

ABSTRACT

Effectiveness of Pulley Resistance Exercises and Elastic Resistance Exercises in the Rehabilitation of Supraspinatus Tendinitis

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Purpose

The purpose of this study was to determine the relative effectiveness of two resistance exercise approaches, pulleys and elastic bands, in the rehabilitation of shoulder patients with the diagnosis of supraspinatus tendinitis.

Methodology

The research design for this study consisted of two parts: (1) a two group experimental design with repeated measures was used in relation to the first six hypotheses, and (2) a single subject A-B research design was used in relation to the last three hypotheses. A questionnaire assessing symptoms and function of the shoulder, goniometer readings, the Visual Analog Scale, and Dynamometer muscle tests were the repeated measures.

The 12 subjects utilized in the study were referred to the researcher by a physician with the diagnosis of supraspinatus tendonitis. In addition to this diagnosis, subjects were compatible with the other inclusion/exclusion criteria.

Shoulder questionnaire data were analyzed statistically using the Mann-Whitney U test, while the one sample t test was used to analyze the data generated by the other measures.

Findings

Statistically significant findings included the following: pulley resistance exercise was more effective than elastic band resistance exercise in increasing range of motion, increasing shoulder strength, and reducing pain. No statistically significant differences between the two groups could be found for the questionnaire subscales of global assessment, changes in pain level, activities of daily living, athletics and recreation, work rehabilitation, and rehabilitation satisfaction.

Conclusions

Positive rehabilitation results are possible for patients with the diagnosis of supraspinatus tendonitis, using an exercise program based on Scientific Therapeutic Exercise Progressions that utilizes pulleys as the resistive exercise approach of choice. Recommendations for further research included replicating this study with different

patient diagnoses, different measures of patient rehabilitation, and the other commonly used resistive exercise approach: free weights.