

عنوان مقاله:

Normalized Electromyography of Shoulder Muscles during Selected Functional Tasks of Upper Limb in Patients with Shoulder Impingement Syndrome

محل انتشار:

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خلاصه مقاله:

Background & Aims: Precise muscle activity pattern is required to maintain normal shoulder function and any alteration in muscle activity can result in movement impairment. The purpose of this study was to assess normalized electromyography (EMG) of shoulder muscles during selected functional tasks of upper limb in patients with shoulder impingement syndrome. **Methods:** Test group consisted of 15 subjects with shoulder impingement syndrome selected by nonprobability convenient sampling and control group consisted of 15 matched healthy subjects. In each group selected exercises including open kinetic chain with and without external load and closed kinetic chain with axial load were done and during each exercise surface EMG from selected muscle was recorded. **Results:** There was significant difference between the two groups in the activities of upper trapezius, infraspinatus and three regions of deltoid muscle ($P < 0.05$). changes in normalized EMG were task dependent. Among all selected exercises, DYE showed minimum changes and tripod showed maximum changes in muscle activity domain. **Conclusion:** Decrease in activity domain of infraspinatus and trapezius muscles in patients with shoulder impingement syndrome causes impairment of shoulder function. DYE with causing minimum changes and Tripod with causing maximum changes in muscles activity domain are suggested respectively as the first and the last activity patterns in the treatment of these patients.

کلمات کلیدی:

Shoulder joint, Shoulder impingement syndrome, electromyography, Exercise, Biomechanics

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