

Case Series

COVID-19 Vaccination Related Lymphadenopathy as a Cause of Acute Shoulder Pain: A Report of Two Patients

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Abstract

Introduction: Physical therapists have utilized ultrasound imaging for over three decades for cross sectional muscle thickness, age-related musculoskeletal changes, response of muscle to interventions, and for biofeedback. More recently, physical therapists have started to incorporate point of care ultrasound as a diagnostic tool for a variety of neuromusculoskeletal conditions including fractures, schwannomas, entrapment of neurovascular structures, and muscle disease. The purpose of this case report is to describe the evaluation and treatment of two patients with shoulder pain that was thought to be musculoskeletal in nature who were subsequently diagnosed with COVID-19 vaccination-related lymphadenopathy and also bring attention to lymphadenopathy as a potential side effect of the COVID-19 vaccination.

Case Description: The first patient case was a 26-year-old male with a chief complaint of right shoulder pain and heaviness who was referred for ultrasound imaging by his physician for a suspected rotator cuff tear. He reported that his symptoms started 2 days prior after playing basketball. The second patient case was a 33-year-old male with a chief complaint of left shoulder pain that was insidious in onset 5 days prior who was referred for ultrasound imaging by his physician. For both patients, the physical examination demonstrated full pain-free range of motion and normal muscle strength for their involved shoulders. Point of care ultrasound imaging performed by the physical therapist was also negative for tendon or bursa abnormalities for the involved shoulder in both patients. Upon further questioning, the first patient stated that he received his first of two COVID-19 vaccinations three days prior in his right deltoid region and the second patient stated that he received his first of two COVID-19 vaccinations six days prior in his left deltoid region. While both patients were afebrile, they did report a recent onset of fatigue after their vaccination. Their past medical histories were unremarkable. Ultrasound imaging of the axillary region for both patients revealed swollen lymph nodes with hilar vascularity on Doppler ultrasound imaging; the axillary nodes were also tender to palpation. Other lymph nodes in the same axillary region as well as the contralateral axillary region did not show any swelling for both patients.

Outcomes: Both patients were referred to their physicians and both were diagnosed with COVID-19 vaccination-related lymphadenopathy. Following the second of two COVID-19 vaccinations, both patients experienced fatigue, malaise, and fever that started about 8 to 12 hours after the second vaccination and resolved within 24 hours.

Discussion: Lymphadenopathy is a potential side effect of COVID-19 vaccination. This report suggests that this condition may manifest as shoulder pain that mimics musculoskeletal pathology; thus, it is important for physical therapists to be aware of this important side effect. If lymphadenopathy is suspected, appropriate screening and medical referral are necessary.

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