

# 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 postop

#### **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 painfree
  - o Cervical ROM and stretches as needed
  - elbow, wrist, and hand A/PROM as needed to restore full motion
  - o hand ball squeezes or putty as needed
- 2-4 weeks:
  - o 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, 5<sup>th</sup> 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.