

Case Study 1: The Painful Shoulder

A 52-year-old Caucasian female is seen with severe left shoulder pain. Pain progressively worsened and became so severe she was immobilizing the shoulder in a sling to remain comfortable. On physical exam, she had exquisite tenderness over the anterior shoulder over the subscapularis tendon. On ultrasound examination, she had a large calcific density expanding the subscapularis tendon, and there was a dynamic impingement of the tendon under the coracoid process during internal rotation of the shoulder. She had associated severe subcoracoid bursitis. She had failed all conservative management. Atypical corticosteroid injection may provide immediate relief but without dealing with the tendon pathology. The patient could only expect a short period of transient symptomatic improvement before symptoms recurred.

Targeting the subacromial bursa, which would typically be the most common approach would also be inappropriate since it would target the wrong bursa based on ultrasonography examination. It is the subcoracoid bursa. That would be the target for corticosteroid injection to provide a period of transient symptomatic relief. Under ultrasound guidance, the subcoracoid bursa was infiltrated with local anesthetic and corticosteroid. This, in fact, did provide immediate symptomatic relief allowing us some time to intervene with the significant rotator cuff pathology.

Following the corticosteroid injection the patient was scheduled back for re-evaluation, and under ultrasound guidance, the large calcific tendinosis was fenestrated with a needle under local anesthetic. An ultrasound-guided percutaneous decalcification procedure was carried out followed by intratendinous injection of platelet releasate. Platelet releasate is a special laboratory process whereby autologous platelet rich plasma is prepared, and then the platelets are activated to release alpha granules into autologous plasma.

This provides an autologous plasma that is rich in platelet-derived growth factors rather than a platelet rich plasma prep. There are certain times when this platelet preparation is preferred over platelet-rich plasma. Intratendinous infiltrations of growth factors, platelet releasate and local anesthetic completely resolved the large calcification and the patient has been asymptomatic for 24 months. It should be pointed out that the cost of care of months and months of physical therapy, conservative care, medications, MRI studies, and multiple subspecialty consultations could all be avoided with early intervention. Two simple interventions directed to a precision diagnosis resolved this patient's problem and she is no longer seeking care within the system. This results in significant costs savings.