

Authors' reply: Feedback to the Commentary on “Anatomical Variations of the Suprascapular Notch and its Importance in Suprascapular Entrapment Neuropathy”

Ishwar BAGOJI^a, G A HADIMANI^a, Ambadasu BHARATHA^b

^aAssistant professors, Department of Anatomy, BLDE (Deemed To be University)'s Shri BM Patil Medical College, Hospital & Research Center, Vijayapura, Karnataka, India

^bLecturer in Pharmacology, Faculty of Medical Sciences, University of The West Indies, Cave Hill Campus, BARBADOS, WI

AUTHORS' REPLY:

Thank you, Azzat-AL Redouan and David Kachlikh, for your interest in reading our article (Bagoji *et al*) entitled “Anatomical Variations of the Suprascapular Notch and its Importance in Suprascapular Entrapment Neuropathy”.

Firstly, the presented scapula in Figure 6, the suprascapular ligament is ossified and converted into the foramen. As per the literature available on the website, Shane Tubbs *et al* (1), Pećina M *et al* (2), M Polguy *et al* (3) reported that the nerve entrapment syndrome was mainly due to ossification of the suprascapular ligament. We suggest that the occurrence of the bony bridge formed by ossified SSL could have a genetic basis, and the fre-

quency of completely ossified suprascapular ligament varies throughout the world and can be a risk factor for surgical explorations. The incidence of entrapment of suprascapular ligament largely increases with strenuous overhead abduction, *i.e.* in repeated overhead motion such as volleyball, baseball pitching, and trauma contributes to ossification of the ligament (1), resulting in bony foramen through which the suprascapular nerve travels and may lead to suprascapular nerve compression (4).

Secondly, the W-shaped SSN variant was a unique finding in our study as per the limited available literature. As reported by R. Vandana *et al* (3), W-shaped notch is proposed as a possible cause of the suprascapular nerve entrap-

Address for correspondence:

Dr. Ambadasu Bharatha, Lecturer in Pharmacology

Faculty of Medical Sciences, University of the West Indies, Cave Hill, Barbados, WI

Email: ambadasu.bharatha@cavehill.uwi.edu

Article received on the 30th of August 2021 and accepted for publication on the 10th of September 2021

ment syndrome due to changed morphology and reduced morphometry. The occurrence of a W-shaped notch may be due to developmental abnormality scapula or abnormal attachment or division of the suprascapular ligament, or change in the course of suprascapular blood vessels. The presence of an inconspicuous additional notch (W) may cause entrapment of the suprascapular nerve, compressing the suprascapular blood vessels (6).

Thirdly, measurements of 'V' shaped notch had the lowest width/depth ratio, and this parameter was comparatively lesser than the other various notch parameters in our study; these

findings were almost similar to those reported by Antoniadis *et al* (7), who stated that a V-shaped notch was more likely to be connected with suprascapular nerve pathology. The V-shaped notch is also supported by the sling effect theory of suprascapular nerve entrapment, proposed in 1979 by Rangery *et al* (8), who described the V-shaped sharp bony margins of the scapular notch that could press the suprascapular nerve. Repeated kinking irritates the nerve and may induce microtrauma that results in neuropathy (9).

Conflicts of interest: none declared.

Financial support: none declared.

REFERENCES

1. **Tubbs RS, Nechtman C, D'Antoni AV, et al.** Ossification of the suprascapular ligament: A risk factor for suprascapular nerve compression? *Int J Shoulder Surg* 2013;7:19-22.
2. **Pećina M, Krmpotić-Nemanić J, Markiewitz A.** Tunnel Syndromes. In: *Peripheral Nerve Compression Syndromes*, 2nd ed, Boca Raton, FL: CRC Press, 1997 [Google Scholar].
3. **Polgaj M, Sibiński M, Grzegorzewski A, et al.** Suprascapular Notch Asymmetry: A Study on 311 Patients. *BioMed Res Int* 2014;2014:196896.
4. **Sergides NN, Nikolopoulos DD, Boukoros E, Papagiannopoulos G.** Arthroscopic decompression of an entrapped suprascapular nerve due to an ossified superior transverse scapular ligament: A case report. *Cases J* 2009;2:8200. [PMC free article] [PubMed] [Google Scholar].
5. **Vandana R, Patil S.** Morphometric study of suprascapular notch. *Natl J Clin Anat* 2013;2:140-144.
6. **Bagoji IB, Hadimani GA, Bulgoud RS, et al.** Anatomical Variations of the Suprascapular Notch and its Importance in Suprascapular Entrapment Neuropathy. *Maedica* 2020;15:298-304. <https://doi.org/10.26574/maedica.2020.15.3.298>.
7. **Antoniadis G, Richter HP, Rath S, et al.** Suprascapular nerve entrapment: experience with 28 cases. *Journal of Neurosurgery* 1996;85:1020-1025.
8. **Rengachary SS, Neff JP, Singer PA, Brackett CF.** Suprascapular entrapment neuropathy. A clinical, anatomical and comparative study. *Part I. Neurosurgery* 1979;4:441-446.
9. **Dunkelgrun M, Iesaka K, Park SS, et al.** Interobserver reliability and intraobserver reproducibility in suprascapular notch typing. *Bull Hosp Joint Dis* 2003;61:118-122.