



The Resolution of Long COVID-19 Symptoms After Stellate Ganglion Blocks: A Case Report



Ryan Triglia, DO¹; Chase Bauer, DO²; Justin Winas, DO³; Andrew Walrond, MD¹; & Leonard Kamen, DO²

(1) Department of Rehabilitation Medicine, Thomas Jefferson University, Philadelphia, PA, USA; (2) Jefferson Moss-Magee Rehabilitation, Elkins Park, PA, USA; (3) Center for Interventional Pain & Spine, Fort Washington, PA, USA.

Introduction

Approximately 30% of individuals who recover from acute COVID-19 continue to experience a range of persistent symptoms, a condition referred to as "Long COVID." These symptoms can include fatigue, brain fog, sleep and mood disturbances, anosmia, and dysgeusia¹. Research suggests that excessive sympathetic nervous system activity may play a role in the development of Long COVID symptoms. The sympathetic innervation to the head, neck, upper limbs, and upper thoracic region is supplied by the cervical sympathetic chain, which includes the superior, middle, and inferior cervical ganglia, as well as the first thoracic ganglion. In 80% of the population, the inferior cervical and first thoracic ganglia are fused, forming the stellate ganglion. By injecting local anesthetic near the stellate ganglion, it is possible to block the activity of the entire cervical sympathetic chain, potentially alleviating related symptoms¹.

Case Presentation

We present the case of a 73-year-old, 119 lb retired female who contracted COVID-19 in the spring of 2023. Her initial symptoms included fatigue, myalgias, anosmia, and ageusia. While her fatigue and myalgias resolved over the following weeks, she continued to experience persistent anosmia and ageusia. In late fall 2023, she presented to a pain management clinic, where she underwent a right-sided, ultrasound-guided stellate ganglion block (SGB). In the weeks that followed, she reported an approximate 80% improvement in her sense of smell and taste. Encouraged by the results, she underwent a repeat right SGB in the spring of 2024, after which she experienced a full restoration of her smell and taste.

Discussion

The improvements may be due to increased cerebral blood flow to brain regions involved in smell and taste, or enhanced perfusion to facial areas where the peripheral receptors for these senses are located¹.

Conclusion

Given these potential benefits, SGB should be considered a treatment option for patients experiencing Long COVID symptoms.

References

- 1) Liu, Luke D. & Duricka, Deborah L. Stellate ganglion block reduces symptoms of Long COVID: A case series. *Journal of Neuroimmunology*. 2021.