E-Poster

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Transforming the Management of Serratus Anterior Muscle Pain Syndrome: Ultrasound-Guided Hydrodissection of the Long Thoracic Nerve with 5% Dextrose – A Case Report

Topic: Injections (Joint, Spine, etc.)

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BACKGROUND

Serratus Anterior Muscle Pain Syndrome (SAMPS), often attributed to dysfunction of the Long Thoracic Nerve (LTN), can lead to significant disability, affecting both upper limb movement and quality of life. SAMPS can mimic the pain of myocardial infarction and frequently misdiagnosed as such. Hydrodissection is a minimally invasive technique used to treat nerve-related pain and dysfunction. The procedure involves the injection of a fluid around a nerve or around the area where the nerve may be compressed or irritated.

CASE DESCRIPTION

A 72-year-old male presented to our Rehabilitation Clinic with persistent left chest pain radiating to the upper back. The pain, which began after a fall three years ago during a rafting trip, had worsened recently following an improper movement. Initially rated 6/10 on the Numeric Rating Scale (NRS), the pain increased to 9/10 over the last two weeks, severely affecting his sleep and daily activities. Despite an earlier cardiology consultation, which showed normal results, the patient described his chest pain as similar to a previous heart attack. After ruling out cardiac causes, we recommended ultrasound-guided hydrodissection of the LTN, which the patient consented to. Using a GE high-frequency linear ultrasound probe (10-12 MHz), a Braun 25-G X 3.5-inch needle, and 20 cc of 5% dextrose, we precisely injected the solution around the LTN at the fascial plane above the serratus anterior muscle. Thirty minutes after the procedure, the patient reported significant pain relief, with an NRS rating of 4/10.

DISCUSSION

Serratus Anterior Muscle Pain Syndrome, often linked to LTN dysfunction, can mimic other conditions like myocardial infarction and thoracic outlet syndrome, complicating diagnosis. A thorough clinical evaluation and imaging studies are essential for diagnosis. Hydrodissection, particularly with 5% dextrose, is an effective treatment for nerve-related pain, reducing inflammation and promoting healing. This minimally invasive technique, guided by ultrasound for precision, offers significant relief in SAMPS when conservative treatments fail, making it a promising option for managing this challenging condition.

CONCLUSION

This case highlights the effectiveness of ultrasound-guided hydrodissection with 5% dextrose for SAMPS, offering a minimally invasive solution for nerve pain. Further research is needed to assess long-term efficacy and compare different solutions (saline, PRP, stem cells) for broader musculoskeletal pain management applications.

Statement of Disclosures

None

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