Original Paper

Comparison of the length of shoulder girdle's muscles, neck and shoulder range of motion in patients with chronic neck - shoulder pain and healthy subjects

Moezy A (Ph.D)*[1], Gharamaninia Sh (MD)[2]
Gharamaninia A (M.D)[3], Rezaei Hemami M (Ph.D)[4]

[1]Associate Professor, Department of Sports Medicine, Iran University of Medical Sciences, Tehran, Iran. [2]General Physician, Iran University of Medical Sciences, Tehran, Iran. [3]Sports Medicine Specialist, Iran University of Medical Sciences, Tehran, Iran. [4]Assistant Professor, Department of Social Medicine, Iran University of Medical Sciences, Tehran, Iran.

Abstract

Background and Objective: One of the most common musculoskeletal injuries in modern societies is neck and shoulder pains which often lead to postural disorders and soft tissue shortenings. This study was done to compare the length of shoulder girdle's muscles in healthy subjects and patients with shoulder and neck pain.

Methods: This case-control study was done on 16 patients with chronic neck- shoulder pain as cases and 15 healthy subjects as control group. Length of upper trapezius, pectoralis major and minor muscles was evaluated with functional tests. Also, the range of shoulder abduction and external rotation and cervical flexion and lateral flexion were measured by goniometer.

Results: Significant differences between patient and control groups were found in pectoralis major and minor muscles length in involved side ($P<0.05$) and also in neck active range of lateral flexion ($P<0.05$). Furthermore, there were significant differences between shoulder active range of abduction and external rotation ($P<0.05$) in the groups.

Conclusion: This study confirmed a significant reduction in range of motion in the neck and shoulder and also a remarkably shortening in the muscles of in the involved side.

Keywords: Muscle Length, Trapezius, Pectoral, Chronic Pain, Shoulder, Neck

*** Corresponding Author: Moezy A (Ph.D), E-mail: moezy.a@iums.ac.ir, azarmoezy@yahoo.com**

Received 4 Jan 2016 **Revised** 22 Jan 2017 **Accepted** 6 Feb 2017

Cite this article as: Moezy A, Gharamaninia Sh, Gharamaninia A, Rezaei Hemami M. [Comparison of the length of shoulder girdle's muscles, neck and shoulder range of motion in patients with chronic neck - shoulder pain and healthy subjects]. J Gorgan Uni Med Sci. Summer 2017; 19(2): 51-58. [Article in Persian]