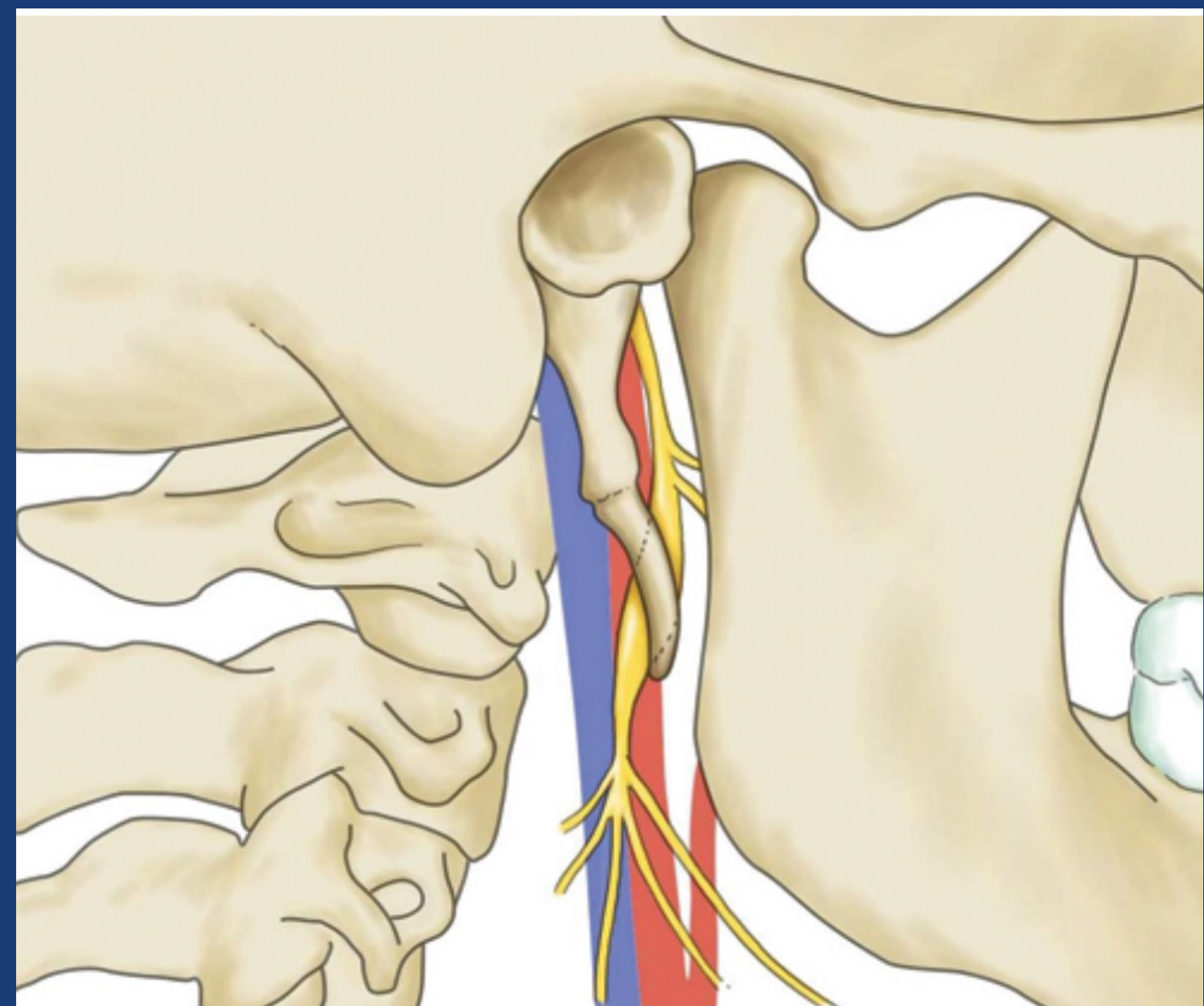


Figure 1. Lateral view of cervical vertebrae and mandible with styloid process seen overlying the glossopharyngeal nerve (yellow), internal jugular vein (blue) and carotid artery (red). (12)

Case Presentation

A 56-year-old man with a history of cervical radiculopathy and anterior cervical spine surgery presented with persistent dysphagia, laryngeal spasming and pain, coughing, and oxygen desaturation immediately following anterior cervical discectomy and fusion.

Related to his significant decrease in oral intake, he had lost over 80 pounds subsequent to the surgery. After extensive evaluation, the dysphagia was determined to be the source of his dyspnea.

Multiple interventions, including staged right and left superior laryngeal nerve blocks, and medications (e.g., gabapentin, pregabalin, and amitriptyline), yielded no improvement.

An extraoral glossopharyngeal nerve block was ultimately performed under fluoroscopic guidance using 1% lidocaine and dexamethasone, which alleviated his dysphagia, reduced his dyspnea, and improved his self-reported quality of life.



Figure 2. Anteroposterior cervical radiography with fusion hardware in place and osteophyte seen at C3-C4

Discussion

Dysphagia following anterior cervical spine surgery has a 5-15% incidence beyond 1-year post-surgery, often attributed to mechanical factors such as pharyngeal thickening and epiglottis inversion.

Despite normal neurological exam and EMG, nerve distortion related to stretching remains a possibility in these patients.

In our patient, a glossopharyngeal nerve block was effectively employed to manage the glossopharyngeal hyperesthesia, reducing the gag reflex and dysphagia and enhancing oral tolerance.

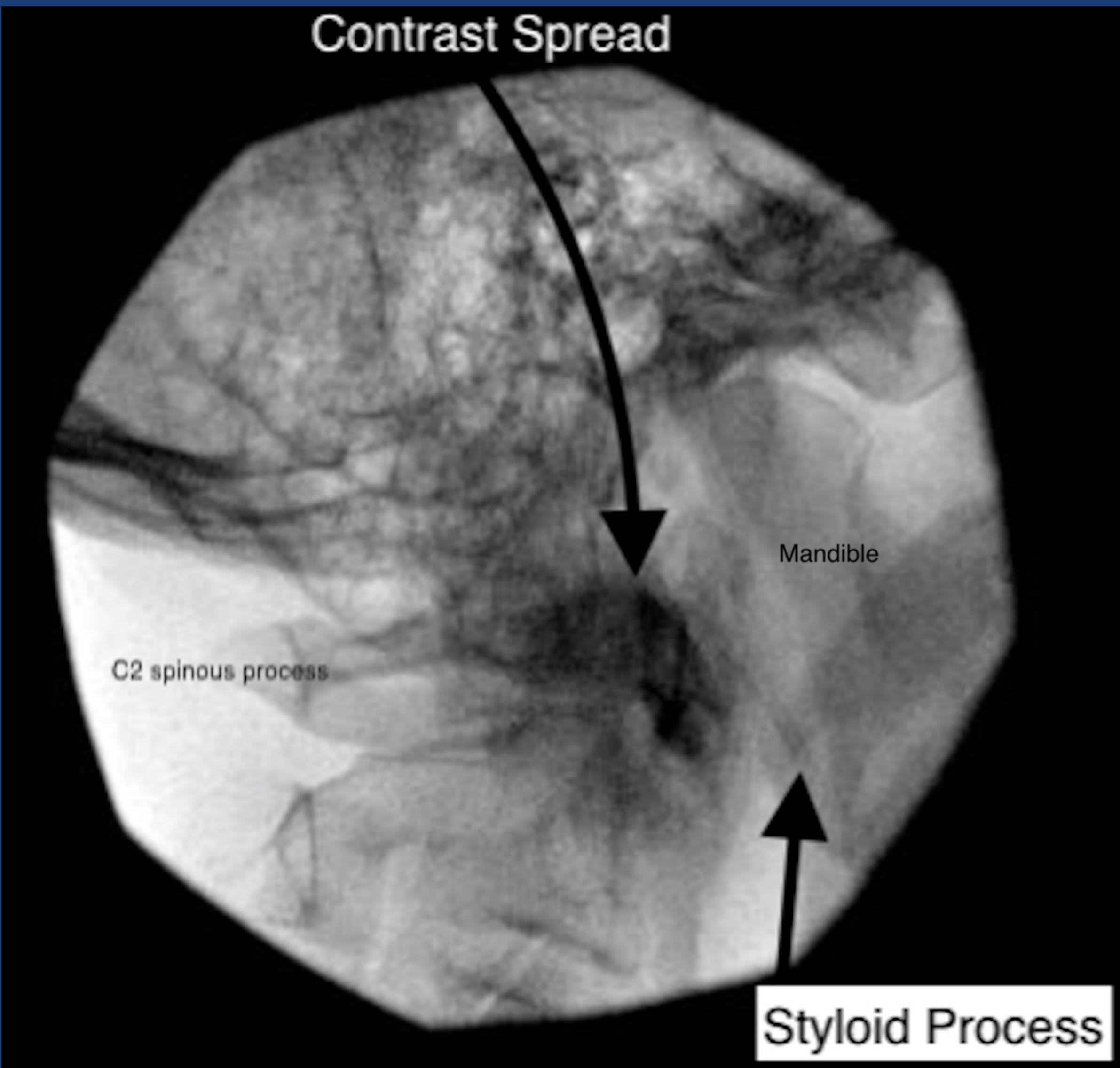


Figure 3. Lateral cervical radiography with contrast spread near the right styloid process in the vicinity of the glossopharyngeal nerve during the extraoral glossopharyngeal nerve block.

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