Reasoning your way through the injured athletic shoulder

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The majority of athletic shoulder injuries that create a challenge for the physiotherapist are those related to overuse during pursuits such as throwing, swimming and racquet sports. Research related to these lesions has predominantly been conducted on throwers and, in particular, baseball pitchers. While this paper focuses on the throwing shoulder, the pathology and approach to examination and management of shoulder problems associated with swimming and racquet sports are similar.

Since the advent of arthroscopic investigation of the shoulder, understanding of the pathology associated with the painful athletic shoulder has changed. Early hypotheses related to subacromial impingement secondary to anterior laxity and more recently, intra-articular or internal impingement and eccentric load on the biceps anchor during follow-through, leading to fatigue failure of the superior labrum. The current most favoured hypothesis is that of a primary lesion to the superior labrum secondary to altered glenohumeral mechanics during the late cocking phase of the throw.

Such disagreement on the pathology makes clinical evaluation and interpretation of the physical features seen in these athletes difficult for the physiotherapist, who must rely on recognition of typical historical and subjective features associated with the condition and then use clinical reasoning through the physical examination and evaluation of potential contributing factors to reach as strong a diagnostic conclusion as possible without access to the gold standard of arthroscopic examination for confirmation. To make the process even more challenging, critical evaluation of the plethora of clinical tests reported for diagnosis of SLAP lesions indicates that none has a satisfactory level of reliability or diagnostic accuracy.

With little reliable evidence on which to make a clinical diagnosis, the decision about management of the injured overhead athlete also presents the physiotherapist with a dilemma. The only definitive treatment for a SLAP lesion is surgical repair. However, surgical repair alone will not address the contributing features that lead to development of the lesion in the first instance. Not all athletes are keen for surgical intervention. There is also a group of young athletes who present with the subjective features typical of this condition but who do not demonstrate sufficient physical impairment to justify surgical intervention - this has been coined a “precursor SLAP lesion”.

If an elite athlete presents to the physiotherapist in a primary care setting with the typical features of the injured overhead athlete, immediate referral for further investigation and likely arthroscopic repair is the appropriate management pathway. However, the physiotherapist should also evaluate the athlete for the common contributing factors and address these appropriately in conjunction with the throwing coach, both pre- and post-operatively. Similarly, if a junior athlete presents with a precursor lesion, attention to the contributing factors is frequently sufficient to resolve the symptoms. Even those with confirmed labral pathology who choose not to take the

surgical route will benefit to some extent from attention to the contributing factors presumably because their resolution reduces the stress on the injured labrum.

Successful interpretation of the presenting features and ongoing diagnostic reasoning is required for the physiotherapist to reach a satisfactory outcome for the injured overhead athlete. In this paper, the proposed mechanisms of injury and pathology, their relationship to technical, biomechanical and movement pattern impairments and clinical features of the condition will be presented, together with discussion on the contribution of the physiotherapist to management of the injured overhead athletic shoulder.