ORTHOPEDICS & SPORTS MEDICINE
BAYCARE CLINIC

Dr. Klika & Dr. Kirkpatrick
Clavicle Fracture ORIF

Phase 1 – Early Protection of Repair (0 - 4 Weeks)

Goals for phase 1
- Protect healing structures
- Minimize pain and edema
- Begin ROM to uninvolved joints
- Educate patient in home program

Other considerations:
- Check specific MD orders and operative notes for variations in the protocol
- All ROM should be in comfortable pain-free range
- Educate patient in surgical precautions:
  - No shoulder flexion/abduction beyond 90 degrees for 4 weeks
  - No repetitive shoulder ROM
  - No lifting more than 5#
  - Avoid internal rotation behind back for 6 weeks
- Patient will typically be sent to therapy at 1 week post-op to begin pendulum exercises and uninvolved joint ROM per protocol

Immobilization
- Patient is fitted with a soft prefabricated clavicle strap and/or sling after surgery to be worn until 6 weeks post-op

Wound Care
- Keep incisions clean and dry
- Educate patient in sterile dressing changes as needed

Scar Management
- Scar mobilization may be initiated two days following suture removal if incision is well-healed with no open areas and no drainage; apply scar remodeling products as needed

Manual Therapy
- Soft tissue massage to neck and shoulder as needed

ROM
- 0-2 weeks:
  - Begin pendulum exercises to shoulder in standing or seated position as long as it is pain-free
  - Cervical ROM and stretches as needed
  - elbow, wrist, and hand A/PROM as needed to restore full motion
  - hand ball squeezes or putty as needed
- 2-4 weeks:
  - Continue pendulum exercises
  - Begin short-arc scapular ROM including shoulder elevation/depression and protraction/retraction within pain-free range
  - Initiate PROM shoulder to 90 degrees of flexion and abduction and internal/external rotation with shoulder at 0 degrees of abduction. All PROM should be performed within soft issue restriction and pain limits
  - Initiate AAROM in supine using dowel to 90 degrees flexion/abduction and internal/external rotation with shoulder at 0 degrees of flexion/abduction
  - Progress to AROM in supine with elbow flexed to 90 degrees of flexion/abduction

Phase 2 –Progress to full ROM (4 - 6 weeks)

Goals for phase 2

- Continue pain and edema control
- Continue scar management
- Restore full active ROM

Other Considerations

- All ROM should be in comfortable pain-free range

Immobilizer

- The sling may be left off for ADLs around the home but should be worn in public for protection.

Continue phase 1 scar and edema management as needed

ROM

- Progress PROM to 120 degrees of flexion and abduction within pain-free limits and soft tissue restriction. May also issue table slides if patient is not progressing in pain-free shoulder ROM.
- Progress AAROM to 120 degrees of flexion/abduction in supine and to 90 degrees flexion/abduction in seated against gravity. Progress internal and external rotation from 0 degrees shoulder abduction to 45 and 90 degrees of abduction.
- 5 weeks: If patient is doing well with relatively low pain progress to wall slides.
- Progress to full scapular ROM as tolerated

Modalities

- Moist heat as needed prior to ROM

Strengthening

- Elbow, forearm, wrist, and hand strengthening as needed
- Initiate shoulder isometric strengthening as tolerated

Phase 3 –Strengthening and Return to Full Function 6+ weeks

Goals for phase 3

- Restore full active and passive ROM
- Gradually discontinue sling and return to functional activity
- Restore strength
- Return to work

Immobilizer

- Sling should be discontinued completely by 6 weeks unless otherwise indicated by MD depending on fracture healing

ROM

- Progress to full pain-free shoulder A/PROM as long as x-ray shows signs of union
- Allow full internal rotation behind back

Modalities

Continue heat modalities as needed to improve range of motion and tissue mobility

Strengthening

- Begin prone scapular stabilization exercises
- Begin gravity-eliminated low weight / high repetition shoulder strengthening in all planes
- Serratus strengthening beginning with no weight and progressing as tolerated
- 8 weeks: Initiate isotonic strengthening for shoulder in all planes including stabilization exercises, prone scapular strengthening
- 10 weeks: Initiate functional strengthening and work simulation as tolerated

Functional Activity

6-8 weeks: Gradually return to all activities of daily living emphasizing pain-free use of the involved arm
8-10 weeks: Gradually return to home management and work activities including functional lifting with MD consent

Work Conditioning

After 10-12 weeks and with MD consent a comprehensive work conditioning program for patients with high demand / heavy manual labor occupations may be appropriate

References

Cannon, Nancy M. et. al. Diagnosis and Treatment Manual for Physicians and Therapists, 5th Ed. The Hand Rehabilitation Center of Indiana. Indianapolis, Indiana. 2021.

Neumann, Donald A., et al. Kinesiology of the Musculoskeletal System: Foundations for Rehabilitation. Elsevier, 2017.

This protocol was reviewed and updated by Brian Klika, MD, Lacey Jandrin, PA, Andrew Kirkpatrick, MD, Tiffany Terp, PA, and the Hand Therapy Committee 8/9/2021.