General Rehabilitation Guidelines

Program for Non-Operative Treatment of Elbow Injuries in Throwers

Points:
- Many elbow injuries in throwers stem from problems that originate more proximally in the kinetic chain
  - Glenohumeral internal rotation deficit (GRID) leads to increase valgus stress at the elbow causing several potential problems: MCL strain, flexor-pronator overload, valgus extension overload and posterior impingement
  - An imbalance in internal and external rotation strength at the shoulder also places increased valgus stress at the elbow
  - Insufficient core body strength leads to ineffective force transfer through the kinetic chain and places additional stress on the elbow

Acute Phase (Week 1)
- Goals
  - Improve ROM
  - Diminish pain and inflammation
  - Retard muscle atrophy
- Exercises
  - Stretching for wrist and elbow joint, stretches for shoulder joint (especially posterior capsule)
  - Strengthening exercises isometrics for wrist, elbow and shoulder musculature
  - Pain and inflammation controls, cryotherapy, E-stim, ultrasound, whirlpool

Subacute Phase (Weeks 2-4)
- Goals
  - Normalize motion
  - Improve muscular strength, power and endurance
- Week 2
  - Initiate isotonic strengthening for wrist and elbow
  - Initiate exercise tubing exercises for shoulder
  - Continue use of cryotherapy and other modalities
- Week 3
  - Initiate rhythmic stabilization drills for elbow and shoulder joint
  - Progress isotonic strengthening for entire upper extremity
  - Initiate isokinetic strengthening exercises for elbow flexion/extension
- Week 4
  - Initiate thrower’s ten program
  - Emphasize eccentric biceps work, concentric triceps and wrist flexor work
  - Program endurance training
  - Initiate light plyometric drills
  - Initiate swinging drills

Intermediate Phase (Weeks 4-6)
• **Goals**
  o Preparation of athlete for return to functional activities

• **Criteria to Progress to Advanced Phase**
  o Full non-painful ROM
  o No pain or tenderness
  o Satisfactory isokinetic test
  o Satisfactory clinical exam

• **Weeks 4-5**
  o Continue strengthening exercises, endurance drills, and flexibility exercises daily
  o Thrower’s ten program
  o Progress plyometric drills
  o Emphasize maintenance program based on pathology
  o Progress swinging drills (ie, hitting)

• **Weeks 6-8**
  o Initiate interval sport program once determined by physician

**Return to Activity Phase** (Weeks 6-9)
• **Weeks 6-9** – return to play depends on condition and progress.
  o Continue strengthening program thrower’s ten
  o Continue flexibility program
  o Progress functional drills to unrestricted play