Bacterial endocarditis presenting as a rotator cuff and sternoclavicular injury. A case study.

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Clinical Case Presentation:

Background: Shoulder injuries are very common in active older individuals. Shoulder pain can often be referred from other areas and it can be difficult to determine the original source. Occasionally shoulder pain can be referred from non-musculoskeletal related injury or medical condition. The objective of this case study is to present a case that involved shoulder pain being referred from a medical condition.

Purpose: Provide an example of a non-musculoskeletal etiology for shoulder pain.

Case Description: Patient is a 63 year old male referred to physical therapy by his primary care physician with the diagnosis of a right rotator cuff strain. Patient reports working in the yard two days earlier. He woke up the following day with right shoulder pain. The primary care physician prescribed Naprosyn and Physical Therapy.
Past medical history included right shoulder injury with weakness of the rotator cuff ~ 26 years ago. He reports the symptoms improved on their own. There was history of a surgical repair of an abdominal hernia. There was an allergy to penicillin. Medications included Naprosyn and a daily multiple vitamin. The patient reported 3-10/10 pain in the right shoulder, upper trapezius and sternoclavicular joint. The patient had difficulty with ADLs, driving, disturbed sleep, was currently out of work (postal clerk) and was unable to play golf or tennis. Pain was exacerbated by quick shoulder movements, overhead activities, protracting shoulders and coughing. The patient denied numbness and tingling. Cervical range of motion provoked pain in the right distal sternocleidomastoid and sternoclavicular joint. Patient had tenderness of the right medial clavicle and sternoclavicular joint. The right medial clavicle was prominent and there was supraclavicular swelling. Active and passive right shoulder range of motion was limited and painful. Light touch was intact. Right internal rotation strength was 5/5. Pain with resisted right external rotation (4/5) and there was pain/weakness with right empty can test. Minimal restriction right shoulder anterior-posterior glide.

Outcome: The patient's primary care physician was contacted after the initial evaluation due to concern regarding the position of the sternoclavicular joint and the local symptoms. The patient was referred to an orthopedic physician. An x-ray revealed mild acromioclavicular degenerative changes. An MRI identified a rotator cuff tear. The patient was referred back to physical therapy. Re-evaluation revealed continued pain in the medial clavicle and sternoclavicular joint. The patient was referred back to the orthopedist. The patient collapsed in the community and was taken to the hospital. The workup resulted in a diagnosis of bacterial endocarditis which was treated successfully with IV antibiotics.

Discussion: The evaluation of a patient should consider musculoskeletal as well as non-musculoskeletal etiologies. This patient's history and onset of symptoms were consistent with a rotator cuff strain. However the sternoclavicular joint region pain, tenderness and swelling as well as symptoms exacerbating with coughing, were not consistent with a rotator cuff strain. The extent of the pain, swelling and position of the medial clavicle was a concern, especially given the absence of direct trauma. Signs and symptoms of bacterial endocarditis include fevers, chills, night sweats, shortness of breath, persistent cough, new or changed heart murmur, nausea and aching joints & muscles. Of these, the patient only reported joint and muscle pain. This was not typical with bacterial endocarditis.