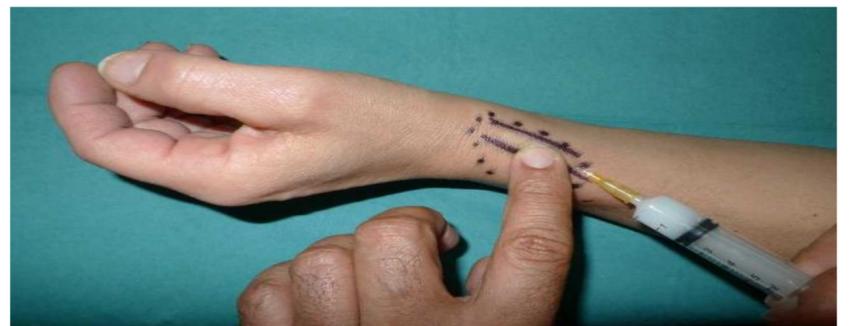
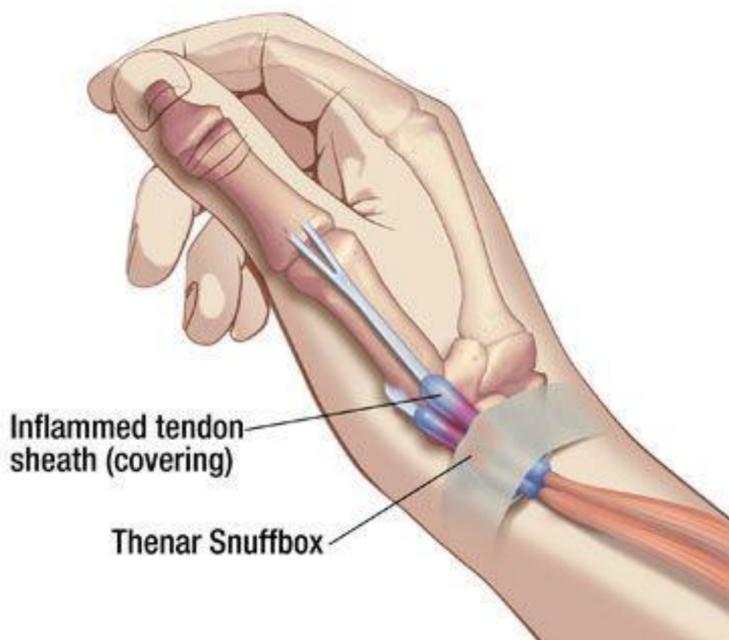


**Objective.** To analyze the short and medium-term outcomes of ultrasound guided platelet-rich-plasma injections for the treatment of De Quervain's Tenosynovitis. Although PRP has gained momentum in the sports medicine world over the last decade, there is a relative paucity of data regarding the efficacy of this technique in the treatment of this pathology. A review of the literature shows that there is only one case report utilizing PRP for this purpose and as such, we believe that this technique deserves further study.

**Summary of Background Data:** Platelet Rich plasma (PRP) is a relatively new treatment modality which has gained popularity in both primary care sports medicine and orthopedic offices since its inception in the early 1990's. During the procedure, blood is drawn from the patient and spun down in a centrifuge. The plasma is drawn off and discarded which leaves a thin layer (namely the buffy coat), behind which contains the platelet rich portion of the blood. This layer of fluid contains diverse platelet growth factors including TGF- $\beta$ , epidermal growth factor and cytokines which promote growth and tissue differentiation which aid in tissue healing. Additionally, practitioners will also incorporate a dry needling tenotomy of the involved soft tissue to create a local inflammatory response that acts as an adjuvant to increase blood flow to the area and create a favorable environment for the PRP to begin working. Research has demonstrated that many different clinical pathologies can be treated with this modality including rotator cuff tendonitis, epicondylitis, plantar fasciitis, bursitis and meniscal injuries. Previous to the advent of this technique, intra-articular corticosteroids had been the gold standard for treatment of overuse and inflammatory issues such as these; however, in recent years, the efficacy and long-term consequences of repetitive steroid injections have proven to be worrisome.

De Quervain's Tenosynovitis



**Methods.** A retrospective review of charts was conducted on patients who received at least one injection of PRP between 2014-2016. Eight patients qualified for the study, 7 females and 1 male. All patients had previously undergone a minimum of 2-4 weeks of conservative therapy which included physical therapy, ice/heat, bracing, iontophoresis, corticosteroid injections and NSAIDs. Symptoms were predominantly described in the distal wrist and hand but also included referred pain into the lateral forearm. Diagnosis of De Quervain's tenosynovitis was made through careful patient history, clinical evaluation and confirmed with ultrasound or MRI depending on the chronicity of the injury and the location of the original facility where care was established. VAS scores were obtained from the medical records both pre and post-procedure and follow-up ranged from 6 months to 2 years with an average of 13 months. Patients were also contacted via phone for information regarding their satisfaction with the procedure as well as the current status of their pain control.

**Results.** VAS scores decreased an average of 87% and these results were maintained at all subsequent follow-up visits for all members of this cohort. Active and passive range of motion was assessed at each additional follow-up visit and all patients demonstrated increased pain free movement in all ranges. Additionally, there were no significant complications following this procedure including neurologic compromise or skin breakdown. Patient satisfaction was overwhelmingly positive with 100% of patients surveyed, reported that they would undergo this procedure again if the pain returned in the future.

**Conclusion:** Ultrasound guided PRP injections significantly increases function and reduces pain associated with De Quervain's tenosynovitis. It appears to be an effective alternative for patients with uncomplicated inflammatory pain associated with overuse of the abductor pollicis longus and the extensor pollicis brevis tendons. PRP injections appear to be both safe and effective and should be considered as an alternative for patients with refractory disease that may be considering surgery; however due to the small sample size of this study, further research must be done to make definitive conclusions about the long term effectiveness of this treatment.