

Stellate Ganglion Block for Long COVID-Associated Dysautonomia

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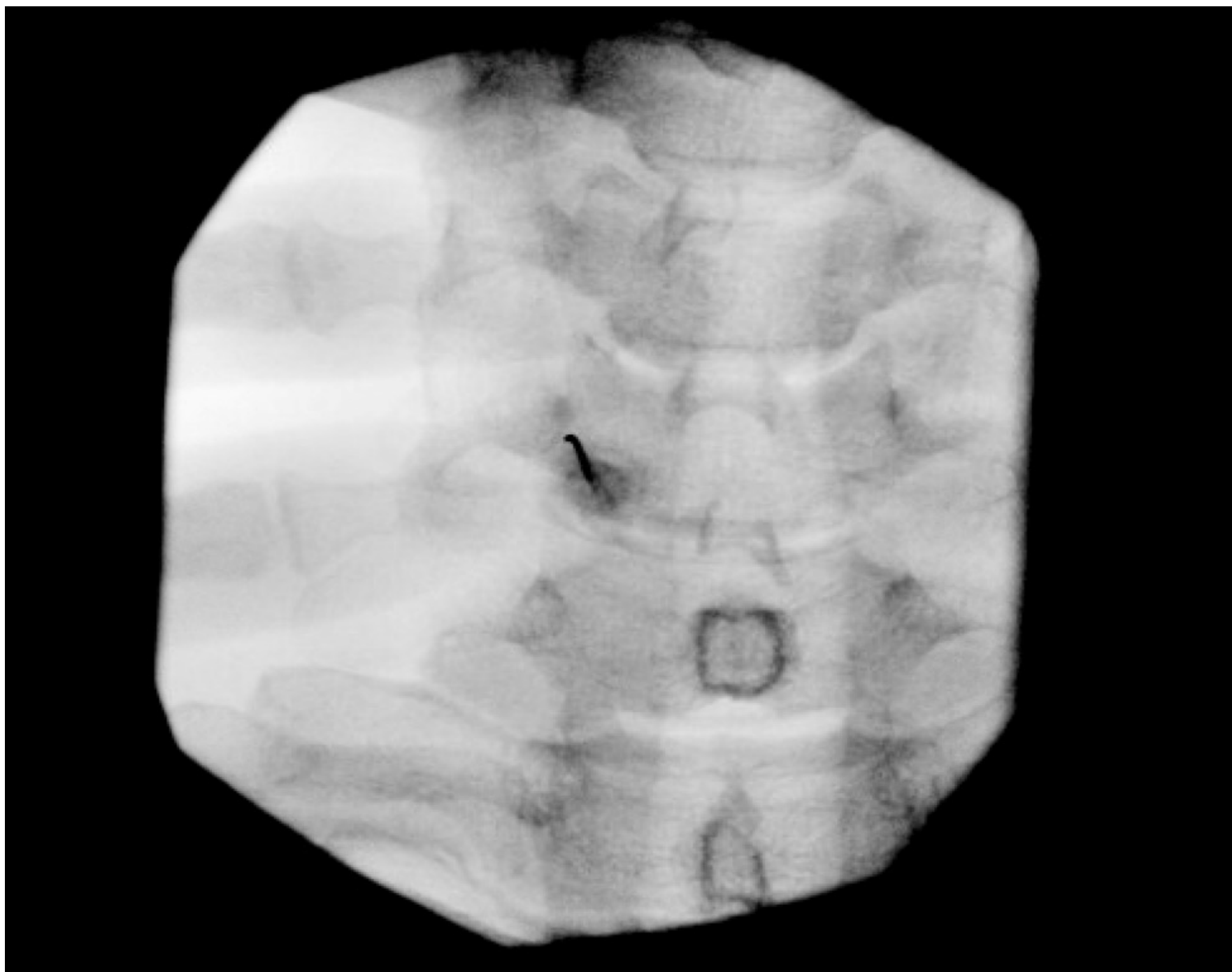
Introduction

- The SARS-CoV-2 global pandemic has been associated with significant mortality and morbidity.
- As many as 30% and 5% of symptomatic and asymptomatic individuals, respectively, who recover from initial infections will develop a pro-inflammatory biochemical profile and a persistent constellation of symptoms called Long COVID
- According to the WHO’s clinical case definition of Post-Acute Sequelae of SARS-CoV-2 infection, olfactory and gustatory dysfunction are commonly associated symptoms of Long COVID
- The stellate ganglion block (SGB) has been used to successfully treat a number of autonomic-mediated conditions
- Our case examines the use of SGB to treat anosmia and dysgeusia associated with Long COVID

Case Report

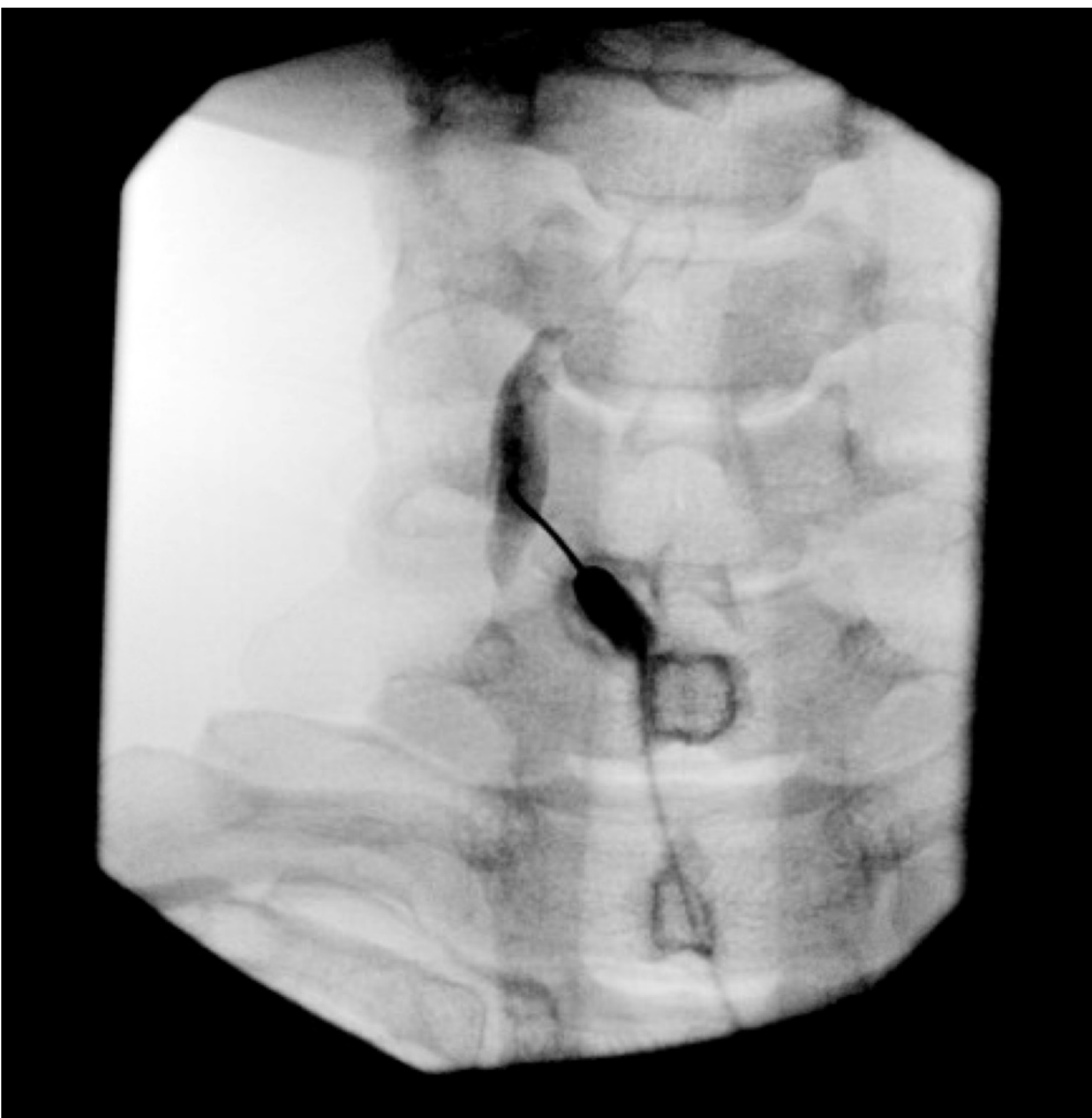
An otherwise healthy 38-year-old female with a history of COVID infection circa October 2020 presented to the multidisciplinary pain clinic in May 2023 with a chronic subjective 90% reduction in taste and smell dating back to index illness. Course of recovery was complicated by chronic fatigue in addition to recurrent infection in April 2022. Given chronic olfactory and gustatory dysfunction the patient was evaluated on multiple bases by ENT on multiple instances and failed conservative as well as alternative measures: oral steroids, aerosolized nasal sprays (azelastine, fluticasone), vitamin B injections, and acupuncture. A non-contrast CT sinus imaging study was found to be unremarkable. Following a peer-to-peer review, she ultimately elected to undergo a right-sided stellate ganglion block to ameliorate the potentially sympathetic-mediated symptoms. The procedure was performed under fluoroscopic guidance in June 2023 (images 1 and 2): following identification of the right C6 transverse process, the imaging angle was optimized for visualization of Chassaignac’s Tubercle. Following lateral retraction of the carotid artery, a 25g gauge needle was advanced in an AP fashion until impingement upon the tubercle. The needle was then withdrawn 2mm to avoid the body of the longus colli, followed by injection of 1cc of contrast medium which revealed cephalo-caudal spread. An injectate of 5cc of 0.5 bupivacaine was then deposited. She developed partial Horner’s Syndrome as confirmation of adequate blockade. As of one week follow-up she noted to have improved discrimination with sense of smell, however no change in gustation. The patient is currently awaiting insurance approval for a repeat left-sided block.

Figure 1



Chassaignac’s Tubercle identified at right C6 transverse process

Figure 2



Cephalocaudal spread of contrast

Discussion

- SGB has been used extensively for successfully treating a variety of sympathetic-mediated conditions, including CRPS and PTSD
- This case continues the evaluation of the efficacy of SGB in the treatment of olfactory and gustatory dysfunction secondary to Long COVID
- While there are not yet randomized controlled trials that have evaluated the role of various interventions in the management of Long COVID, early work in animal models has examined the pathophysiology and mechanisms
- We use this case to motivate continued investigations in optimizing treatment protocols for Long COVID while promoting SGB as a means of facilitating recovery from a quality of life-reducing ailment, while also demonstrating the need for further research.

References

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