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## **A Case Study on Treatment Of Subcoracoid Impingement in an Overhead Athlete With Manual Therapy**

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**Introduction:** Subcoracoid impingement of the shoulder is a condition that occurs when the tendons or soft tissues in the shoulder are compressed or pinched between the coracoid process and the humeral head. It is also suspected that subcoracoid impingement can occur when the humerus translates anteriorly, decreasing the subcoracoid space. This impingement can cause pain, inflammation, and limited mobility in the shoulder joint. All kinds of impingement are typically multifactorial, and have several areas that need to be addressed. The purpose of this case report is to examine the effects of therapeutic exercise as well as manual therapy on subcoracoid impingement in an overhead athlete. **Patient Information:** Patient is a 16-year-old third baseman who began seeking treatment for increased shoulder pain toward the end of a baseball game. Patient reported sharp pain in the anterior aspect of his shoulder when throwing during the cocking phase. He reported pain during warm ups that gradually got worse throughout the game when throwing, and was unable to continue by the bottom of the 5th inning. He reports no neurological symptoms such as numbness or tingling. He reports no history of shoulder pain. Differential diagnoses included subcoracoid impingement or rotator cuff strain. Rotator cuff strain was ruled out as the rotator cuff muscles were strong and not painful, but subscapularis manual muscle testing was weak and painful along with positive impingement tests such as Hawkins-Kennedy test, O'Brians test, and Bear hug test. **Interventions:** Treatment options for subcoracoid impingement may include rest, physical therapy, anti-inflammatory medications, and in severe cases, surgery. The treatment for this patient included manual techniques along with therapeutic exercise over the course of about 6 weeks, followed by a return to throwing progression. Manual techniques included soft tissue mobilization of the pectorals as well as a posterior glide of the shoulder. Following manual therapy the patient would stretch internal and external rotation, and then complete a series of exercises targeting the subscapularis as well as overall rotator cuff strength. **Outcomes:** Once the patient was pain free and internal and external range of motion was normalized, he was cleared to begin a return to throwing progression with his coach. Patient felt strength and range of motion improved and reported being ready to return to play. Following the completion of the throwing progression the patient will be cleared to return to play as tolerated. Patient discussed and agreed to continuing a maintenance program to be done 2-3 times a week either in the athletic training room or at home to maintain the strength needed to play baseball. **Clinical Bottom Line:** Overall this case met expectations of implementing a good posterior cuff strengthening therapeutic exercise plan along with introducing manual therapy to address subcoracoid impingement in an overhead athlete. Based on the positive results of this treatment for this athlete, who had no shoulder injury prior, it would be interesting to see if introducing a posterior cuff strengthening program to overhead athletes as a warm up would prevent similar injuries in the future.