

# Letter to the Editor: Commentary to “Anatomical Variations of the Suprascapular Notch and its Importance in Suprascapular Entrapment Neuropathy”

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## TO THE EDITOR:

### COMMENTARY

**W**ith interest we read the article by Bagoji *et al.* reporting a study of the suprascapular notch (SSN) variations in relation to the suprascapular nerve entrapment (SNE). The authors reported a morphometric study of the SSN consisted of parametric measurements and shape typing besides correlating certain SSN variants to potential risk of SNE (1). We strongly do not agree with the conclusions and have the following comments and concerns.

Firstly, the presented scapula in Figure 6 in the study by Bagoji *et al.* (1) shows one suprascapular

foramen and the opening next to it is a scapular defect that is not related to the SSN. Scapular defects are variant openings within the lamina of the scapula and are visible on some dry or wet scapulae as well as on some shoulder X-rays. These scapular defects (if present) appear in varying size and number and they are encountered more commonly within the infraspinous fossa, but they can be also observed within the suprascapular fossa (2).

Secondly, the W-shaped SSN variant, even though neither mentioned as a SSN type nor addressed as W-shaped type in previous studies, is well known related to the site of the variant bifid suprascapular ligament or of the variant anterior coracoscapular ligament attachment being partially ossified (3). This SSN type can relate to the SNE, but not due to its morphological shape. The potential risk is a consequence of those aforemen-

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tioned variant ligaments located internally within the SSN narrowing its vicinity (4, 5).

Thirdly, SSN geometric shape is not a direct influence in SNE *per se*. SNE is more associated with the SSN stenosis manifested by reduced morphometric SSN margins (6) which can also appear due to the reported soft tissue variations (7, 8) and this is a limitation in dry bones studies. The authors' concluding statement that the V-shaped SSN is the most common causative factor in SNE was not driven from supporting findings. The reported measurements and presented statistics by Bagoji *et al.* do not suggest any association of the

V-shaped SSN to SSN stenosis in comparison to the other reported SSN types (1).

Overall, the presented study by Bagoji *et al.* (1) combined two methods of SSN classification. One being based on the SSN observed shapes (9, 10) and one being based on the SSN morphometric measurements (11, 12). However, this approach would be more meaningful if it linked to direct effect on the passing suprascapular nerve rather than the presented non-evidenced based speculations.

*Conflicts of interest: none declared.*

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## REFERENCES

1. **Bagoji IB, Hadimani GA, Bulgoud RS, et al.** Anatomical variations of the suprascapular notch and its importance in suprascapular entrapment neuropathy. *Maedica (Bucur)* 2020;3:298-304.
2. **Cigtay OS, Mascatello VJ.** Scapular defects: a normal variation. *AJR Am J Roentgenol* 1979;132:239-241.
3. **Polguy M, Jędrzejewski K, Majos A, et al.** Coexistence of the suprascapular notch and the suprascapular foramen—a rare anatomical variation and a new hypothesis on its formation based on anatomical and radiological studies. *Anat Sci Int* 2013;3:156-162.
4. **Avery BW, Pilon FM, Barclay JK.** Anterior coracoscapular ligament and suprascapular nerve entrapment. *Clin Anat* 2002;6:383-386.
5. **Polguy M, Jędrzejewski K, Majos A et al.** Variations in bifid superior transverse scapular ligament as a possible factor of suprascapular entrapment: an anatomical study. *Int Orthop* 2012;10:2095-2100.
6. **Al-Redouan A, Hudak R, Nanka O et al.** The morphological stenosis pattern of the suprascapular notch is revealed yielding higher incidence in the discrete type and elucidating the inevitability of osteoplasty in horizontally oriented stenosis. *Knee Surg Sports Traumatol Arthrosc* 2020 [published online ahead of print, 2020 Jul 25]. doi:10.1007/s00167-020-06168-1.
7. **Polguy M, Roźniecki J, Sibiński M et al.** The variable morphology of suprascapular nerve and vessels at suprascapular notch: a proposal for classification and its potential clinical implications. *Knee Surg Sports Traumatol Arthrosc* 2015;5:1542-1548.
8. **Al-Redouan A, Holding K, Kachlik D.** "Suprascapular canal": Anatomical and topographical description and its clinical implication in entrapment syndrome. *Ann Anat* 2021;233:151593.
9. **Hrdicka A.** The scapula: visual observations. *Am J Phys Antropol* 1942;29:73-94.
10. **Rengachary SS, Burr D, Lucas S et al.** Suprascapular entrapment neuropathy: a clinical, anatomical, and comparative study. *Neurosurgery* 1979;4:447-451.
11. **Natsis K, Totlis T, Tsikaras P et al.** Proposal for classification of the suprascapular notch: a study on 423 dried scapulas. *Clin Anat* 2007;2:135-139.
12. **Polguy M, Jędrzejewski K, Podgórski M et al.** Morphometric study of the suprascapular notch: proposal of classification. *Surg Radiol Anat* 2011;9:781-787.