

as is commonly represented. In only one of the skulls of the 50 examined could a foramen of any size be identified in the general vicinity, and this was less than 0.5 mm in diameter.” For the supraorbital nerve, Miller et al. described, “The supraorbital nerve was found to exit the orbit through a supraorbital notch in 59 of 100 skull sides and via a foramen in 41 of 100 sides.” I am afraid that Janis et al. may have confused the supraorbital foramen and the supratrochlear foramen.

Andersen et al. noted that the supratrochlear nerve usually entered the subcutaneous tissue by exiting the orbit at its upper medial corner, and no foramen or notch was found at the exit site.² If Janis et al. can provide a picture of the supratrochlear foramen containing a supratrochlear nerve in dissection, which I believe they have, it will be very valuable to anatomists. Janis et al. mentioned that the nerve entrance into the corrugator was found to be at a mean distance of 18.76 ± 2.94 mm lateral to the midline. The location of the exit of the supratrochlear nerve from the corrugator/entrance into the superficial plane was seen to be at a mean distance of 19.62 ± 2.94 mm lateral to the midline.¹ Janis et al., in the conclusion, insisted that extension of this myotomy to within 1.8 cm of the midline would likely ensure complete decompression.¹

For the location of the supratrochlear nerve, however, Andersen et al.² already measured the most medial branch of the supratrochlear nerve, which was located between 8 and 30 mm from the midline along the supraorbital margin, and the most lateral branch, located between 6 and 38 mm from the supraorbital notch. If Janis et al. can provide the distance from the midline to the supratrochlear nerve, it will be very valuable to compare their data with the data from Andersen et al.

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DISCLOSURE

The author has no financial interest to declare in relation to the content of this communication.

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Reply: Anatomy of the Supratrochlear Nerve: Implications for the Surgical Treatment of Migraine Headaches

Sir:

We thank Dr. Hwang for his attentiveness to our article, “Anatomy of the Supratrochlear Nerve: Implications for the Surgical Treatment of Migraine Headaches.”¹ We also confess a mild degree of envy at his deep knowledge of supraorbital anatomy and obvious familiarity with the relevant literature. His letter makes a number of good points which we will discuss further.

We appreciate Dr. Hwang’s referencing the article by Andersen et al.,² which we had overlooked. Andersen appears to have been a very early arriver to the theory of tight connective tissue bands in this region being contributors to pain in this region, and his study needs the attentive discussion that it did not receive in our article.

Dr. Hwang points out that our classification is based on the assumption that there are always two branches of the supratrochlear nerve, and that this branching point is always within the retro-orbicularis oculi fat substance. Stating that there are always two branches may be oversimplifying the anatomy for the sake of creating a classification to guide clinical understanding; however, there were only a couple of instances seen where the nerve was three branches within the deep tissues along the supraorbital rim. We never saw a single branch, as Andersen et al. did. In most instances, supratrochlear nerve branches diminished into smaller and smaller branches within the muscle substances or cranial to it. In the forehead, superficial to frontalis, the nerve is often multiple branches, the lateral ones of which often connect with branches from the supraorbital nerve. As pointed out by Hwang, Andersen et al. found that the most medial supratrochlear nerve branch seen was just 8 mm from the midline. This was at the level of the supraorbital rim; at its entrance to the corrugator, we found that it entered at a mean distance of 18 mm from the midline, with a range of 11.5

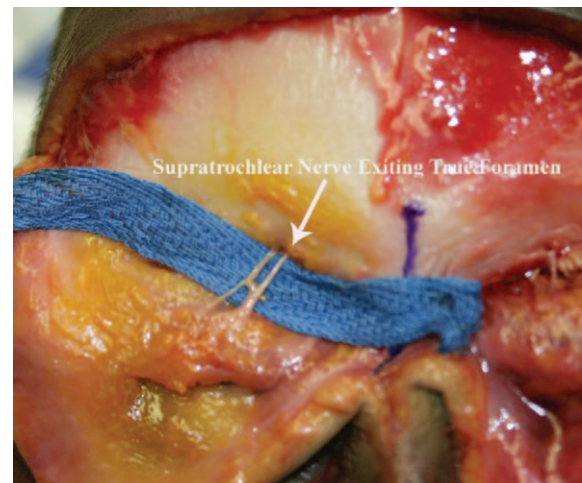


Fig. 1. The supratrochlear nerve is shown exiting through a true foramen.

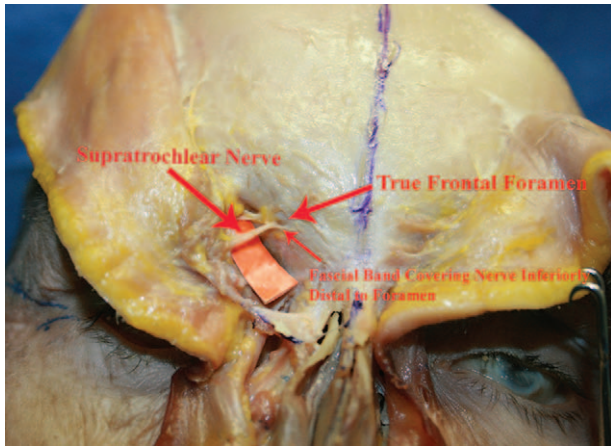


Fig. 2. The supratrochlear nerve is shown exiting through a true foramen in another specimen.

to 21.5 mm. Our data are not as variable as Andersen et al.'s, and we did not find any supratrochlear branches this far medial, but we cannot explain why. Perhaps part of the explanation is that Andersen's group was measuring at a slightly more caudal point, at the supra-orbital rim, whereas we were measuring at the entrance to the corrugator. However, it is highly doubtful that the nerve jumps 4 mm in this very short distance. Finally, in their study, Andersen et al. never seemed to have found a frontal notch or foramen, and felt that the supratrochlear nerve simply entered the forehead at the superomedial aspect of the orbit. We only found this to be the case in about 6 percent of our dissections.

Hwang pointed out that in our discussion of the article by Miller et al. we took our frontal/supratrochlear notch/foramen data and accidentally put it into our discussion of the supraorbital notch/foramen. There is more detailed information in our Results section, but this was written in error when writing the Discussion. The sentence the writer is referring to would appropriately read as follows: "...the frontal/supratrochlear foramen was found to be present only 2

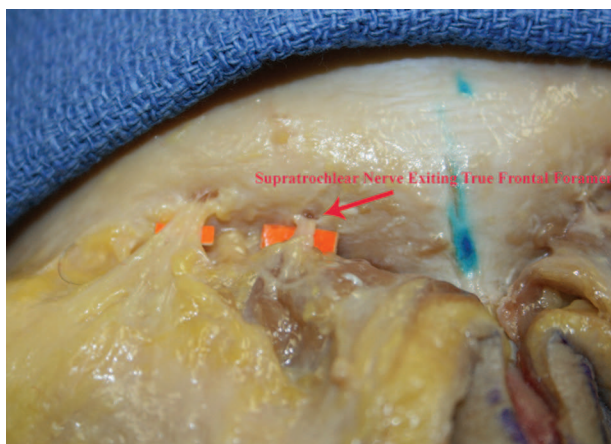


Fig. 3. The supratrochlear nerve is shown exiting through a true foramen in a third specimen.

percent of the time as a true foramen compared with 18 percent of the time in our study." However, this would not make sense in this portion of the Discussion as this was a paragraph expounding on Miller et al.'s data concerning the exit of the supraorbital nerve. We thank Dr. Hwang for pointing out this error in our editing.

Concerning Dr. Hwang's request for a supratrochlear foramen (or frontal foramen) containing a supratrochlear nerve, the reader can see that Figure 5, *below* panel, of our article demonstrates a supratrochlear nerve coming out of a frontal or supratrochlear foramen. We have included three more examples of a true foramen as Figures 1 through 3.

We reiterate our appreciation to Dr. Hwang for his interest in our article.

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Rib-Sparing and Internal Mammary Artery–Preserving Microsurgical Breast Reconstruction with the Free DIEP Flap

Sir:

We read with interest the article entitled “Rib-Sparing and Internal Mammary Artery-Preserving Microsurgical Breast Reconstruction with the Free DIEP Flap” by Kim et al.¹ We congratulate the authors on their surgical prowess, and we would like to provide some clarification.