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Post-Op: Elbow Ulnar Collateral Ligament (MCL) Reconstruction

Evaluate & Treat:

I. Immediate Post-Operative Phase (Weeks 0-3)

Phase Goals

- Protect Healing Tissue
- Decrease Pain/Inflammation
- Retard muscular atrophy
- Protect graft site-allow healing

A. Post-Operative Week 1

- Posterior splint at 90 degrees elbow flexion-applied at surgery
- Remove and begin early aggressive ROM at 7 days post-op: Convert to hinged elbow brace
- Range of Motion: Wrist AROM ext/flexion immediately postoperative (days 2-3)
- Elbow compression dressing (once splint removed) until POD 14
- Wrist (if graft site) compression dressing until POD 14

Exercises:

- Gripping exercises
- Wrist ROM
- Shoulder isometrics (No Shoulder ER)
- Biceps isometrics
- Cryotherapy: To elbow joint and to graft site below knee

B. Post-Operative Week 2

- Brace: Hinged elbow brace. Elbow ROM gradually increase to 15-105 degrees by end of week 2. Carefully monitor motion-if healing tight, progress PROM and AAROM to obtain ROM goal.

Exercises:

- Continue all exercises listed above
- Elbow Range of Motion in brace (30-105 degrees)
- Initiate elbow extension isometrics
- Continue wrist ROM exercises

- Initiate light scar mobilization over distal incision (graft)
- Cryotherapy: Continue ice to elbow and graft site

C. Post-Operative Week 3

- Brace: Elbow ROM gradually increase ROM as soft tissue allows
- ROM by the end of week 3: at least 10-115 degrees or if tolerated full ROM

Exercises:

- Continue all exercises listed above
- Elbow ROM in brace
- Initiate active ROM Wrist and Elbow (No resistance)
- Initiate light wrist flexion stretching
- Initiate active ROM shoulder;
 - Full can
 - Lateral raises
 - Elbow flex/extension
- Initiate light scapular strengthening exercises (No strengthening shoulder ER)
- May incorporate bicycle for lower extremity strength and endurance

II. Intermediate Phase (Weeks 4-7)

Phase Goals

- Increase to full ROM
- Promote healing of repaired tissue
- Regain and improve muscular strength
- Restore full function of graft site

A. Week 4

- Brace: Elbow ROM: Increase ROM as fast as soft tissue inflammation allows
- End of week goal: 0-125 degrees

Exercises:

- Begin light resistance exercises for arm (1 lb.)
 - Wrist curls, extensions, pronation, supination
 - Elbow extension/flexion
 - NO VALGUS ELBOW STRESS x4 MONTHS
- Progress shoulder program emphasize rotator cuff and scapular strengthening
- Initiate shoulder strengthening with light dumbbells
- Discontinue brace at week 4 (may utilize brace in unique instances)

B. Week 5

- ROM: Elbow ROM 0-135 degrees

Exercises:

- Continue all Exercises: Progress all shoulder and UE exercises (progress weight 1 lb.)

C. Week 6

- AROM: 0-145 degrees without brace or full ROM

Exercises:

- Initiate Thrower's Ten Program
- Progress elbow strengthening exercises (NO VALGUS STRESS x 4 MONTHS)
- Initiate shoulder external rotation strengthening
- Progress shoulder program
- Initiate isotonic strengthening for graft site hamstrings/calf

D. Week 7

- Progress Thrower's Ten Program (progress weights)
- Initiate PNF Diagonal Patterns (light)

III. Advanced Strengthening Phase (Weeks 8-14)

Phase Goals

- Increase strength, power, endurance
- Maintain full elbow ROM
- Gradually initiate sporting activities

A. Week 8

Exercises:

- Initiate eccentric elbow flexion/extension
- Continue isotonic program: forearm and wrist
- Continue shoulder program-Thrower's Ten Program
- Manual resistance diagonal patterns
- Initiate plyometric exercise program (2 hand plyos close to body only)
 - Chest pass
 - Side throw close to body
- Continue stretching calf and hamstrings

B. Week 10

Exercises:

- Continue all exercises listed above
- Program plyometrics to 2 hand drills away from body
 - Side to side throws
 - Soccer throws
 - Side throws

C. Week 12-14

Exercises:

- Continue all exercises
- Initiate isotonic machines strengthening exercises (if desired)
 - Bench press
 - Lat pull down
- Initiate interval hitting program

IV. Return to Activity Phase (Weeks 14-32)

Phase Goals

- Continue to increase strength, power, and endurance of upper extremity musculature
- Gradual return to sports activities

A. Week 14

Exercises:

- Continue strengthening program
- Emphasis on elbow and wrist strengthening and flexibility exercises
- Maintain full elbow ROM
- Initiate one hand plyometric throwing (stationary throws)
- Initiate one hand wall dribble
- Initiate one hand baseball throws into wall

B. Week 16

Exercises:

- Initiate interval throwing program (Phase I) (long toss program)
- Continue Thrower's Ten Program and plyos
- Continue to stretch before and after throwing

C. Weeks 22-24

Exercises:

- Progress to Phase II throwing (once successfully completed Phase I)

D. Weeks 30-32

Exercises:

- Gradually progress to competitive throwing/sports

Throwing Program Outline:

A. 4 Months

- Gentle throwing 30-40ft, 2-3 times per week x15min

B. 5 Months

- Advance to 60 feet, light toss

C. 6 Months

- Start throwing lightly from wind-up

D. 7 Months

- 50% effort, increase session duration to 30 min

E. 8 Months

- Throw off mound, 70% effort

F. 10-12 Months

- Progress to simulated games

G. 1 Year

- Earliest return to competition
- Need full ROM, strength and no pain when throwing.