Elbow Injuries in Throwers: Non-Operative Protocol

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 severalpotential 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 throwers 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
- Preparation of athlete for return to functional activities *Criteria to Progress to Advanced Phase*
- Full non-painful ROM
- No pain or tenderness
- Satisfactory isokinetic test
- Satisfactory clinical exam

Weeks 4-5

- Continue strengthening exercises, endurance drills, and flexibility exercises daily
- Throwerís ten program
- Progress plyometric drills
- Emphasize maintenance program based on pathology
- Progress swinging drills (ie, hitting)
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Weeks 6-8

- 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.
- Continue strengthening program throwerís ten
- Continue flexibility program
- Progress functional drills to unrestricted play