Connecticut Orthopaedics

Megan R. Wolf, MD
Sports Medicine/Foot & Ankle

Clavicle Open Reduction Internal Fixation
Post-Operative Protocol

Phase I – Maximum Protection – Passive Range of Motion
Week 0 to 4:

- Sling for 2 weeks.
- No range of motion for 2 weeks.

Goals
- Reduce inflammation
- Decrease pain
- Postural education

Manual therapy
- STM – effleurage to forearm and upper arm as needed.

Exercise progression
- Ice and modalities to reduce pain and inflammation.
- Cervical range of motion and basic deep neck flexor activation (chin tucks).
- Active hand and wrist range of motion.
- Passive biceps for 6 weeks.
- Encourage walks and low intensity cardiovascular exercise to promote healing.

Phase II – Progressive Stretching and Active Motion
Weeks 4 to 6:

Goals
- Postural education.
- Begin AROM – full all planes.

Manual therapy
- STM – global shoulder and CT junction.
- Scar tissue mobilization.
- Graded GH mobilizations.
- ST mobilizations.
- Gentle CR/RS for range of motion and RC-SS activation.

Exercise progression
- Progress to full range of motion flexion and external rotation as tolerated.
  - Use a combination of wand, pulleys, wall walks or table slides to ensure compliance.
- Gradual introduction to internal rotation shoulder extensions (stick off back).
- Serratus activation: Ceiling punch (weight of arm) - may initially need assistance.
- Sub-maximal rotator cuff isometrics.
- Scapular strengthening – prone scapular series (rows and I's).
  - Emphasize scapular strengthening less than 90 degrees.
- External rotation on side (no resistance).
- Sub-maximal isometrics.
- Cervical range of motion as needed to maintain full mobility.
- DNF and proper postural positioning with all RC-SS exercises.
- Low to moderate cardiovascular work. May add elliptical but no running until 6 weeks.

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Phase III – Strengthening Phase

Weeks 6 to 12:

Goals
- Full AROM
- Normalize GH/ST arthrokinematics.
- Activate RC-SS with isometric and isotonic progression.

Manual therapy
- STM and joint mobilization to CT junction, GHJ and STJ as needed.
- CR/RS to gain range of motion while respecting repaired tissue.
- Manual perturbations.
- PNF patterns.

Exercise progression
- Continue with combined passive and active program to push full range of motion.
- Internal rotation with thumb up behind back and sleeper stretch.
- Continue with ceiling punch adding weight as tolerated.
- RC isotonics at 0 and 90 degrees as strength permits.
- Advance prone series to include T's and Y's as tolerated.
- Add seated rows and front lat pulls.
- Progressive resistance exercise: biceps and triceps.
- Scaption: normalize ST arthrokinematics.
- CKC progression: quadruped, ball compression, counter weight shift, knee scapular push-ups, knee push-ups; all as tolerated.
  - Therapist directed RS and perturbations in quadruped – bilateral progressing to unilateral-tri pod position.
- Weeks 8 to 10: gym strengthening program to include chest fly and pressing motions.
- Supine progressing to standing PNF patterns, with resistance as appropriate.

Phase IV – Advanced Strengthening and Plyometric Drills

Weeks 12 to 16:

Manual therapy
- STM and joint mobilization to CT junction, GHJ and STJ as needed.
- CR/RS to gain range of motion while respecting repaired tissue.
- Manual perturbations.
- PNF patterns.

Exercise progression (PRE/PSE)
- Full range of motion in all planes – emphasize terminal stretching.
- Advance strengthening at or above 90° with prone or standing Y's and 90/90 as scapular control and ROM permit.
  - Patient health, physical condition and goals/objectives determine.
- Gym strengthening program; gradual progression with pressing and overhead activity.
- Progress closed kinetic chain program to include push-up progression beginning with counter, knee then gradual progression to full as appropriate.
- Initiate plyometric and rebounder drills as appropriate.

Return to sport program
- Continue to progress RC and scapular strengthening program.
- Continue with closed chain quadruped perturbations. Add open chain as strength permits.
- Advance gym strengthening program.
- Return to sport testing for interval programs using microfet dynamometer.
- Follow-up examination with the physician (3-4 months) for release to full activity.