

## CASE SERIES

REHABILITATION OF SUBACROMIAL PAIN SYNDROME  
EMPHASIZING SCAPULAR DYSKINESIS IN AMATEUR  
ATHLETES: A CASE SERIESKatherinne F. Moura, PT, MSc<sup>1</sup>Renan L. Monteiro, PT, MSc<sup>1</sup>Paulo R.G. Lucareli PT, PhD<sup>2</sup>Thiago Y. Fukuda, PT, PhD<sup>1,3</sup>

## ABSTRACT

**Study design:** Case series

**Background and Purpose:** Scapular dyskinesia has been associated with several shoulder injuries. Recent literature has suggested that a greater activation of the scapular muscles can play an important role in reducing subacromial impingement in patients with shoulder pain. Thus, the purpose of this case series was to describe a rehabilitation program that emphasizes scapular dyskinesia correction for those with clinical evidence of subacromial pain syndrome.

**Case Descriptions:** The four amateur athletes in this series showed clinical evidence of subacromial pain syndrome and scapular dyskinesia and each underwent a treatment protocol consisting of three phases. Phase 1 emphasized pain relief, scapular control, and recovery of normal range of motion (ROM), Phase 2 focused on muscular strengthening, and Phase 3 emphasized sensory motor training.

**Outcomes:** All subjects demonstrated decreased pain, improved sports performance and function, increased muscular strength for shoulder elevation and external rotation, and increased ROM for internal rotation. Improvement in serratus anterior (SA) activation was also noted.

**Discussion:** The results of this case series suggest that subjects with clinical tests positive for subacromial pain syndrome can show significant improvement with an intervention focused on scapular dyskinesia correction. SA activation can play an important role in this process given that all subjects presented with better recruitment after rehabilitation, as measured by electromyography.

**Levels of Evidence:** Level 4

**Key Words:** Impingement, serratus anterior, trapezius

## CORRESPONDING AUTHOR

Thiago Y. Fukuda

Instituto Trata, Rua Martinico Prado, 26 Cj  
141, CEP 01224-010

Bairro Higienópolis, São Paulo – SP, Brazil

Phone: (55 + 11) 96400-4144

E-mail: fukuda@institutotrata.com.br

<sup>1</sup> Physical Therapy Sector, Santa Casa of São Paulo - ISCMSP, São Paulo-SP, Brazil

<sup>2</sup> Nove de Julho University, São Paulo-SP, Brazil

<sup>3</sup> Trata Institute – Knee and Hip Rehabilitation, São Paulo-SP, Brazil