

Bilateral C5 Nerve Branch Supplies the Levator Scapulae and Serratus Anterior Muscles: A Cadaveric Case Report

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Introduction: Variation of the different components of the brachial plexus is fairly common and well documented. Some of these variations may have clinical consequences in terms of clinical manifestations or altering the surgical intervention plan while others may be benign with no functional or clinical consequences. Therefore, thorough reporting and knowledge of different anatomical variations is of utmost clinical importance.

Case Presentation: Here, we report bilateral anatomical variance of the C5 nerve root which supplied the levator scapulae muscle (LSM) and superior slip of the serratus anterior (SSSA). This innervation was completely independent of the dorsal scapular (DSN) and long thoracic nerves (LTN), both of which existed bilaterally. However, on the right side, the LTN did not receive any contribution from C5, whereas on the left side the LTN did receive a contribution from C5.

Conclusion: We believe this is one of the rare reports of a C5 nerve root having combined LSM and serratus anterior (SA) innervations bilaterally. As such, this finding may prove useful in clinical applications such as LTN injury, thoracic outlet syndrome, winged scapula, and surgical cases pertaining to the head and neck.

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