SMALL-MEDIUM ROTATOR CUFF CLINICAL REPAIR GUIDELINE



Summary of Recommendations

Risk Factors	 Avoid AROM before 6 weeks Correct scapular substitution with AA/AROM Smoking Postural considerations should be addressed
Precautions	 Sling use for 6 weeks Start physical therapy Week 2-4 Continue post-operative home exercises until starting physical therapy No behind back stretching x 12 weeks Subscapularis Repair (12 weeks) No ER past 30 degrees No cross body adduction No active IR or IR behind back No supporting of body weight on affected side (i.e. pushing up from chair)
Manual Therapy	 Week 2-4: caudal GH mobilizations, PROM flexion and external rotation only, soft tissue mobilization as appropriate, hand/wrist/elbow ROM exercises Week >4: PROM (flexion, external rotation, internal rotation, abduction), soft tissue and joint mobilization as appropriate
Corrective Interventions	 Pain and edema control modalities Manual for glenohumeral and scapular mobility and shoulder ROM Therapeutic exercise and neuromuscular re-education for UE strength, control and postural stability Therapeutic activity for return to work simulations to increase strength and endurance Sport-specific activity training
Outcome Testing	Disability of Arm, Shoulder, Hand (DASH)Quick DASH
Criteria for Discharge	 Full AROM with no scapular substitution 5/5 RTC strength 65-70% IR/ER isokinetic testing

Phase 1: Protection

ROM	 Continue PROM Begin PROM in abduction per patient tolerance Shoulder joint mobilizations (grade II-III) – posterior and caudal Scapular mobilizations Pectoralis minor flexibility Supine postural stretch Begin wand exercises in a seated position Shoulder external rotation Shoulder flexion if not contraindicated
Strengthening	 Begin isotonic scapular retraction/protraction Supine serratus punches PNF patterns in sidelying (scapular clock) Sitting retraction Begin manual resistance scapular stabilization (late phase) Scap Squeezes, extension with light resistance
Modalities	Ice and pain modalities as indicated
Criteria for Progression	 Decrease pain Full PROM supine Sleeping through the night Normal posture

Phase 2-discontinue sling at 6 weeks

Week 6-8

ROM	 AAROM per patient tolerance - all motions, adding abduction, IR, horizontal abduction (maintain subscapularis precautions) Ball on wall, UE swiss ball mobility –IR/ER Towel wipes on table – any direction
Strengthening	 Initiate sub-max/50% effort strengthening Isometric flexion, extension, abduction, ER, IR Isometric lower trap Dynamic isometric walk-outs Closed-chain stability – elbow extension with hand on ball performing oscillations Progress scapular neuromuscular strengthening

Week 8-10

ROM	AROM per patient tolerance; avoid scapular substitution
Strengthening	 UBE light resistance Begin prone exercise program <u>below shoulder level</u> Extension, rows Begin closed chain UE activities Towel wipes on wall – horizontal, diagonal and vertical Serratus punches Quadruped weight-shifts Proprioception exercise
Criteria for Progression	 Full AROM with no scapular substitution No reactive inflammation with strengthening Return to full ADLs pain free

Phase 3

Week 10-12

Strengthening	 UBE moderate resistance Light T-band exercises Shoulder IR/ER Horizontal abduction/adduction Diagonal patterns Progress prone exercise program Row Shoulder Extension Horizontal Abduction – T exercise position Lower Trap – Y exercise position Begin rhythmic stabilization exercises supine, starting at balance point position (90-100 degrees of elevation); progress to side lying, prone, standing
Criteria for Progression	 Full active ROM No trapezius substitution No reactive inflammation with strengthening

Week 12-16

Strengthening	 Progress prone exercise program Progressive Dumbbell Program – emphasis on high reps/low weight Scaption Diagonal patterns Bent row Prone Retraction with ER Functional strengthening Functional positions with eccentrics loads Progress closed chain UE strengthening Push up with a plus Swiss ball activities
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	 Plank BOSU weight shifts Trunk and lower extremity strengthening Begin short toss and overhead endurance activities per physician release
Criteria for Progression	 Full AROM with no scapular substitution between weeks 10-12 5/5 rotator cuff strength 65-70% IR/ER isokinetic testing

Phase 4-return to sport/activity

ROM	 Emphasis on posterior capsule stretching General stretching/flexibility program (pectorals, biceps, upper trapezius, etc.)
Strengthening	 Progress T-band exercises Begin Diagonal Patterns Progress prone exercise program with weight Row Shoulder Extension Horizontal Abduction – T exercise position Lower Trap – Y exercise position Progress Dumbbell Program with weight Scaption Diagonal patterns Bent row Prone Retraction with ER Functional eccentric strengthening Push up with a plus Swiss ball activities Trunk and lower-extremity strengthening Initiation of throwing progression Continuation of functional UE/LE strengthening and endurance activity
Criteria for Return to Sport	 Completion of throwing progression No reactive effusion, pain and/or instability 65-70% IR/ER isokinetic testing

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References

Colvin AC, Egorova N, Harrison AK, Moskowitz A, Flatow EL. National trends in rotator cuff repair. *J Bone Joint Surg Am.* 2012;94:227-233.

Kim YS, Chung SW, Kim JY, Ok JH, Park I, Oh JH. Is early passive motion exercise necessary

McCann PD, Wooten ME, Kadaba MP, Bigliani LU. A kinematic and elctromyographic study of shoulder rehabilitation exercises. *Clin Orthop Rel Res.* 1993;288:178-188.

Ellsworth AA, Mullaney M, Tyler TF, McHugh M, Nicholas S. Electromyography of selected shoulder musculature during un-weighted and weight pendulum exercises. *N Am J Sports Phys Ther*. 2006;1:73-79.

Kibler WB, Livingston B, Bruce R. Current concepts in shoulder rehabilitation. In: Stauffer RN, Erlich MG. *Advances in Operative Orthopaedics. Vol 3.* St. Louis, MO: Mosby; 1995: 249-297

Park MC, Idjadi JA, Elattrache NS, Tibone JE, McGarry MH, Lee TQ. The effects of dynamic external rotation comparing 2 footprint-restoring rotator cuff repair techniques. *Am J Sports Med*. 2008;36(5): 893-900.