

The Psychological Rehabilitation of the Handball Players Before Returning From Injury To Stadium

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ABSTRACT:

The purpose of the study is regarding "Shoulder injuries" in handball players are both a diagnostic and therapeutic test. Information of each aspect of the advancement of shoulder disorders is necessary to apply legitimate treatment modalities. The mechanism of the overhead activity in tossing sports has been studied extensively. This motion is unnatural and profoundly powerful, regularly surpassing the physiological limits of the joint. Inferable from over-burden of various anatomical structures, the shoulder is susceptible to damage. Ideal shoulder work requires great motor chain work, ideal stability, and coordination of the scapula in the overhead activity. A very much adjusted activity of the rotator cuff muscles and capsular structures is necessary to get a stable focus of pivot amid the overhead activity. This audit concerns shoulder injuries, identified with the overhead motion in tennis players, which can be clarified by the same mechanism as thrower's shoulder.

The study constitutes of 5 shoulder injuries in tennis players (age: 20 – 30 years) at Hyderabad. In this study, we report the results of patients treated with an arthroscopic capsular release, lysis of adhesions, and control under anesthesia for the treatment of shoulder stiffness following RCR. This blend of procedures represents a safe and solid means to recapture shoulder motion, specifically FE and ERS, after the onset of post-agent shoulder arthrofibrosis that is hard-headed to

conservative measures. Moreover, no significant differences in result existed based on whether the record surgery was performed open, smaller than usual open, or arthroscopic. Laborer's compensation status resulted in bring down approved result measures, yet no distinction in ROM.

INTRODUCTION:

Bear torment can occur in tennis players in light of the way that there are rehashed stresses in the midst of tennis strokes, especially the serve. There are a couple of wellsprings of shoulder pain in tennis players, yet a standout amongst the most broadly perceived causes is Shoulder Bursitis. Bursitis is disturbance of a sac of fluid called a Bursa. In the shoulder visit abuse of the Rotator Cuff muscles (a social event of little muscles, organized close to the ball-and-connection joint of the shoulder, that offer security to the ball and connection) can achieve the Bursa to get infringed' between the muscles and the hard discernible nature of the shoulder, inciting to aggravation. This causes torment at whatever point the arm is raised.

What a large number individuals call the shoulder is really a couple of joints that consolidate with ligaments and muscles to allow an extensive assortment of development to the arm, from scratching your back to flawless hand stroke over tennis. Most shoulder issues incorporate the sensitive tissues, muscles, tendons, and the tendon as opposed to bones and fall into three critical classes;

- tendinitis/bursitis
- injury
- arthritis

Because of master report regarding the recreational exercises the tissue is related to monotonous strain harm likewise called cumulative injury issue, abuse disorder or enthesopathy. Likewise with numerous other hand and arm conditions, extraordinarily restricted intelligent support has been viewed. The tendon as a string associates a muscle to a bone or other tissue and most tendinitis are the consequence of the wearing method that happens over a time allotment.

- intense/subacute tendinitis after some abuse extreme exercises endless
- tendinitis coming to fruition because of degenerative illnesses or dull developments ;
- the splitting and tearing of the ligaments of the rotator cuff,(that is a strategy of muscles and their ligaments that gives the shoulder development and steadiness).



Figure 1.4: Shoulder Injury

The purpose of the paper is to elucidate the most surely understood reason for tennis shoulder, side effects and symptomatic strategy and furthermore possible measures. The pathophysiology of enthesopathy is related to the levator scapular muscle association on the upper normal corner of the scapular sharp edge. Non-flammable, endless degenerative changes are perceived in surgical pathology examples.

This muscle has small start and does not transmit extensive powers through its tendon in the midst of repetitive nature of hitting a large number balls which prompts to minor tears in the tissue. This as often as possible is seen at the solid tendinous intersection by coordinate palpation.

For tennis players consideration must be given flexibility, quality and perseverance of the shoulder muscles. Bear adjustment practices under the supervision of a sanctioned physiotherapist can likewise check impingement. Moreover, any increments in the measure of getting ready or contention must be progressive so as not to over-trouble the shoulder. Specifically, redundancies of the administration movement should be extended a tiny bit at a time to allow the body to adjust to extended workload. The primary purpose of treatment is to decrease the measure of irritation through ice treatment (never apply ice specifically to the skin) and quieting medication endorsed by a specialist. The Shoulder Cryo/Cuff is the best strategy for ice treatment at home. It is definitely not hard to use and remains frosty for 6 - 8 hours. Then again, a reusable cold pack can be used with a wrap that fixes the nippy pack set up. In the occasion that kept in the cooler this can be used again and again. If you don't have induction to a cooler where you play tennis, at that point Instant Cold Packs give a speedy dispensable procedure for ice treatment. Once the bothering and torment has settled, activities to recoup full improvement can start, trailed by a purposely assessed strengthening and offsetting program.

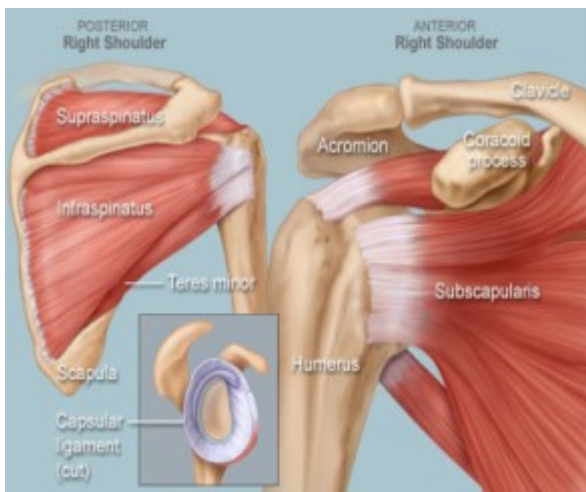


Figure 1.4: Shoulder Injury

REHABILITATION:

Rebuilding is a treatment or pharmaceuticals proposed to enable the system of recuperation from mischief, disease, or tainting to as customary a condition as could be typical in light of the ebb and flow situation. The inspiration driving revamping is to reestablish a couple or most of the tolerant's physical, material, and mental capacities that were lost as a result of damage, infirmity, or illness. Recovery fuses helping the patient to adjust for shortages that can't be rotated therapeutically. It is suggested after various sorts of mischief, disease, or disorder, including evacuations, joint torment, risk, heart tainting, neurological issues, orthopedic injuries, spinal line wounds, stroke, and awful personality wounds.

Recovery or Reclamation of the injuries should be done just by qualified masters. Rehearses and other physical mediations must consider the tolerant's need. An instance of an insufficiency is the departure of a part. A fitting and pleasant revamping task can switch various disabling conditions or can enable patients to adjust to deficiencies that can't be rotated by medicinal idea. Recovery addresses the tolerant's physical, mental, and characteristic needs. It is master by reestablishing the tolerant's physical limits as well as altering the comprehension's physical

and social condition. The rule sorts of recovery are physical, word related, and vernacular course. Each revamping endeavor is exceptionally made to the individual quiet's necessities and can consolidate no less than one sorts of treatment. The quiet's specialist if all else fails sorts out the attempts of the reconstructing cluster, which can fuse physical, word related, talk, or distinctive masters; restorative overseers; engineers; physiatrists (physical pharmaceutical); clinicians; orthoptists (makes contraptions, for instance, props to redress twisted or insufficiently shaped bones); prosthetists (a counselor who makes counterfeit extremities or prostheses); and capable consultants. Relatives are every now and again successfully consolidated into the quiet's remaking program.

PHYSICAL THERAPY:

Non-interfering treatment helps the patient reestablish the use of muscles, bones, and the material structure using warmth, chilly, back rub, whirlpool showers, ultrasound, work out, and distinctive strategies. It tries to moderate torment, overhaul quality and convenience, and set up the patient to perform basic customary errands. Dynamic recuperation may be prescribed to reestablish a patient after expulsions, joint desolation, seethes, illness, cardiovascular disease, cervical and lumbar brokenness, neurological issues, orthopedic injuries, pneumonic contamination, spinal line wounds, stroke, awful personality wounds, and diverse injuries/disorders. The traverse of the training based recuperation program contrasts relying on the mischief/disease being overseen and the understanding's response to treatment. Development is the most overall used and best known sort of powerful recuperation. Subordinate upon the steady's condition, exercises may be performed by the patient alone or with the consultant's assistance, or with the

master moving the understanding's members. Practice hardware for non-meddlesome treatment could fuse an activity table or tangle, a stationary bike, strolling guides, a wheelchair, sharpen stairs, parallel bars, and pulleys and weights. Warm treatment, associated with warmed water packs, infrared lights, short-wave radiation, high rehash electrical stream, ultrasound, paraffin wax, or steaming showers, is used to enliven the tolerant's course, loosen up muscles, and decrease torment.

Crisp treatment is associated with ice packs or cool water soaking. Engrossing a whirlpool would straightforwardness be able to muscle fit torment and sustain advancements. Back rub helps dispersal, helps the patient loosen up, eases torment and muscle fits, and declines swelling. Low quality electrical streams associated through the skin empower muscles and influence them to contract, helping debilitated or weakened muscles respond once more.

PARTICIPANTS:

In this study we choose participants were separated into two groups: Group 1 (n = 5, age: 18 ± 2.58) went to a Volleyball physiotherapy treatment Program and Group 2 (n = 5, age: 18 ± 2.58) was composed of Control Group. Along these lines the point of this study was to assess whether physiotherapy Treatment would rehabilitation be able to assumed control 6 months would enhance performances among revolving cuff damage volleyball players.

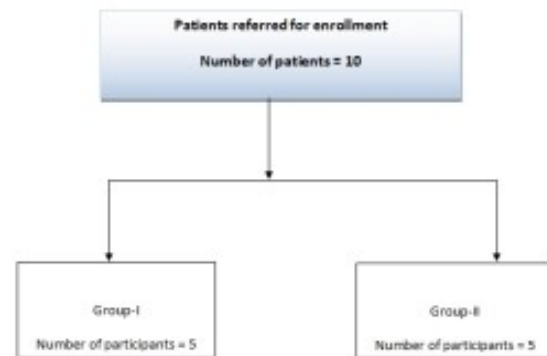


Figure 3.1: Flow graph of the study process, showing patient selection.

3.2 METHODS:

There is a high predominance of shoulder disorders in the group. Shoulder disorders can result in considerable torment and disability. Physiotherapy is regularly the first line of treatment for shoulder disorder. Twenty-six trials presented sufficient information to be incorporated into meta-analysis. There is some confirmation from methodologically feeble trials to demonstrate that some physiotherapy interventions are powerful for some specific shoulder disorders. The results general give little proof to control treatment. There is a reasonable requirement for encourage excellent trials of physiotherapy interventions, including trials using combinations of modalities, in the treatment of shoulder disorders.

3.3 TOOLS:

The interim from the date of record operation to lysis of adhesions was 9.7 months (extend 4.2–36.2 months), and the interim from lysis of adhesion to most late follow-up 18.2 months (go 4.1–43.7 months). Post-agent assessment was performed using Shoulder Surgeons Score (ASES), Visual Analog Score (VAS), Single Assessment Numeric Evaluation (SANE), and Simple Shoulder Test (SST) on 18 (62%), while scope of motion (ROM), dynamometer strength testing, and Constant-Murley Scoring were performed on 13 (45%). Statistical analysis was performed using a Student's t-test.

3.5 MATERIAL AND METHODS:

A retrospective survey of all patients at our institution who experienced arthroscopic lysis of adhesions, capsular release, and control under anesthesia for the treatment of arthrofibrosis following an arthroscopic, open, or smaller than usual open RCR were distinguished from July 2016 to April 2017.

Ordinarily in our training, patients must demonstrate suitable PROM preceding experiencing the list RCR surgery; thus, the shoulder stiffness that grew mostly happened post-operatively. Inclusion criteria were that patients required surgical treatment of shoulder stiffness following a RCR with at least 3-month follow-up amid which time non-agent measures were exhausted. Non-agent measures ordinarily consisted of aggressive physical treatment, oral corticosteroids (4 day decreasing Methylprednisolone regimen – Medrol Dosepak - starting at 24 mg and consummation at 4 mg), and in all cases, intra-articular steroid injections.

We barred two patients who required extra surgical procedures other than capsular release. One barred patient was found to have diffused bipolar glenohumeral chondromalacia at the season of arthroscopic capsular release and was at last treated with an aggregate shoulder arthroplasty. The other prohibited patient experienced a glenohumeral fusion in the wake of sustaining an incessant front glenohumeral dislocation. Of note, the main glenohumeral dislocation and fizzled RCR in this series happened in this patient. Any patient requiring an extra capsular release was incorporated, however considered a disappointment.

The study aggregate consisted of 7 patients: arthroscopic (62%), 8 open (28%), and small scale open (10%) repairs. The normal age at the

season of file operation was (go 24–70, SD 11), 4 patients (62.1%) were male, the prevailing furthest point was engaged with 4 (69.0%), and 3 (55%) were associated with worker's compensation claims. The normal number of months from the date of record operation to lysis of adhesions was 9.7 months (extend 4.2–36.2, SD 6.9), and from lysis of adhesion to most late followup 18.2 months (run 4.1–43.7, SD 13).

Information were gotten retrospectively by diagram audit, telephone interviews, and followup examination when accessible. Full endorsement from our institutional audit board was accomplished before setting out on the study. Consent was gotten from all individuals who took an interest in the study follow-up examination and telephone surveys.

The patients finished approved, clinical result scores including Constant-Murley score, Single Assessment Numeric Evaluation (SANE), American Shoulder and Elbow Surgeons Score (ASES), Simple Shoulder Test (SST), and Visual Analog Pain scale (VAS). Thirteen patients (45%) returned for a last followup examination amid which shoulder ROM and dynamometer strength measurements were measured by a free analyst. Forward height in the scapular plane and outer pivot with the arm at the side were measured with a goniometer.

The shoulder strength was measured using a manual muscle dynamometer (Lafayette Manual Muscle Test System, Lafayette Instrument Company, Lafayette, IN) in forward height and outer revolution. In patients not accessible for conclusive autonomous development, ROM information from their most late clinical follow-up were recorded. Three patients refused to be incorporated into the study because of progressing case of their laborer's compensation assert. Eight patients were lost to the followup. The agent report was checked on in all cases to

decide status of the cuff repair at the season of capsular release

3.6 STATISTICAL ANALYSIS

Descriptive analysis consisted of frequencies and percentages for discrete information and means and standard deviations for continuous information. Statistical analysis was finished using a Student's t-test to contrast pre-operative ROM and corresponding post-agent measurements on the same patient. P-estimation of less than 0.05 was considered to be statistically significant.

In scenarios in which pre-operative and post-agent assessments were not accessible for the same patient, P-values were not figured but rather descriptive statistics have been given for comparison different reports in the writing.

RESULTS

Table 4.1: Players Body Mass Index

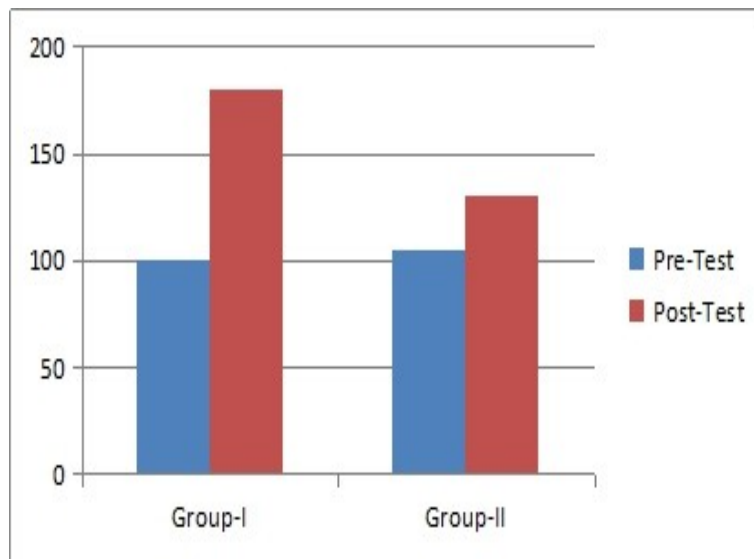
Variable	Experimental Group (n = 5)	Control Group (n = 5)	P value ^f
Age (years) ^a	18 (8.6)	18 (9.7)	0.115
Gender (m:f)	10	10	0.211
Weight (kg) ^a	79 (14.6)	81 (14.5)	0.646
Height (cm) ^a	176 (11.4)	174 (8.8)	0.626
BMI (kg/m ²) ^a	25.7 (4.5)	26.5 (2.5)	0.218
Smoker (yes:no)	4	5	0.621
Alcohol (yes:no)	2	8	0.144
Shoulder Pain	6	4	0.796

The mean duration of follow-up of 18.2 months, (extend 4.1–43.7 months, SD 13.1 months) for all patients engaged with this study (n = 4). This gathering of patients demonstrated a statistically significant increase (P<0.0001) in shoulder motion in forward rise and outer revolution following arthroscopic capsular release. Preoperatively, mean forward height (FE) was 103.8°, (territory 60° – 145° SD 26.3°) and outer pivot at the side (ERS) was 25.3°, (territory 5° – 70° SD 15.1°). Post-operatively, and no more late followup, mean FE significantly enhanced to 158.3°, (territory 110°–180° SD 22.3°, P<0.0001), and ERS enhanced to 58.9° (territory 15°–90° SD 18.6°, P<0.0001).

Table 4.1a: Outcomes after arthroscopic lysis of adhesions in all patients (n = 29)

Table 4.2:

Participants	PRE-TEST (Range of Motion)	PRO-TEST (Range of Motion)
Group – I (N = 5) Experimental Group	100 ⁰	180 ⁰
Group - II(N = 5) Control Group	104.6 ⁰	130 ⁰



Graph4.1: ROM Pre-Test and Post-Test

Table 4.3: ROM Test Results

Participants	Forward Flexion ROM	External Flexion ROM
Group – I (N = 5)	102.8 ± 26.2	152.8 ± 22.2
Experimental Group		
Group - II(N = 5)	25.8 ± 16.2	54.6 ± 18.2
Control Group		

Mean follow-up in this accomplice: 18.2 ± 13.1 months. (b) Outcomes after arthroscopic lysis of adhesions in patients accessible for definite followup (n = 13). Mean follow-up in this accomplice: 24.6 ± 10.0 months.

We also thought about shoulder scores (ASES, CM, VAS, SANE, and SST). Postoperative mean scores were as follows: ASES was 75.5, (territory 36.7 – 100, SD 23.5), CM was 68.9, (territory 30.9 – 80.9, SD 16.0), VAS was 2.5, (territory 0 – 9, SD 2.9), and SANE was 80.3 (territory 50 – 100, SD 18.7). There were insufficient pre-agent shoulder scores to allow an immediate comparison. Also, we dissected

the results based on the method of record RCR (open, little open, or all arthroscopic) and found no statistically significant distinction with regards to postoperative motion or approved shoulder scores ($P > 0.05$).

Thirteen patients were accessible for a free follow-up arrangement at a mean of 24.6 months, (run 8.7 – 40.3 months, SD 10.0) at which time we got subjective shoulder scores and a physical examination consisting of ROM and dynamometer strength testing. For this gathering, pre-agent motion measured 104.6° of FE, (extend 75 – 140, SD 25.5) and 25.0° of

ERS, (run 5 – 40, SD 11.7). Postoperatively their motion measured a mean of 157.0° of FE, (run 110– 180, SD 28.3) and 60.0° of ERS, (run 15 – 90, SD 23.0), [Table 4.1b]. These results were also statistically significant ($P \leq 0.0001$). Sixteen of the 29 patients were dealt with under a specialist's compensation assert [Table 4.2]. There was no statistically significant contrast in definite ROM across these groups ($P > 0.05$, Figure 3a). There was, be that as it may, a statistically significant distinction between the post-agent VAS ($P < 0.05$), ASES ($P < 0.01$), and SANE ($P < 0.001$) scores.

1.1. There was one failure that required a revision arthroscopic capsular release, lysis of adhesions, and control under anesthesia because of repetitive stiffness 17 months after first capsular release. There was one post-agent dislocation however no profound infections or nerve injuries.

1.2. DISCUSSION

Arthroscopic capsular release has been shown to be a safe and solid strategy for restoring shoulder motion for treatment of idiopathic, surgical, or post-awful stiffness. The central results of this study demonstrate that forward rise and outside revolution of the shoulder at the side can be significantly enhanced—despite the fact that with shifted results—in patients with unmanageable postoperative stiffness after RCR following arthroscopic capsular release, lysis of adhesions, control under anesthesia, and aggressive physical treatment. Previous studies have to a great extent included small subsets of patients in each of these etiologic categories. To the best of our insight, our study represents one of the largest accomplice of patients treated with arthroscopic capsular release for shoulder stiffness following a rotator-cuff repair.

As far as we can tell with shoulder stiffness, we have discovered that loss of shoulder motion, when contrasted with the contralateral, shoulder, occasionally occurs following RCR, especially in patients less consistent with post-agent recovery. In the event that recognized ahead of schedule in the post-agent period, treatment with aggressive PROM can be successful in restoring satisfactory motion. This type of treatment, be that as it may, is less liable to be gainful when the patient is 12 weeks or more out from surgery; thus, we trust that persistent post-agent stiffness recalcitrant to conservative administration for 3 months would be a sign for an arthroscopic capsular release and control under anesthesia. Arthroscopic capsular release may have the upside of decreased bleakness and uncomplicated restoration. Patients can safely be quickened in an aggressive dynamic and PROM treatment protocols. Additionally study is necessary to inspire the risk factors associated with fizzled non-agent treatment and the planning of surgery to enhance treatment of this issue.

Warner et al. in 1997 previously published a series of 18 patients with postoperative shoulder stiffness that was treated with arthroscopic release in 16 of the 18 patients. This series included patients that had been treated with several distinctive surgical procedures however just four patients had experienced a RCR.

He detailed an increase in CM scores and a significant increase every which way of motion and presumed that arthroscopic capsular release is a dependable technique for restoring motion with negligible dismalness. He also noticed that nonoperative treatment of post-agent stiffness, including control under anesthesia, is by and large ineffectual.

Several studies have detailed the results of arthroscopic capsular release for treatment of shoulder stiffness based on various distinctive

etiologies (idiopathic, post-damage, and post-surgical). These results were similar to those found by Warner in that these patients had significant increases in motion and capacity following arthroscopic capsular release. Notwithstanding, when the groups were additionally broke down, the patients with idiopathic stiffness improved the situation than those with postoperative stiffness. Each study, in any case, had moderately couple of patients who had postoperative stiffness after RCR.

One remarkable aspect of this study is the moderately substantial level of laborer's compensation patients. Historically, it has been suggested that this patient populace is less liable to have a decent result and come back to a pre-damage level of capacity. Previous studies detailing the result of RCR in patients required with specialist's compensation claims have shown significantly worse result in those patients associated with laborer's compensation claims. It has also been suggested that the specialist's compensation patients have certain statistic characteristics such as lower training level, smoking, and overwhelming difficult work that places them at risk for disappointment. In our study, we didn't locate a significant contrast in post-agent motion for those patients engaged with specialist's compensation claims. We did, notwithstanding, locate a significant distinction in the shoulder scores that consisted solely of subjective reports, the VAS, ASES, and SANE.

This suggests that increasing the utilitarian ROM, the essential objective of the operation, was similar to patients not included with a laborer's compensation assert, those in the specialist's compensation aggregate complained of more agony and saw their result worse than the nonworker's compensation gathering. These differences reflect many challenges; one is looked with treating a patient with a business

related damage, and suggests that an arthroscopic capsular release in this gathering can be successful in restoring an utilitarian ROM. Nonetheless, one should be cautious when counseling the patient preoperatively as their apparent result may not be as great as those not engaged with a laborer's compensation assert.

There are several weaknesses of our study. First, this is a retrospective case series with no control gathering and just 7 patients accessible for autonomous examination at a subsequent examination. We trust this was lower than anticipated rate of last development and was identified with the way that 55% of our patients had laborer's compensation injuries and were either unfit to be reached or refused followup interviews because of progressing legitimate issues. Furthermore, as a substantial referral focus, 7 of the patients in this study were alluded in for treatment and many came back to their home physician for postoperative followup.

Actually, five of the eight patients lost to followup were initially treated at an outside institution. Despite the fact that we analyzed the clinical outcomes of patients based on system of the list strategy, there were just three patients in the little open gathering and eight patients in the open gathering leaving these groups underpowered. In addition, the sample bunch included patients who had experienced arthroscopic, smaller than normal open, and open cuff repair procedures.

Given the generally low occurrence of postoperative arthrofibrosis requiring surgical release, to accomplish a suitably sized partner it was necessary to bunch both open and arthroscopic cuff repair patients as well as alongside workers compensation patients. Lastly, restricted ROM measurements were

gathered. Interior pivot is frequently quite decreased with postoperative stiffness and future studies—in a perfect world performed at various centers—should have more comprehensive ROM measurements.

In this study, we report the results of patients treated with an arthroscopic capsular release, lysis of adhesions, and control under anesthesia for the treatment of shoulder stiffness following RCR. This mix of procedures represents a safe and solid means to recapture shoulder motion, specifically FE and ERS, after the onset of post-agent shoulder arthrofibrosis that is stubborn to conservative measures. Moreover, no significant differences in result existed based on whether the record surgery was performed open, smaller than usual open, or arthroscopic. Specialist's compensation status resulted in bring down approved result measures, yet no distinction in ROM.

CONCLUSION:

Most of the controlling principles used for decision-production in treating rotator cuff disease are based on restricted proof and negligible science. Factors that seem to be essential incorporate term of symptoms, weakness, size of the tear, and muscle decay. On the off chance that surgery is performed, either by a smaller than usual open or arthroscopic procedure, a twofold column spanning repair seems to be biomechanically stronger, if this can be performed in a without tension condition. As of right now there is no utilitarian confirmation to support twofold column repair over single line repair, however the re-break rate is diminished after a twofold line repair.

As far as we can tell with shoulder stiffness, we have discovered that loss of shoulder motion, when contrasted with the contralateral, shoulder, occasionally occurs following RCR, especially in patients less agreeable with post-agent restoration. On the off chance that distinguished right on time in the post-agent period, treatment with aggressive PROM can be successful in restoring satisfactory motion. This type of treatment, in any case, is less prone to be advantageous when the patient is 12 weeks or more out from surgery; thus, we trust that persistent post-agent stiffness obstinate to conservative administration for 3 months would be a sign for an arthroscopic capsular release and control under anesthesia.

Arthroscopic capsular release may have the benefit of decreased bleakness and uncomplicated recovery. Patients can safely be quickened in an aggressive dynamic and PROM treatment protocols. Additionally study is necessary to inspire the risk factors associated with fizzled non-agent treatment and the planning of surgery to upgrade treatment of this issue.

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