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*"Lower Trapezius Tendon Transfer vs. Partial Arthroscopic Rotator Cuff Repair for Massive Rotator Cuff Tears: A Pilot Randomized Control Trial"*

Massive irreparable rotator cuff tears of the shoulder in the absence of significant shoulder arthritis are common in older patients, and are associated with significant pain and functional limitations. Clinical outcome studies have generally supported the efficacy of tendon transfers for the treatment of massive irreparable rotator cuff tears. Recent interest has piqued around lower trapezius tendon transfer. The rationale for performing lower trapezius tendon transfer relate to theoretic advantages of a similar line of pull to the infraspinatus (one of the rotator cuff tendons), and its anatomic position outside of the shoulder joint. There is currently no clear surgical consensus regarding the optimal treatment of patients with symptomatic massive irreparable rotator cuff tears that are appropriate candidates for joint salvage treatment, and no high level of evidence studies to guide clinical decision making have been published. A pilot study is required prior to the development of a full-scale trial to assess its feasibility and recruitment across clinical sites, to determine protocol adherence (errors in randomization), and patient retention over a 12-month period.

The authors predict that patients presenting with massive, irreparable rotator cuff tears with an external rotation lag will have better patient reported outcomes, external rotation range of motion and strength and lower revision rates when treated with a lower trapezius tendon transfer compared to those who undergo a partial rotator cuff repair and biceps tenodesis/tenotomy.

The main objective of this pilot trial is to assess a composite measure of feasibility including recruitment, protocol adherence, and patient retention at two years. The secondary objectives, currently exploratory only, are to determine the clinical outcomes of lower trapezius tendon transfer versus arthroscopic rotator cuff partial repair and biceps tenodesis/tenotomy on clinical outcome measures, shoulder function, adverse events and reoperation rates.

This pilot study is a parallel-group multicentre randomized controlled trial with participating sites across Canada that aims to compare the clinical outcomes of patients with massive irreparable rotator cuff tears and who are appropriate candidates for joint salvage, treated with either arthroscopic partial rotator cuff repair or arthroscopic-assisted lower trapezius tendon transfer.