Accuracy of suprascapular notch detection by ultrasonography

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Background: Suprascapular nerve block is a common procedure for management of shoulder pain. However, the accuracy of finding the exact suprascapular notch by ultrasonography remains controversial.

Objective: To define the location of the suprascapular notch by surface landmark in patients and to assess the accuracy of suprascapular notch detection by ultrasonography in cadavers.

Methods: Patients who underwent ultrasonography and suprascapular nerve block were enrolled in this study. Moving the probe, the suprascapular notch was identified. The length between the medial border of scapula and the posterior angle of acromion and the ratio of the length between the medial border of scapular and the suprascapular notch to the length between the medial border of scapula and the posterior angle of acromion as well as the depth between the surface and the suprascapular notch were measured. In cadavers, dyes were injected around suprascapular notch under ultrasound guidance. Dissection was done to assess the accuracy of suprascapular notch detection by ultrasonography.

Results: 36 men and 62 women were included. The length between the medial border of scapula and the posterior angle of acromion and the ratio of the length in men and women were 13.13±1.08 cm, 0.59±0.04, 12.15±0.90 cm and 0.60±0.04, respectively. The depths of suprascapular notch in men and women were 3.60±0.35 cm and 3.14±0.36 cm respectively. 9 scapulars in five fresh cadavers were included. All of nine injections were shown around suprascapular notch.

Conclusions: This study suggests suprascapular notch detection by ultrasonography would be accurate.

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