

CERVICAL CONTRIBUTION TO FUNCTIONAL SHOULDER IMPINGEMENT: TWO CASE REPORTS

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ABSTRACT

Background: Subacromial impingement is a common condition among overhead athletes. The cause of subacromial impingement can be multifactorial and often involves impaired rotator cuff function.

Case Description: The following cases outline the presentation, examination and intervention of two overhead athletes, a high school football quarterback and a collegiate swimmer, each presenting with signs and symptoms of subacromial impingement. The unique feature in each case was the manifestation of the cervical spine as the apparent source of rotator cuff weakness, which contributed to functional subacromial impingement although other overt signs of cervical or associated nerve root involvement were absent.

Outcome: Subsequent to this finding, the athletes demonstrated a rapid recovery of rotator cuff strength and resolution of impingement symptoms in response to cervical retraction and retraction with extension range of motion exercises along with posture correction. They both returned to unrestricted sporting activities within a week, with maintenance of strength and without reoccurrence of symptoms.

Discussion: The signs of functional subacromial impingement often include weakness of the supraspinatus and infraspinatus. The cause of the weakness in the two cases appeared to be the result of stresses associated with forward head posture contributing to a possible intermittent C5 nerve root compression. The findings in the two cases would suggest the cervical spine should be considered as a potential cause of rotator cuff weakness in individuals presenting with subacromial impingement. Future research should examine the influence of cervical postures and shoulder muscle strength.

Level of Evidence: 4

Keywords: Cervical posture, functional subacromial impingement, rotator cuff strength

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