

Title: Electromyographic analysis of shoulder girdle muscles in swimmers with and without shoulder and neck pain

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The purpose of this study was to analyze the upper, middle, lower trapezius, sternocleidomastoid, middle deltoid, serratus anterior and latissimus dorsi muscle activity in a group of swimmers with shoulder and neck pain relative to a group of subjects without symptoms of shoulder and neck pain during the functional upper limb task. 9 swimmers with shoulder and neck pain and 9 swimmers without shoulder and neck pain were recruited. surface electromyography from the upper, middle, lower trapezius, sternocleidomastoid, middle deltoid, serratus anterior and latissimus dorsi was recorded unilaterally in 9 swimmers (9 men; mean+SD age, 18/5 + 3/1 years) with shoulder and neck pain, and 9 age matched swimmers without pain. Root-mean-square value were calculated and normalized to assess the muscular activation during a functional upper limb task. The data showed significant differences between the muscle activity of upper trapezius (F=13/36, P=0/002), serratus anterior (F= 6/33, P= 0/023) and latissiums dorsi (F= 13/09, p=0.002) in groups. The swimmers with shoulder and neck pain demonstrated greater activation of the UT, SA, LD during a functional task. This study revealed altered muscle activation in swimmers with shoulder and neck pain which can be emphasized on rehabilitation programs.

Biography

Elnaz Sabzehparvar has completed her Ms at the age of 25 years from Azad university, karaj branche, Iran. She has collaborated as an hydrotherapy instructor with techne sport injury and corrective exercise centre.

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