

2021

Diagnosis and Intervention of Posterior Shoulder Impingement in a Non-Throwing Athlete

K Orrick

Houston Methodist Willowbrook Hospital, Houston, TX

Follow this and additional works at: <https://scholars.indianastate.edu/clinat>

Recommended Citation

Orrick, K (2021) "Diagnosis and Intervention of Posterior Shoulder Impingement in a Non-Throwing Athlete," *Clinical Practice in Athletic Training*: Vol. 4: Iss. 2, Article 18.

Available at: <https://scholars.indianastate.edu/clinat/vol4/iss2/18>

This Article is brought to you for free and open access by the Publications at Sycamore Scholars. It has been accepted for inclusion in *Clinical Practice in Athletic Training* by an authorized editor of Sycamore Scholars. For more information, please contact dana.swinford@indstate.edu.

specific exercise can efficiently treat acquired instability with only four visits.

Diagnosis and Intervention of Posterior Shoulder Impingement in a Non-Throwing Athlete

Orrick K

Houston Methodist Willowbrook Hospital,
Houston, TX

Background: Posterior impingement, also commonly called internal impingement, is identified by a repetitive compression of the posterosuperior aspect of the glenoid by the greater tuberosity of the humeral head when the arm is in an abducted and externally rotated position. There are multiple possible causes of this impingement. One of the most frequent contributors is scapular dyskinesia, where the scapula does not track properly with overhead movement due to weakness. Other contributors include kinetic chain instabilities found in the spine, core, and lower extremity, as well as glenohumeral instability causing a shift in the humeral head. Posterior impingement is commonly seen in upper extremity athletes during the late cocking and early acceleration phase of throwing, however this level two case report looks at the dysfunction in the less commonly occurring sport of volleyball. **Patient:** The patient is a fifteen-year-old female volleyball athlete that came to the athletic training facility complaining of left posterior shoulder pain. She has been playing the sport for 2 years, and claims the pain started around two years ago. At the time of evaluation the patient was in the off-season and was preparing to play in the upcoming season. The patient reported moderate pain at rest which increased to major pain while performing overhead movement. Her most recent season saw the greatest increase in pain, and the athlete attributed it to an increase in hitting and serving. The patient reported frequent popping in the shoulder, but no pain accompanied it. With passive movement, the patient had pain at end range in external and internal rotation, and actively had pain with flexion and abduction twenty degrees before end range. Patient presented as well as a lack of scapular

upward rotation during shoulder movement, and the patient reported no pain with flexion when assisted with scapular upward rotation. A load and shift test presented with a grade 2 on the involved side. The posterior impingement test was performed and found to be positive. This led to a diagnosis of posterior shoulder impingement, caused by scapular dyskinesia and glenohumeral instability. **Treatment:** Treatment was focused on improving glenohumeral stability and activating the upward rotators of the scapula to improve the dyskinesia. Initially, manual therapy was used to mobilize the scapula into upward rotation and decrease tension in the latissimus dorsi and upper trapezius. Therapeutic exercise consisted of strengthening of the upward rotators, focusing on functional positions and overhead activities to mimic athletic play. Glenohumeral stability was improved through closed kinetic chain exercises for the shoulder. With the patient being a volleyball athlete, a larger importance was placed on overhead stability with the elbow in near full extension when compared to the typical throwing athlete with posterior impingement. **Outcomes:** The patient progressed well, with manual and exercise therapy interventions improving the patient back to pain free active daily living. Rehabilitation is still ongoing to return to a competitive level, however sport specific activity has been performed by the athlete pain free for short amounts of time. **Conclusions:** Overall the patient's progression was in line with current research, however modifications to rehabilitation needed to be made to fit the athlete's sport. Research for posterior impingement is centered on throwing athletes, and does not take into account the different demands of volleyball. While the patient herself did not have an atypical presentation, her sport called for an atypical approach when forming a rehabilitation plan based on current research. This approach placed a greater emphasis on stabilization in overhead activities, especially in situations where power is needed to generate the force for serving and hitting.