

Ultrasound Guided Glossopharyngeal Nerve Block in a patient with Eagle Syndrome

Timothy Maher, MD
(Hariharan Shankar, MD)
Medical College of Wisconsin



Patient Presentation

- 41 yo female with history of right throat, jaw, and ear pain for 18 months
- Evaluated by PCP, neurosurgery, ENT, neurology, and GI
- MRI/CT showing elongated styloid processes
- Exam with right tonsillar base and external styloid tenderness to palpation



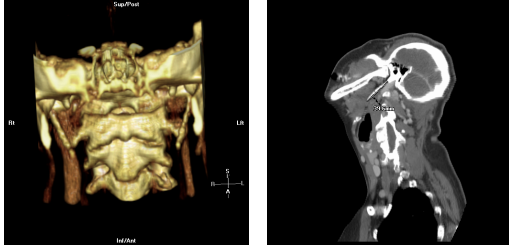
Eagle Syndrome

- Dysphagia and odynophagia with radiation to ear, jaw, or neck
- Related to elongated styloid process causing glossopharyngeal neuralgia
- Clinical diagnosis based on symptoms, physical exam, and imaging
- Treatment with medical, interventional, and surgical management

Blumenfeld, A., et al. Glossopharyngeal neuralgia. *Curr Pain Headache Rep.* 2013 Jul;17(7):343.



MRI and CT Images



Murtagh R, et al. CT findings associated with Eagle syndrome. *AJNR Am J Neuroradiology* 2001;22:1401-1402.

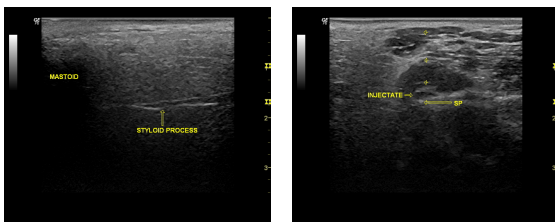


Ultrasound Guided Nerve Block

- Diagnostic nerve block with LA and low dose steroid
- External percutaneous approach
- Linear probe in oblique orientation between the mandible and mastoid
- Target is hyperechoic structure with shadow slightly deep to the mastoid process



Ultrasound Images





Conclusions

- Eagle syndrome is a rare form of glossopharyngeal neuralgia
- Other, more common causes of pharyngeal pain need to be fully excluded before diagnosis
- Ultrasound is a useful guide for diagnostic nerve block due to proximity to other neurovascular structures
- Medical and surgical management is effective for treatment of symptoms

Taheri, A., et al. Nonsurgical treatment of stylohyoid (Eagle) syndrome: a case report. *J Korean Assoc Oral Maxillofac Surg*. 2014 Oct;40(5):246-9.