Title: A Superficial Dissection Approach to the Sphenopalatine (Pterygopalatine) Ganglion Emphasizing Osteopathic Relevance

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Introduction/Background: The sphenopalatine (pterygopalatine) ganglion is the most superficial ganglia to manipulate from the oral cavity. It has parasympathetic and sensory fibers directly affecting the paranasal sinuses and can be manipulated by providers using manual osteopathic techniques to relieve congestion associated with sinusitis, allergies, and upper respiratory infections. In the documented ganglia release technique, the physician inserts their fifth digit into the oral cavity to locate the ganglia, which is not able to be directly visualized due to its location. Using anatomic dissection, the provider can further appreciate the orientation and depth of this ganglion. The most efficient dissection of this ganglion is bisecting the head and pursuing a deep to superficial approach, which challenges the understanding of its osteopathic relevance. Our hypothesis is that this superficial dissection approach can help providers better appreciate the osteopathic relevance of this ganglion's location.

Methods: To accomplish this dissection, we first identified each terminal branch of the trigeminal cranial nerve (CN V), then specifically targeted the maxillary branch (CN V_2) as it travels deep into the face. To follow this nerve, we then removed the eyeball, portions of the inferior orbit, and zygomatic arch while keeping the nerve intact.

Results: By following CN V_2 deep into the face, we were able to identify the sphenopalatine ganglion superficially to deep as it branched inferiorly.

Discussion/Conclusion: This dissection approach allowed for a more thorough understanding of the sphenopalatine ganglion's location in a manner highlighting its osteopathic relevance. Limitations include a lack of variability in human anatomy due to dissection of one cadaver and using a single dissection technique.