

INTRODUCTION

- The stellate ganglion block is typically performed to manage various conditions related to the sympathetic nervous system, such as chronic pain in head, neck, or upper extremities, chronic regional pain syndromes, and circulatory disorders.
- This presentation describes yet another potential indication for the stellate ganglion block.
- Case presentation illustrates the successful application of an ultrasound guided stellate ganglion block for the treatment of dysgeusia, or the loss of taste after an episode of COVID-19 infection.

CASE PRESENTATION

A 75 y.o. male with PMH significant for heart transplant in 2001 complicated by complete vision loss, Hypertension, Interstitial Lung disease, CKD, and gastroesophageal reflux disease presented to our clinic with a chief complaint of tastelessness or dysgeusia.

- The patient was diagnosed with COVID-19 in November 2021 and reports losing his sense of taste a few days after diagnosis.
- On presentation, reported how his symptoms had been causing him significant distress and had been affecting his quality of life. He reported losing approximately 27 pounds, which he attributed to his dysgeusia.
- Prior to his presentation to our clinic, patient trialed multiple vitamins as well as zinc supplementation without any significant improvement in his symptoms.
- Patient denied having similar symptoms prior to this episode and was not taking any medications known to cause this unpleasant side effect.

Materials and Methods

- Monitors including 5 lead EKG, Blood pressure cuff, pulse oximetry
- 20 gauge, 9 cm Echogenic needle
- Linear ultrasound probe
- Intravenous line was placed for safety purposes as no sedation was administered
- 0.5% Ropivacaine
- 100 mcg of clonidine - off label use for prolongation of local anesthetic effect

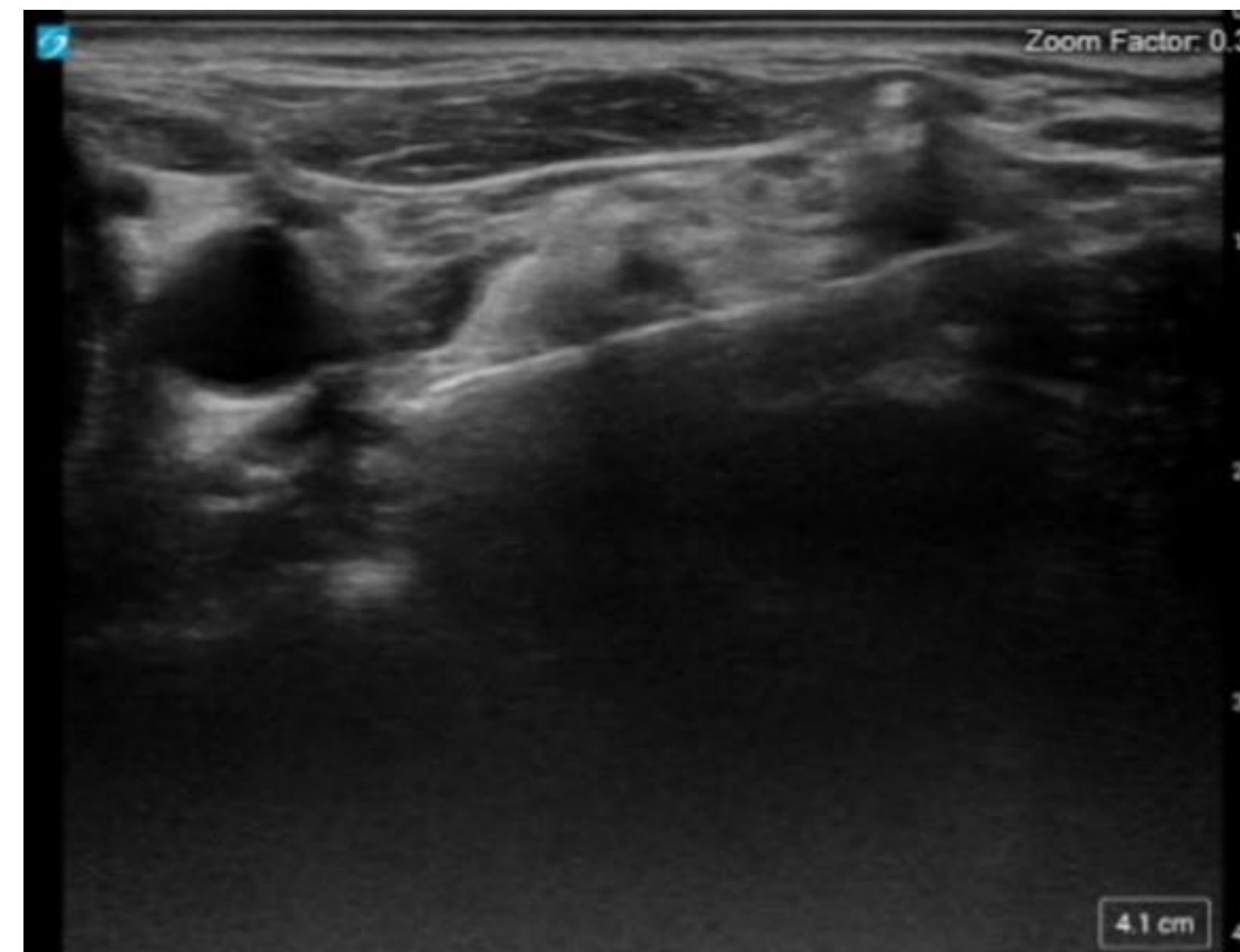


Figure 1: in-plane technique over the anterior tubercle of C6 until the tip was situated in the subfascial plane of the longus colli muscle

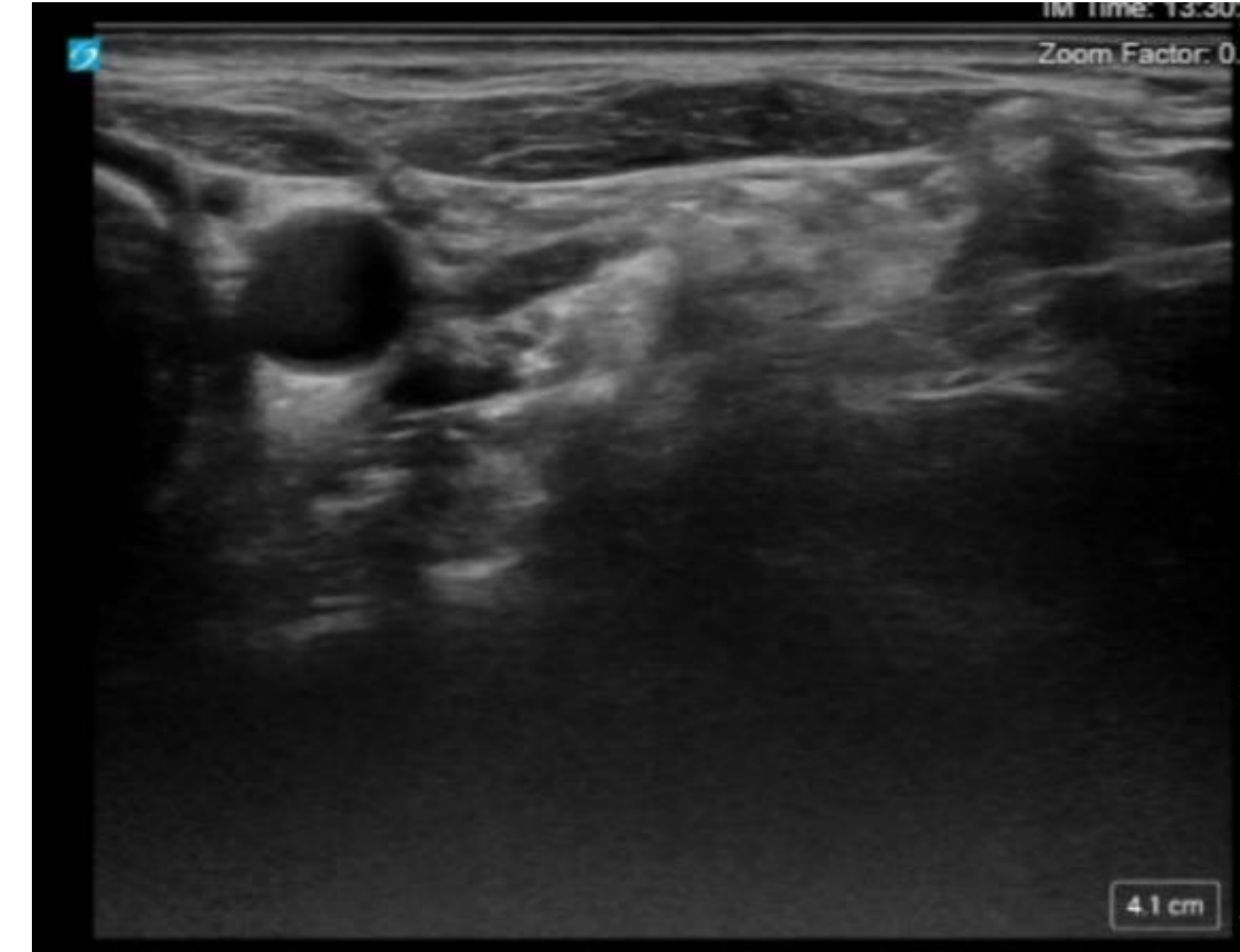


Figure 2: Injectate administered surrounding sympathetic chain

Results/Case Report

- Patient scheduled for right sided stellate ganglion block under ultrasound guidance and brought back for same procedure on contralateral side one week later.
- Partial resolution of his dysgeusia after just first stellate ganglion block performed on the patient's right side. Patient able to taste food for the first time in two years.
- After undergoing second stellate ganglion block on contralateral side, patient reported even further improvement in his dysgeusia.
- One month post second stellate ganglion block, the patient was contacted via telephone and was still reporting benefit from the procedure

DISCUSSION & CONCLUSION

- Multiple theories exist behind the cause for persistent dysgeusia and anosmia after a viral infection such as seen commonly after COVID-19 infection.
- Leading theory attributes loss of these senses to dysautonomia. Other possible causes include chronic sympathetic hyperresponsiveness, vasomotor dysfunction, and persistent chronic inflammation.²
- Impaired cerebral blood flow leading to dysautonomia may explain why there is such a dramatic improvement in dysgeusia and anosmia after a successful stellate ganglion block.³
- The stellate ganglion block has been shown to improve cerebral blood flow under normotensive conditions improving perfusion of cortical areas responsible for the sense of smell and taste.³
- Mechanism responsible for symptom improvement after block not clearly known. Currently, there are only scant case studies describing the benefit of this procedure for treatment of this and other conditions such as PTSD.⁴
- Overall, this procedure may be an effective treatment for patients with loss of taste or smell after an infection such as COVID-19 significantly affecting patient's quality of life.

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