Double Crossed Syndrome in Cricketer's Shoulder: RCT

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Abstract

The purpose of the study was to identify the effect of stretching and strengthening exercises on double crossed syndrome in cricket bowlers. This study was carried out at Belgaum Cricket Club and Union Gymkhana, Belgaum. The sample consisted of 30 male fast bowlers with double crossed syndrome. Their demographic data was collected and participants were randomly allocated into two groups (Study & Control) of 15 each after obtaining their informed consent. Pre-interventional measurements were taken in terms of Forward Head Posture (FHP), Forward Shoulder Posture (FSP), Head to Shoulder Translation (HST), Head to Ankle Translation (HAT), Shoulder to Ankle Translation (SAT), New York Postural Rating Scale (NYPRS). Shoulder stretching and strengthening exercises were carried out using a theraband for a period of six weeks, following which post interventional measurements were taken. Interventional group showed statistically significant differences in terms of FSP, HST, SAT, NYPRS when compared with the control group. It is concluded that shoulder stretching and strengthening exercises are effective in reducing the muscular imbalance pattern in double crossed syndrome.

Key Words: Cricket bowlers, Forward shoulder posture, NYPRS.

Introduction

Cricket is one of the major international sports played in more than 60 countries. In India, cricket has always been much more than a sport. Although a non-contact sport, injuries in cricket are common and have been documented as far back as 1751 *(Brasch, 1971).* In 1970, cricket was regarded as a sport of 'Moderate Risk Injuries'. These days' cricketers are more susceptible to high risk injuries and cricket ranks 5th among causes of non-fatal accidents, because today players are expected to train themselves longer, harder and earlier in life, to excel in sport *(Weightman & Browne, 1971).* Cricket bowlers like other throwing sports involve repeated forceful ballistic arm actions which will put a great deal of eccentric load on the shoulder rotator cuff muscles predisposing them to injuries *(Stretch, 2001).* Bowling has been found to be the major cause of cricket injuries with 38% to 47.4% of schoolboy bowlers sustaining injuries in cricket *(Stretch, 1995 & Honcock & Hawkins, 1996).* Scapular instability is found in as many as 68% of rotator cuff problems and 100% glenohumeral problems. The abnormal scapular biomechanics that occur as a result of this dysfunction create imbalance between agonist and antagonist muscles and predispose the shoulder to injuries *(Voight & Thomson, 2000).*

To achieve peak performance during overhead activity, there must be optimal balance between mobility and stability. Most of the shoulder problems are due to improper technique and unbalanced upper body workouts. In highly trained athletes, an adaptation of increased activation of agonist over antagonist muscles has been reported in both upper and lower extremities. As a result of these neuromuscular and strength adaptations, the commonly observed forward head and rounded shoulder in bowlers develop overtime *(Kluemper et al, 2006).* Possibly this phenomena is