ABSTRACT

Background: An aberrant upper body posture has been proposed as one of the etiological factors contributing to the development of subacromial impingement syndrome (SAIS). Clinicians have translated this supposition into assessment and rehabilitation programs despite insufficient and conflicting evidence to support this approach.

Purpose: The purpose of this study was to compare several postural variables between the SAIS patients and asymptomatic healthy controls.

Study Design: Case-Control Study

Methods: A total of 75 participants including 39 patients (20 females; 19 males) and 36 healthy controls (15 females; 21 males) participated in the study. Study evaluated several postural variables including forward head posture (FHP), forward shoulder posture (FSP), thoracic kyphosis index (TKI), scapular index (SI), normalized scapular protraction (NSP), and the lateral scapular slide test (LSST). The variables were compared between patient and control groups according to sex.

Results: Significant differences were observed in the female patients compared to asymptomatic controls for the FHP (49.3° ± 9.6° vs 55.5° ± 8.3°, p = 0.03), FSP (45.5° ± 10.1° vs 53.6° ± 7.0°, p = 0.02), and LSST in third position (10.2 ± 2.1 cm vs 11.5 ± 0.7 cm, p = 0.01). Male patients showed a significant difference only in the FSP compared to controls (61.9° ± 9.4° vs 49.7° ± 9.2°, p < 0.001).

Conclusions: While inadequate data on the relationship between dysfunctional posture and SAIS has led to broad variations in current rehabilitation strategies, the results of the present study revealed different patterns of postural aberrations in female and male patients with SAIS. This clarifies the need to develop individualized or sex-specific approaches for assessing posture in men and women with SAIS and rehabilitation programs based on the assessment results.

Level of Evidence: 3b

Key words: Forward head posture, forward shoulder posture, movement system, postural assessment, scapular positioning, shoulder impingement, thoracic kyphosis

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