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Intro

Chronic shoulder pain in the elderly is a significant challenge, often compounded by comorbidities and age-related frailty. This case presents a multidisciplinary approach to managing a 94-year-old woman with severe chronic left shoulder pain, highlighting the use of cooled radiofrequency ablation (c-RFA).

Case Presentation

A 94-year-old woman presented to the pain clinic with a chief complaint of chronic left shoulder pain affecting her activities of daily living (ADLs) such as getting out of a chair, getting off the toilet, and eating. She had undergone two glenohumeral joint injections without significant relief and was deemed not a surgical candidate due to age and frailty. Her pain began years ago without any preceding injury or accident.

Management

Initially, a nerve block of the distal articular branches of the left shoulder was attempted on the axillary, lateral pectoralis, and suprascapular nerve, which is the conventional approach. However, due to eroded anatomy, a left axillary nerve block was performed, providing only 20% relief of her overall shoulder pain. Subsequently, an ultrasound-guided suprascapular nerve block was performed at the left suprascapular notch, resulting in 80% relief of her shoulder pain and noted improvement in function. Importantly, she did not report any muscle weakness as a result of the block.

For the ablation, using linear ultrasound guidance, a Coolief 17g 5mm needle with a 2 mm active tip was advanced in-plane to the suprascapular notch. The suprascapular artery was visualized, and the needle was placed just inferior to the suprascapular notch ligament. Motor stimulation at 3 V was performed with no muscle movement. A c-RFA was performed with an ablation temperature of 60 degrees Celsius for 2 minutes and 30 seconds.

Successful Management of Chronic Shoulder Pain in a Nonagenarian Using Cooled Radiofrequency Ablation of the Suprascapular nerve at the Suprascapular Notch

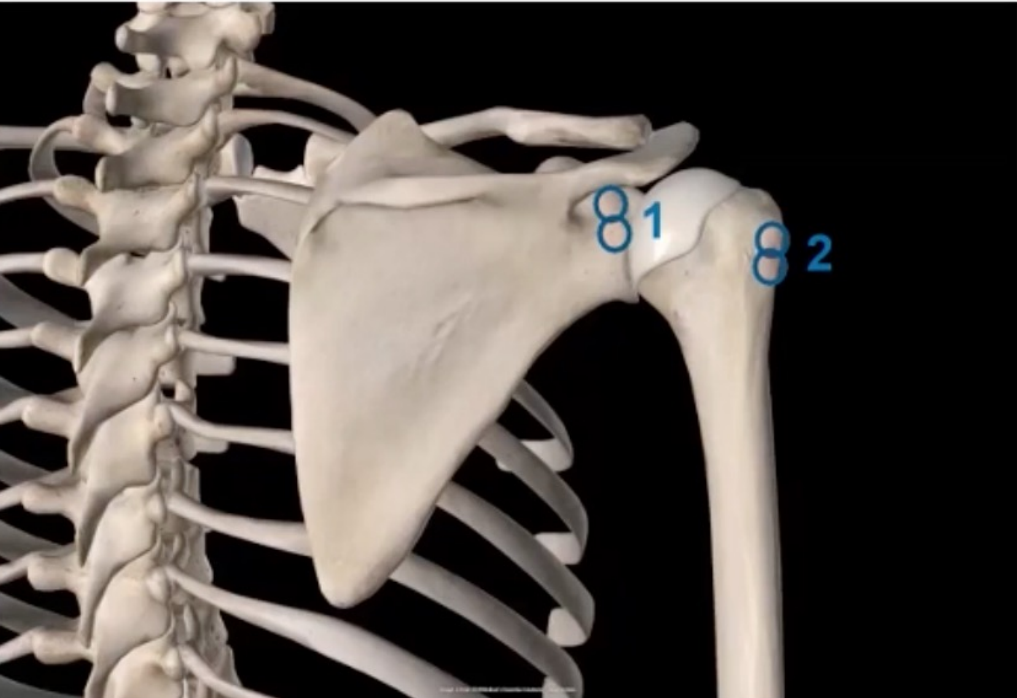
Shoulder Targets for Diagnostic Nerve Blocks & COOLIEF* Cooled RF

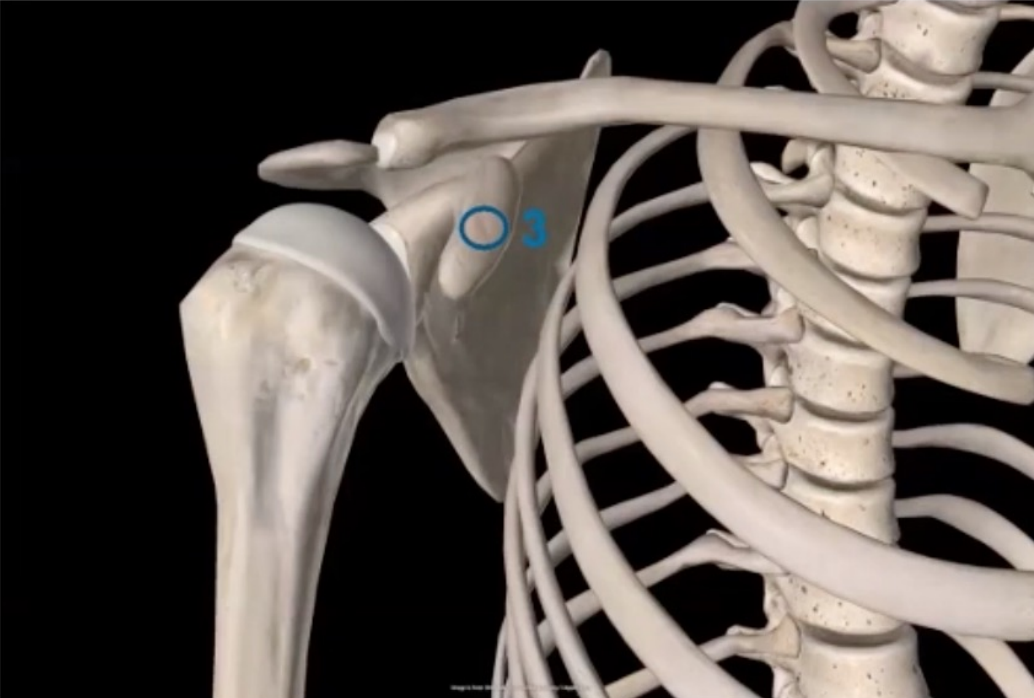
Posterior Targets

- Suprascapular Nerve
 - Two ablations
- Axillary Nerve
 - Two ablations

Anterior Targets

- Lateral-Pectoral Nerve
 - Single ablation





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Discussion:
There is no current literature on using c-RFA of the suprascapular nerve at the suprascapular notch. However, continuous radiofrequency ablation (RFA) at this site has been documented, and peripheral nerve stimulation and pulsed RF have been performed due to the mixed motor and sensory fibers. In cases requiring more durable pain relief where peripheral nerve stimulation is not feasible, continuous RFA has been used, despite risks of muscle weakness and atrophy of the infraspinatus and supraspinatus muscles. This case is unique as the patient did not experience muscle weakness after the ultrasound-guided suprascapular nerve block and after the ablation, which may be attributed to chronic compensatory muscle adaptations. She experienced increased range of motion and was able to raise her left arm overhead.

Conclusion:
This case demonstrates the successful treatment of chronic left shoulder pain in a nonagenarian using cooled radiofrequency ablation (c-RFA) at the suprascapular notch. The significant pain relief and functional improvement achieved highlight the potential of c-RFA at this anatomical location, as a viable option for elderly patients with chronic shoulder pain who are not surgical candidates, for which the distal articular branches could not be accessed.

