ABSTRACT

Background: Although commonly prescribed, the evidence to support exercises therapy (ET) and conservative management for the treatment of full-thickness rotator cuff tears (FTT) is equivocal.

Purpose: The purpose of this systematic review of the literature was to determine the current level of evidence available for ET in the treatment of FTT and to provide a formal Grading of Recommendations Assessment, Development and Evaluation (GRADE) Working Group of recommendation.

Methods: Five databases were systematically searched to evaluate the effectiveness of ET for FTT. Inclusion criteria: experimental or observational studies of adults clinically diagnosed with FTT, or massive, or inoperable tears that contained a treatment group that received ET for FTT. Exclusion criteria included: history of surgical repair, concurrent significant trauma, neurological impairment, and level V studies. Articles were assessed for quality, the level of evidence (I – V) and GRADE of recommendation (A to F) was determined. Data extraction included: demographics, specific interventions, and outcomes.

Results: One thousand, five-hundred and sixty-nine unique citations were identified, 35 studies were included: nine randomized controlled studies, six cohort studies, 15 case series and five case reports. There were 2010 shoulders in 1913 subjects with an average age of 64.2 years, 54% males, 73% of tears were >1 cm and 37% were classified as massive. Based on studies that reported, >58% of tears were >1 year and 73% were atraumatic. Of the non-operatively treated cohorts that reported the respective outcomes: 78% improved in pain (9/10 cohorts that reported statistically significant differences [stat-sig] p<0.05), 81% improved in ROM (14/14 cohorts that reported, met stat-sig), 85% improved in strength (7/8 cohorts that reported, met stat-sig), 84% improved in functional outcomes (17/17 cohorts that reported, met stat-sig). Dissatisfied outcomes occurred in 15% of patients, who then transitioned to surgery.

Conclusion: The current literature indicates GRADE B recommendation (moderate strength) to support the use of ET in the management of FTT. There is further need for well-designed randomized controlled trials.

Level of Evidence: 2a

Key Words: Exercise therapy, full-thickness rotator cuff tear, non-operative management