

Revisiting the Surgical Approaches to Decompression in Quadrangular Space Syndrome: A Cadaveric Study

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Abstract : Introduction: Quadrangular space syndrome involves compression of the axillary nerve and posterior circumflex humeral artery and its management in few cases, requires surgical decompression. The current study reviews the surgical approaches used in the decompression of neurovascular structures and presents our reflections and recommendations. Methods: Four human cadavers, in the Department of Anatomy were used for dissection of the Axillae and the Scapular region by the senior residents of the Department of Anatomy and Department of Orthopedics, who dissected quadrangular space in the eight upper limbs, using anterior and posterior surgical approaches. Observations: Posterior approach to identify the quadrangular space and secure its contents was recognized as the easier and much quicker method by both the Anatomy and Orthopedic residents, but it may result in increased postoperative morbidity. Whereas the anterior (Delto-pectoral) approach involves more skill but reduces postoperative morbidity. Conclusions: Anterior (Delto-pectoral) approach with suggested modifications can prove as an effective method in surgical decompression of quadrangular space syndrome. The authors suggest more cadaveric studies to facilitate anatomists and surgeons with the opportunities to practice and evaluate older and newer surgical approaches.

Keywords : surgical approach, anatomical approach, decompression, axillary nerve, quadrangular space

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