**Subacromial Pain: Is decompression surgery outdated?**

Subacromial pain and subacromial impingement is one of the most common disorders of the shoulder; being referenced to account up to 65% of all shoulder complaints.1 Subacromial impingement (SAI) is an umbrella term for numerous pathologies including: partial rotator cuff tears, calcific tendinitis, subacromial bursitis, and tendinosis.1 Main signs and symptoms of SAI include: +Neers, +Cross Body Test, difficulty with overhead activity, and anterolateral acromion pain spreading to lateral humerus. Through cadaver studies it has been identified that this impingement occurs due to the limited space between the head of the humerus and the undersurface of the acromion which typically lies within 7 and 14 mm in “healthy” asymptomatic shoulders.1,2 Specific extrinsic factors that can cause SAI include anatomical factors and biomechanical factors. The shape of the acromion itself is the main contributing extrinsic factor.2 There are three types of acromion shapes: Type I Flat, Type II curved, or Type III Hooked.3 The coracoacromial ligament can also become thickened causing narrowing of the joint space. Biomechanically, if the humeral head has excessive superior translation with motion or if abnormal scapular motions causes the acromion to move inferiorly SAI will occur.2 Due to these extrinsic factors, exercise with emphasis on RTC strengthening is recommended as the first line of defense following by activity modification and cortisone injection.2 However, if treatment is unsuccessful within three months, there has been documented research showing push towards subacromial decompression surgery (SAD). In fact, in the UK alone, over 21,000 subacromial decompression surgeries are completed each year and the rate of this surgery has increased fivefold over the past two decades.2

What are we as therapists accomplishing within this three-month time span before surgeons are pushing patients towards surgery? Land, Gordon, and Watt conducted a randomized control trial published December of last year in *Physiotherapy Research International* exploring the effect of manual therapy on SAI.3 They completed a double-blinded RTC sixty participants aging between forty and sixty years old with at least three of five positive orthopedic signs: Hawkins and Kennedy, Neer, external rotation resistance test, rotator cuff tendon palpation, and cross body adduction.3 Participants were randomized into an active control group who received ultrasound for six weeks, an intervention group complete upper thoracic mobilizations for six weeks with a daily HEP over a twelve week period, and an intervention group receiving soft tissue mobilization of posterior shoulder for six weeks with posterior shoulder home stretch program over a twelve week period.3 All therapy was performed by one of two therapists, and outcomes were taking at three, six, nine, and twelve weeks with a six month follow up email. Results revealed no differences in participants at baseline with both intervention groups significantly decreasing pain, improving functional outcome scores, and increase in posterior shoulder AROM compared to control at twelve weeks; however, neither treatment group showed a significantly greater benefit in comparsion.3 Email follow up at six months revealed continued decrease in pain and increase in functional outcome scores within both treatment groups.3 This RTC provides evidence that manual therapy coupled with exercise has the power to address extrinsic causes of SAI and improve function and pain outcomes

*British Journal of Sports Medicine* published a meta-analysis in December 2018 which analyzed numerous trials and studies comparing SAD surgery versus placebo surgery.2 This meta-analysis explored over a thousand patients between the ages of forty-three and fifty-nine years old.2 Lahdeoja, et al explored pain, physical function, and quality of life as their main outcomes as prognosis of patient recovery.2 Their main eligibility criteria for selecting specific studies was RTC trails comparing SAD versus any other form of treatment including manual, exercise, and placebo.2 Eighteen publications with nine different trials were considered for this analysis where two trials compared SAD to placebo and five trials compared SAD to exercise and manual therapy. Analysis results revealed with high certainty no clinical benefit with respect to pain, function, or quality of life outcomes at six months or a year following SAD surgery.2 Lahedoja, et al. also discovered that there wasn’t significant evidence to suggest surgical participation benefiting patients’ participation in sport or work activities six months following surgical date.2 Of note, this meta-analysis also discovered that in Brox, JI trial research patients continue to report an average pain of 1.5-3/10 on the visual analogue scale five years follow up irrespective of treatment provided.2 Thus, even surgery isn’t able to get our patients completely pain and symptom free.

We must consider this updated research when working with our SAI patients. Consider the risks associated with a subacromial decompression surgery: blood vessel damage, chronic shoulder pain, infection, nerve damage, hematoma, rupture of biceps tendon, and acromion fracture.4 Reflect on the psychological toll many patients undergo when they agree to “go under the knife.” Are we failing our patients by not stressing the importance of conservative approach followed by specific compliance to their specific HEP? Is there more education we can provide our patients regarding therapy and surgical outcomes and the risk of chronic pain associated with SAI? Is it more important to stress a patient’s progress in AROM, strength, and activity participation rather than focusing on their pain? Can we provide our patients with better self-management techniques, activity modifications, and coping mechanisms in order to provide them with a better overall quality of life? You decide.

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