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: 1995 12 1999 1

17

10

. Reagan & Morrey
(70%),1, 2,
(70%)3 3, 4, 3
가

45°

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: Mayo elbow performance index

가 ,

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6°

128°

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13,14,22,23,24)

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가 5 , 46 (20 - 63) 5 , 5 . 3 4 (14 -5 2) . 가 7 (70%) 가 , 가 2 (20%), 가 1 (10%) . Reagan Morrey ¹⁹⁾ 1 3 (30%), 2 4 (40%), 3 3 (30%) . 가 6 가 , 가 3 , 가 1 . 7 , 2 , 1 , 1 , 가 1 , 가 6 .

8,10,14,18,19,20) 19,20) 12 가 17

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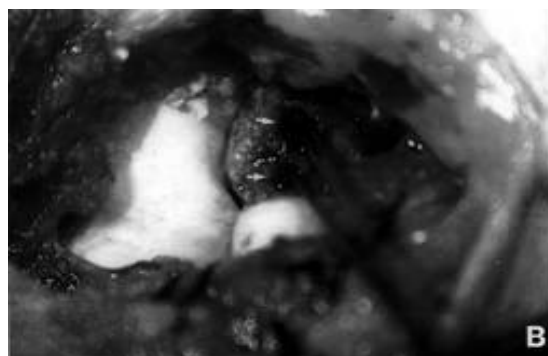


Fig 1A. Three-dimensional CT showed fracture of coronoid process associated with posterior dislocation of ulnohumeral joint. The ulnohumeral joint could not maintain it 's stability after closed reduction even the fragment of coronoid process fracture was small.; white arrow: coronoid process fracture

1B. Intraoperative photograph: fixation of coronoid process with suture anchors.; white arrow: inserted suture anchors

1C. Anteroposterior radiograph: rigid fixation of coronoid process with suture anchors.



가 45
가 3 ,
가 7
(Fig. 1).
4
가 4 ,
2 , 10 5
2

(Fig 2).
Mayo Elbow Performance Index¹⁵⁾
45 , 20 , 10 , 25
91 100 , 81 90 ,
71 80 , 70
(Table 1),
가

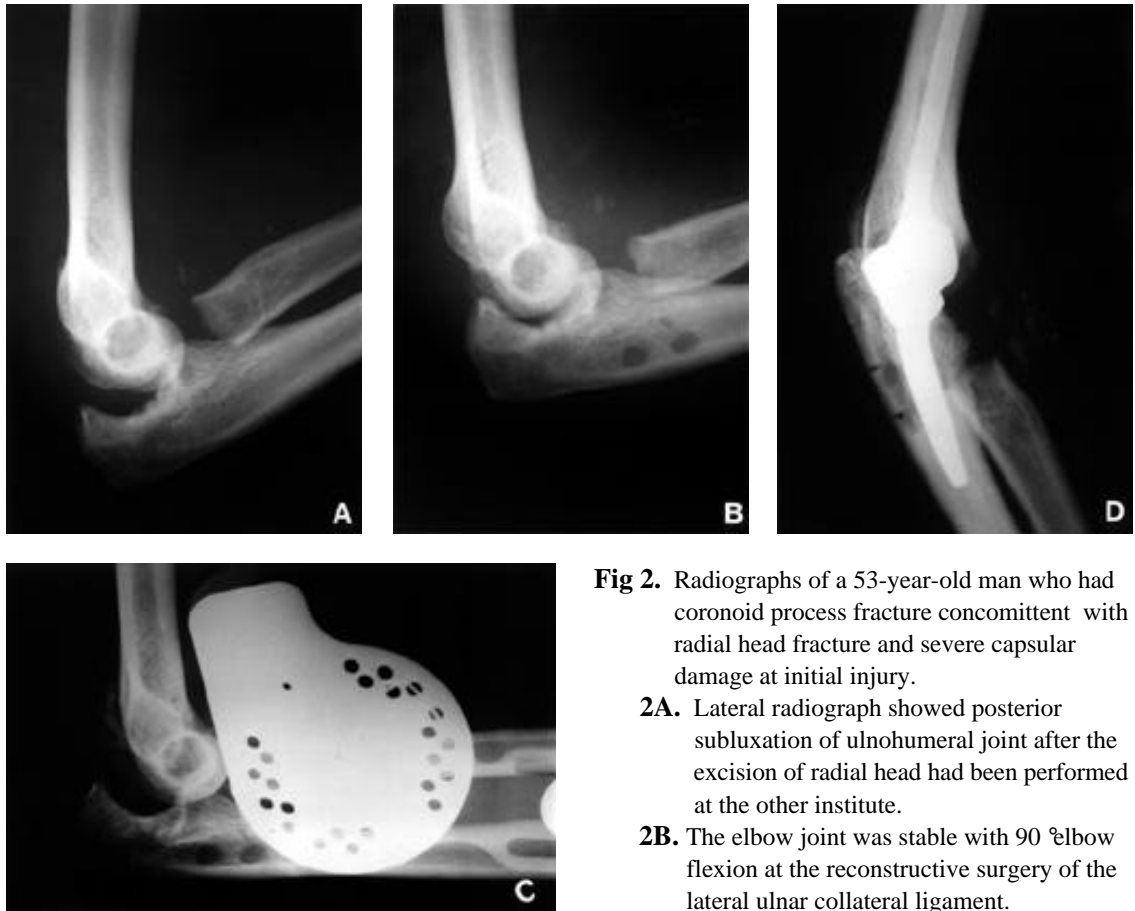
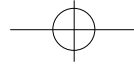


Fig 2. Radiographs of a 53-year-old man who had coronoid process fracture concomittent with radial head fracture and severe capsular damage at initial injury.

- 2A.** Lateral radiograph showed posterior subluxation of ulnohumeral joint after the excision of radial head had been performed at the other institute.
- 2B.** The elbow joint was stable with 90° elbow flexion at the reconstructive surgery of the lateral ulnar collateral ligament.
- 2C.** But, the elbow subluxation was observed at postoperative 2 days, though the brace was applied.
- 2D.** Total elbow replacement was performed due to an inevitable elbow subluxation.

**Table 1.** Mayo Elbow Performance Index

Function	Points
Pain (max., 45 points)	
None	45
Mild	30
Moderate	15
Severe	0
Range of motion	
Arc > 100 degrees	20
Arc 50 to 100 degrees	15
Arc < 50 degrees	5
Stability	
Stable	10
Moderately unstable	5
Grossly unstable	0
Function	
Able to comb hair	5
Able to feed oneself	5
Able to perform personal hygiene tasks	5
Able to put on shirt	5
Able to put on shoes	5

6 °, 128 ° 가

가

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5.8 °,

128 °

1

3.8 °

131 °, 2

10 °

127 °, 3

3 °

122 °

3

68 °,

71 °

. 2 1 , 3 2

3

6

Mayo Elbow Performance Index

45 ,

20 ,

8.5 ,

21.5

가 7 , 가 3

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3

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25 ,

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7

1 2 , 2 2 , 3 3 ,

2

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1 2 , 2 2 , 3 2 .

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3 3 .

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Mayo Elbow Performance Index

7

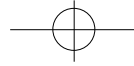
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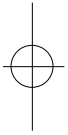
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10



2-10% , 가 , , ,
 10% ,
 가 7,18,24) Hotchkiss Weiland 8)
 30%
 6) Cage 가
 1) Reagan 1 ,
 2
 (shear) 11,17,23)
 Lischeid Wheeler 12) -
 Morrey An¹⁴⁾ -
 (varus-valgus loading) 30-40%
 85%
 4) . Dryer 4)
 Josefsson Gentz 9)
 23 4
 가 10)
 . Gil 6) 6 ,
 12 7
 Connolly³⁾ . Robert 21)
 가 가
 3-4
 , Eppright Wilkins 5)
 가 , Selesnick 23)
 가 2 3 , 3 1
 . Reagan 20) 1 1 3
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 1
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 86%

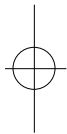


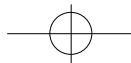


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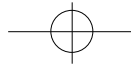
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Abstract

The role of the coronoid process fracture in the elbow dislocation

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Purpose : To evaluate whether the size of the coronoid process fracture influence on elbow instability, to recognize the requirement of surgery and to report the final results after operation.

Materials and Methods : We performed the operative treatment for 10 cases among 17 coronoid process fractures with elbow dislocation from December 1995 to January 1999, and evaluated operative cases. According to Reagan & Morrey classification, 3 cases(30%) belong to type I, 4 cases(40%) type II and 3 cases(30%) type III. The major mode of injury was fall down accident(70%) and most common associated injury was radial head fracture(70%). In all case, the elbow was inevitably subluxated when flexed beyond 45° regardless the size of the fragment segment. This lead us to performed the fixation of coronoid process fracture and the reconstruction of the ruptured articular capsule. Two patients who had had recurrent posterolateral instability due to severe capsular damage at initial injury and previous excision of the radial head underwent the total elbow replacement.

Results : According to Mayo elbow performance index, results were graded as excellent in 7 cases(70%), good in 1 cases(10%), and at two case of radial head excision had been performed previously, the results had been graded as poor, but after total elbow replacement they were good. At final results, all of them resulted in more than good. Postoperative range of motion averaged 6 degrees in extension and 128 degrees in forward flexion and there was significantly a tendency for less motion of a forward flexion with more involvement of coronoid fragment.

Conclusion : In cases of the elbow dislocation, instability of the elbow is correlated with the severity of the damaged articular capsule and ligament regardless of the size of the coronoid process fracture. The early excision of the fractured radial head should be avoided not to run into total elbow replacement.

Key word : Elbow, Dislocation, Coronoid process fracture

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