

◁심포지움 II (Current Issues in the Elbow Jt.) 11:20 ~ 11:28▷

## **Arthroscopic Treatment of Coronoid Impingement in Stiff Elbow**

이 용 결

경희대학교 정형외과 건관절 클리닉

**Mechanical impingement at the extreme motion : painful motion**

**contracture**

**crepitus**

**locking**

### **Etiology**

- 1. Post-traumatic**
- 2. Degenerative**

### **Pathology**

- 1. Loose bodies**
- 2. Osteochondritis dissecans**
- 3. Osteophytes**  
on the olecranon and coronoid process  
filled in olecranon and coronoid fossae
- 4. Intra-articular adhesions**
- 5. Capsular contracture**
- 6. Muscle contracture**

### **Indications**

- 1. Pain**
- 2. Functional limitation**
- 3. Non-rigid arthrofibrosis**
- 4. Mild ankylosis**
- 5. Early stage of the degenerative arthritis**

### **Advantages**

- 1. Less surgical insult**
- 2. Better visualization**
- 3. Less painful motion**
- 4. Earlier rehabilitation**

### **Technique**

- 1. Supine position**
- 2. Outline landmarks**

**Mapping : medial and lateral epicondyles, olecranon, radial head and soft spot**

3. Tourniquet
4. Joint distension through the soft spot
5. Evaluation of anterior chamber
  - Lateral portal - coronoid process and fossa
  - Medial portal - radial head
6. Direct visualization for posterior chamber
  - Miniopen incision

#### Standard portals

1. Anterolateral : 3cm distal to and 2cm anterior to the lateral epicondyle
  - penetrates the extensor ward and extensor carpi radialis brevis
  - radial n. & br. of lateral and posterior antebrachial cutaneous n
2. Anteromedial : 2cm distal and 2cm anterior to the medial epicondyle
  - penetrates the flexor carpi radialis and digitorum suferficialis
  - brachial artery, median n. & medial antebrachial cutaneous n
3. Superomedial : 2cm proximal to the medial epicondyle and anterior to the
  - intermuscular septum
  - ulnar nerve
4. Direct lateral : soft spot in the center of a triangle
  - pass anconeus muscle

#### Arthroscopic coronoplasty

1. deepening the coronoid fossa
2. excision of the coronoid process
3. anterior capsular release

#### Miniopen posterolateral approach

1. olecranon tip excision
2. posterior capsular release

#### Materials

From Jan 1996 to Jul 1998

11 patients 12 elbows

M:F = 10:1 E/U : av 10ms

12 Arthroscopic coronoplasty

9 coronoid process excision

6 olecranon tip excision

3 posterior capsular release

#### Results :

- . Pain(VSA) : preoperative 2.2 to postoperative 7.4
  - no significance in related with severity and duration of pain
  - no significance in etiology
  - significance in severity of the degenerative change
- . Motion : flexion contracture - preop. 14.5 to postop. 5

forward flexion - preop. 107.5 to postop. 119.5  
arc of F/E motion - preop. 93 to postop. 114.5  
pronation - preop. 81 to postop. 81  
supination - preop. 75 to postop. 85  
arc of S/P motion - preop. 156 to postop. 166

. Overall results :

excellent : 4, good : 7, fair 1, poor 0

Pt's satisfaction : 92%

**Summary**

- . Arthroscopic management is the effective method with acceptable results for coronoid impingement of stiff elbow contributing to the functional improvement and pain relief.
- . The functional improvement and pain relief seem to be affected by the severity of a degenerative change of the elbow joint.
- . Excision of coronoid process is required in a marked limitation of further flexion in addition to deeping of the coronoid fossa and anterior capsular release.
- . Excision of olecranon tip or posterior capsular release are effective method in severe flexion contracture.