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Comments on “Dorsal scapular nerve entrapment neuropathy managed by ultrasound-guided hydrodissection – a case report”

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We have read with great interest the manuscript titled “Dorsal scapular nerve entrapment neuropathy managed by ultrasound-guided hydrodissection – a case report” by Gaurav Kant Sharma and Rajesh Botchu⁽¹⁾. We appreciate the fact that the authors have pointed out dorsal scapular nerve (DSN) entrapment as one of the common causes of interscapular upper thoracic pain, and the usage of high-resolution ultrasound to visualize DSN entrapment in the interscapular regions. The manuscript is well-written; however, we are somewhat concerned about the figures included in the manuscript.

In Fig. 1B of Sharma’s manuscript, the linear muscle anterior to the rhomboids, posterior to the other paraspinal muscles, and with the muscle fibers directly slanting across the image, should be the serratus posterior superior (SPS) muscle. (Fig. 1) The DSN runs down the medial border of the scapula, deep to the levator scapulae and rhomboids, and superficial to the serratus anterior muscle and the SPS^(2–4). However, the label of the DSN has been placed anterior to the SPS. Anatomically, this hypoechoic echostructure, considering it to be a swollen nerve, should be the posterior ramus of the thoracic spinal nerve, which is commonly entrapped by the insertion of the SPS over the second to fifth ribs. If this was swollen posterior ramus of the thoracic spinal nerve, the diagnosis in the case report should have been neuralgia parasthetica (NP), which is attributed to the entrapment of the T2–T6 posterior rami that supply cutaneous innervation to the area⁽⁵⁾. Additionally, the patient was treated with ultrasound-guided hydrodissection of the lateral branch of the posterior ramus of the thoracic spinal nerve. Herein, we provide a picture (Fig. 2) showing the sonoanatomy of the DSN in relation to the SPS, levator scapulae (LS), rhomboid minor (RMi), rhomboid major (RMA), and the levels from the second rib to

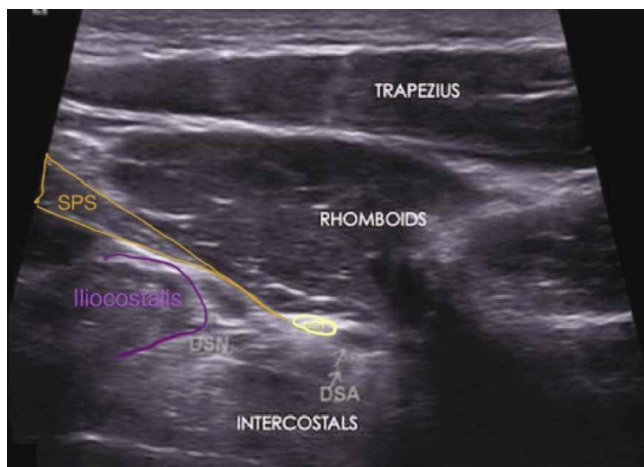


Fig. 1. Proposed correct sonoanatomical locations of the dorsoscapular nerve (DSN) medial to the dorsoscapular artery (DSA) and posterolateral to the serratus posterior superior (SPS)

the fifth rib. We also provide a video showing the scanning of these structures in Video 1.

Although we are delighted to see the use of the hydrodissection technique in this case report, we are worried about the fact that the intercostal muscles have been included as the sono-landmarks in the image before hydrodissection. The pleura and lung are located just below the innermost intercostal membrane, such that if the needle tip is not well visualized during hydrodissection, the needle may end up entering the lungs and causing pneumothorax. Instead, we highly suggest the use of the rib and insertion of the SPS as the landmarks; moreover,

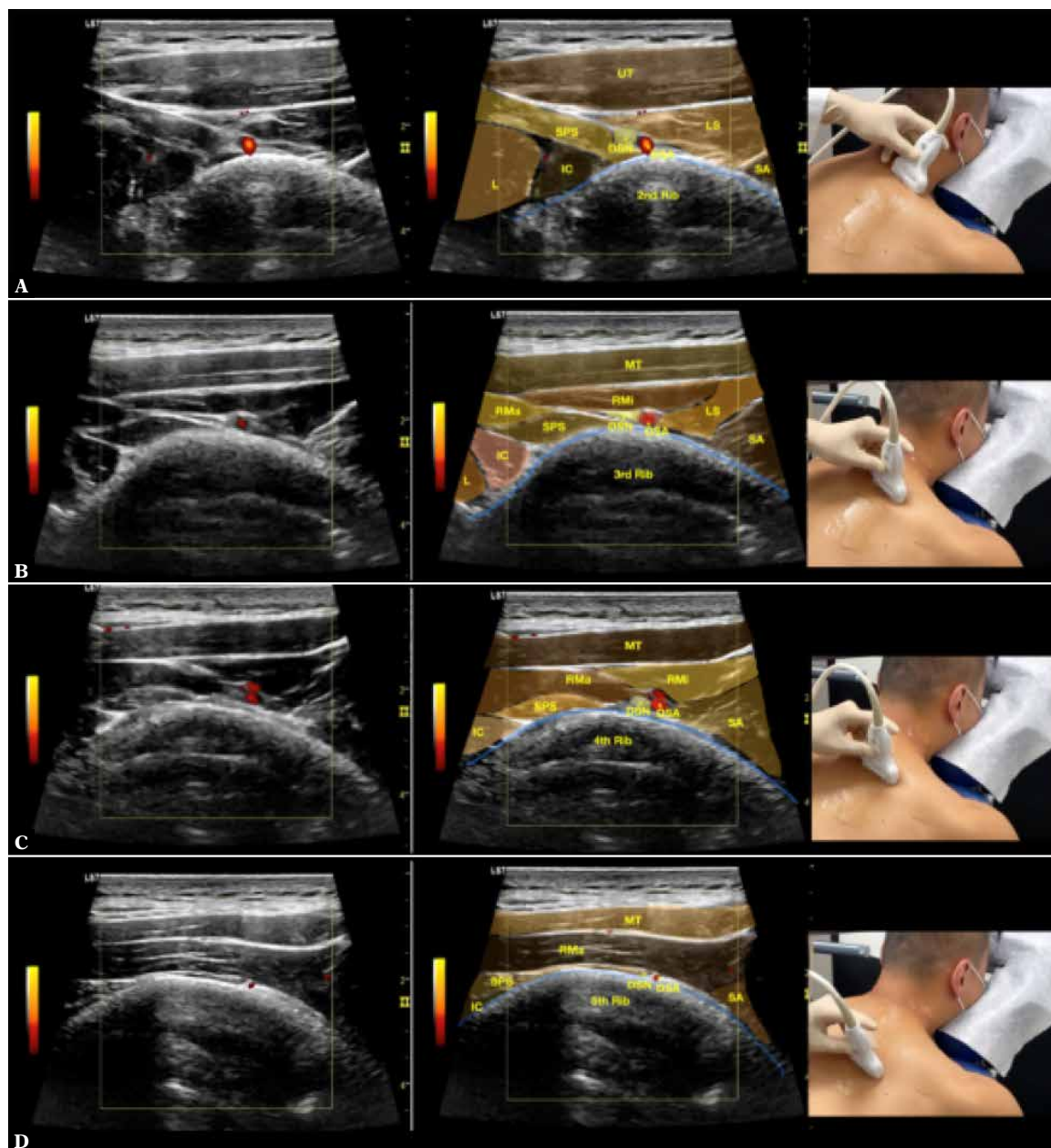


Fig. 2. Sonoanatomy of the dorsoscapular nerve (DSN) and its relationship with the dorsoscapular artery (DSA) and other muscles from the second rib (A), third rib (B), fourth rib (C) to the fifth rib (D). UT – upper trapezius; SPS – serratus posterior superior; LS – levator scapulae; L – longissimus; IC – iliocostalis; SA – serratus anterior; RMA – rhomboid major; RMI – rhomboid minor; MT – middle trapezius

the final position of the needle and the final target of hydrodissection should be posterior/superficial to the SPS insertion and medial to the dorsoscapular artery, with the rib and needle tip always in view to prevent entry into the lungs (Video 2).

Moreover, biomechanically, the fascial plane between the rhomboids and the SPS is not a common entrapment site encountered in the clinical practice. In fact, the scalenus medius muscle through which the DSN passes, is the most common site of entrapment⁽¹⁾.

Conflict of interest

Authors do not report any financial or personal connections with other persons or organizations, which might negatively affect the contents of this publication and/or claim authorship rights to this publication.

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