

Use of Platelet Rich Plasma for non-operative management of bicipital tendinopathy in wheelchair users: A Case Series

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Background: 5 patients between ages 18-65 with spinal cord injury greater than one year with shoulder pain less than six months that are wheelchair users.

Objective: To assess whether platelet rich plasma injection can provide pain relief, decreased use of oral pain medication, and increased function in patients with bicipital tendinopathy.

Methods: Each participant meeting initial inclusion criteria met with the principal investigator for interview. A baseline physical exam of the shoulder score (PESS) was obtained, followed by an ultrasound examination of the shoulder (USPRS). After completing the initial ultrasound screening to confirm biceps tendon pathology was completed, data collection including demographics, duration of SCI, level of completeness of SCI, visual analog score (VAS) for pain, recent functional status, and tendon diameter of bicep was obtained. Patients then underwent a unilateral ultrasound guided bicipital tendon sheath injection of autologous platelet rich plasma (PRP) into the symptomatic biceps tendon sheath. The patients were then contacted by phone at two, four, and six weeks post injection to assess for any adverse reactions, updated pain scores, and functional status. At 8 weeks post injection the patients returned! to the clinic for repeat PESS, USPRS, VAS, and functional status survey.

Results: All five participants reported complete resolution of shoulder pain, increased functionality, with no reported adverse effects. All participants decreased or discontinued the use of over the counter or prescription pain medications for shoulder pain following the PRP injection. On followup physical assessment, all participants demonstrated increased range of motion and resolution of pain in symptomatic shoulders. Ultrasound examination of symptomatic shoulders in all participants revealed resolution of tendon tears, edema, and improved fibrin patterning. These changes were not noted in the non-injection arm.

Conclusions: PRP may present a safe, predictable, effective, non-toxic, biocompatible, autologous, non-operative treatment option for shoulder tendinopathy in paraplegic patients that are wheelchair users, but requires further investigation to its potential application in this population.

Disclosure: none

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