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## Monteggia

- 2 -

= Abstract =

### The Combined Operative Treatment for Neglected Monteggia Fracture-Dislocation in Adolescent Period - Report of 2 cases -

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There are various operative methods for the treatment of neglected Monteggia fracture-dislocation. But, it is difficult to obtain good results by the only one operative method in the adolescent period. We reported two patients for the neglected Monteggia fracture-dislocation in adolescent period who were treated by the combined operative treatment. The combined operative method was, in regular sequence, the ulnar osteotomy, the fibrous tissue removed in the humeroradial joint, radial head reduction, Bell-Tawse annular-ligament reconstruction and fixating the radial head to the capitellum with the K-wire with neutral position. Finally, plate fixation in ulnar osteotomy site was done. After 3 weeks, we removed the K-wire and performed active ROM exercise. The clinical results were evaluated by Bruce scale at the follow-up 15 months and 53 months. The results were satisfactory without complications. So we canvass for this combined method about neglected Monteggia fracture-dislocation in adolescent period.

**Key Words :** Neglected Monteggia Fx.-D/L, Adolescent, Operation

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37†

1814 Mon-  
teggia가 ,  
 , 1 Monteggia 1.  
Monteggia  
Stanley De la Garza<sup>13)</sup> 15cm S- (Fig 1-A),  
 , , , , ,  
(interosseous membrane)  
Monteggia (Fig 1-B).  
Monteggia ,  
 , , ,  
(Fig 1-C). 가  
Monteggia (凸)  
 ,  
 , , , ,  
 , Bell-Tawse ,

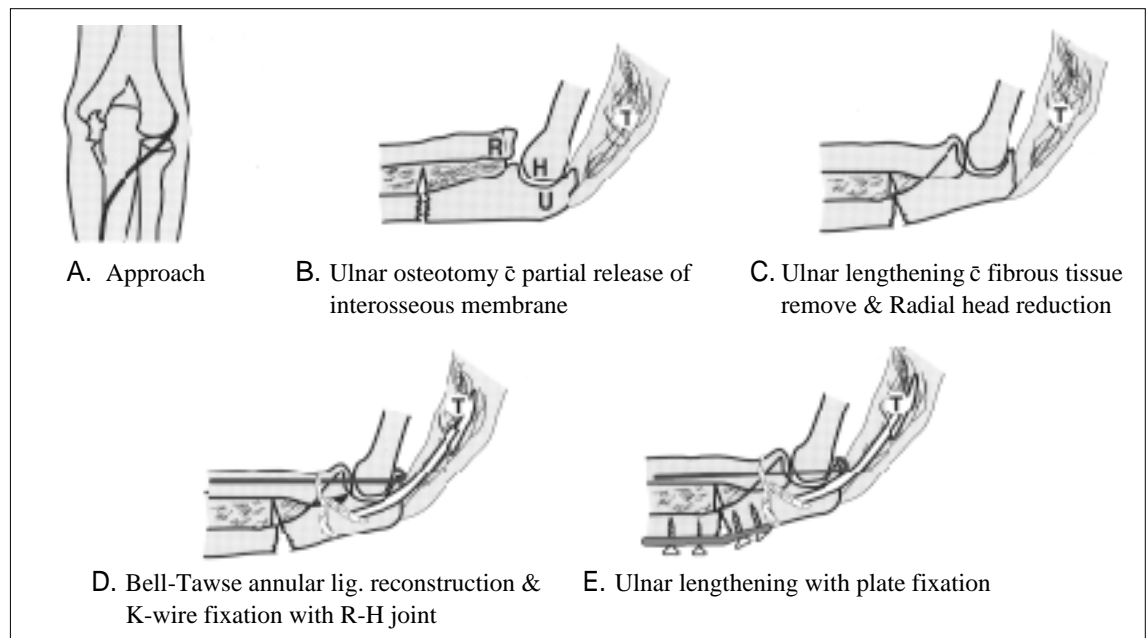


Fig 1-A,B,C,D,E. The combined operative method for neglected Monteggia Fracture-Dislocation, adolescent period.



90 °

Bell-Tawse

central slip

K-

(Fig 1-D).

(凸)

90 °

(Fig 1-E),

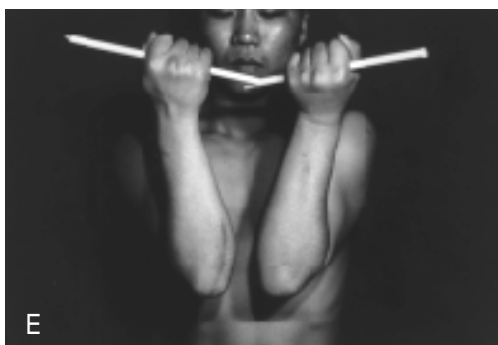
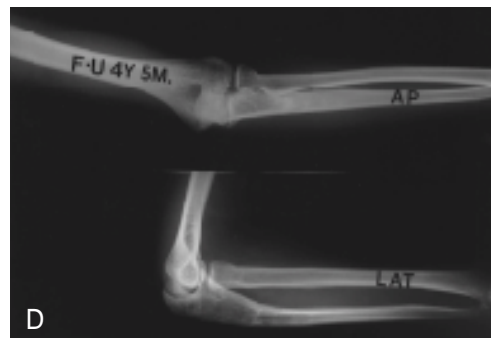
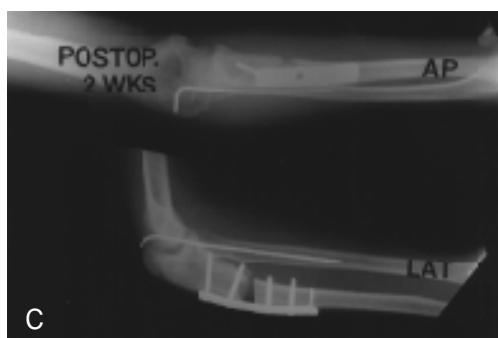
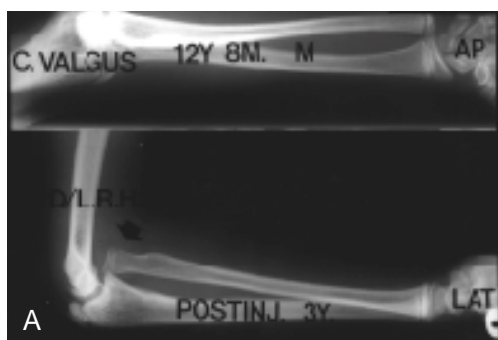


Fig 2-A. In 12 year 8 months boy, the radiograph of an elbow 3 years after injury shows persistent anterior dislocation of the radial head with cubitus valgus deformity.  
 B. The hypertrophied fibrous tissue similar to disc or meniscal material is interposed in the radiohumeral joint.  
 C. A radiograph of an elbow after surgical reduction of radial head and osteotomy, angulation and lengthening of ulnar show how the K-wire holds the position at radiohumeral joint.  
 D. At 4 year 5 months after operation, the radial head is reduced and the ulna united.  
 E,F. The full flexion, 50° pronation and 80° supination at lesion site are shown.



, 3 K-

2.

Bruce 4)

60

20 ,

15 ,

5

, 91-95 , 81-90 96-100 80

가 .

1

12 8 3

Monteggia

80 ° 20 ° 30 ° (carrying angle) 17 °

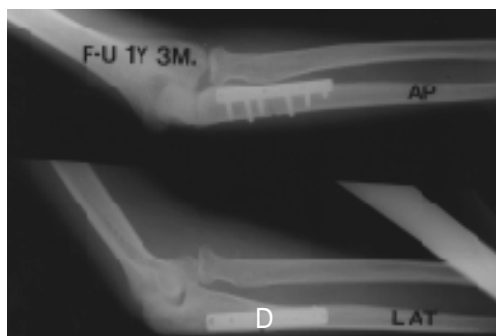
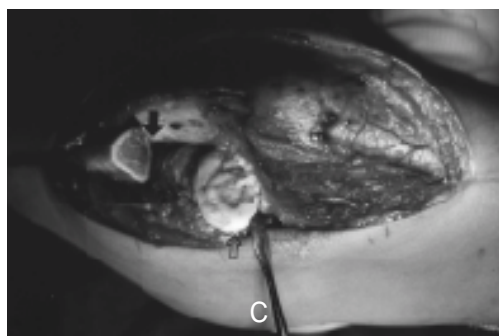
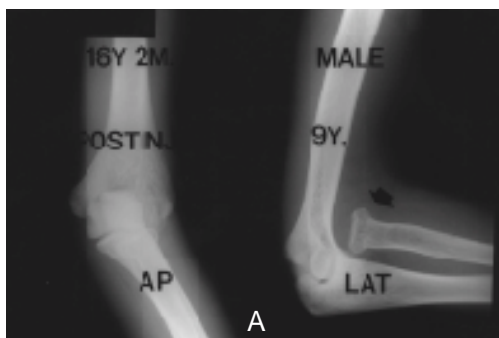
(Fig 2-A).

(Fig

2-B),

, Bell-Tawse ,

K-

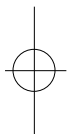


**Fig 3-A.** In 16 year 2 months boy, the radial head is dislocated at 9 years after initial injury (black arrow). The protrusion and deformity of the radial head was found.

**B.** The radiographic findings are transfixing K-wire, reduction state of radial head and plate of ulnar osteotomy.

**C.** The operative finding shows the severe arthritic change and deformity of the radial head (open arrow) with osteotomy of proximal ulna (black arrow).

**D.** At the follow-up 1 year 3 months, mild subluxation of radial head is shown.





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(Fig 2-C), 3 K- 가

. 4 5 가

(Fig 2- ,

D), 0 ° 130 ° , Monteggia

50 ° , 80 ° , 10 ° , 2

, Bruce <sup>4)</sup> 96

(Fig 2-E, F).

Kamali<sup>8)</sup> Reckling<sup>12)</sup> Monteggia

2

16 2 9 ,

Monteggia 45°,

90°, 10°, 30°, 30° ,

(Fig 3-A). Monteggia

(Fig 3-B). 1 3 Hurst Dubrow<sup>6)</sup>

Hirayama <sup>5)</sup> ,

(Fig 3-C), 가 2

10°, 100°, 90°, 70°

, Bruce <sup>4)</sup> 86 가

(Fig 3-D).

Monteggia

central slip

Bell-Tawse<sup>3)</sup>

lateral slip

Monteggia Bado<sup>2)</sup> , K-

47가 Lloyd-Roberts Bucknill<sup>10)</sup>

1

1 가

1) 2

Monteggia Kalamchi<sup>7)</sup> 3.5 6.5

7 10

Theodorou<sup>15)</sup> 가

Monteggia Bruce <sup>4)</sup> 가

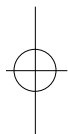
Ray <sup>11)</sup> ,

가

Volkmann

Lichter Jacobsen<sup>9)</sup> , Bell-Tawse<sup>3)</sup>, Lloyd-Roberts

Bucknill<sup>10)</sup>





가  
tension 가  
가가 . Stoll <sup>14)</sup>  
8 Monteggia  
가  
K-  
Monteggia  
가  
가  
2 Monteggia  
Bell-Tawse  
Monteggia

## REFERENCES

- 1) : Mon-teggia - Bell-Tawse - 2 , 26: 1321-1324, 1991.
- 2) **Bado JL** : The Monteggia lesion. *Clin Orthop*, 50: 71-86, 1967.
- 3) **Bell Tawse AJS** : The treatment of malunited anterior Monteggia fractures in children. *J Bone Joint Surg*, 47-B: 718-723, 1965.
- 4) **Bruce HE, Harvey JP Jr and Wilson JC Jr** : Monteggia fractures. *J Bone Joint Surg*, 56A: 1563-1576, 1974.
- 5) **Hirayama T, Takemitsu Y, Yagihara K and Mikita A** : Operation for chronic dislocation of the radial head in children. *J Bone Joint Surg*, 69-B: 639-642, 1987.
- 6) **Hurst LC and Dubrow EN** : Surgical treatment of symptomatic chronic radial head dislocation ; A neglected Monteggia fracture. *J Ped Orthop*, 3: 227-230, 1983.
- 7) **Kalamchi A** : Monteggia fracture-dislocation in children. Late treatment in two cases. *J Bone Joint Surg*, 68-A: 615-619, 1986.
- 8) **Kamali M** : Monteggia fracture. Presentation of an unusual case. *J Bone Joint Surg*, 56-A: 841-843, 1974.
- 9) **Lichter RL and Jacobsen T** : Tardy palsy of the posterior interosseous nerve with a Monteggia fracture. *J Bone Joint Surg*, 57-A: 124-125, 1975.
- 10) **Lloyd-Roberts GC and Bucknill TM** : Anterior dislocation of the radial head in children. A Etiology, Natural History and Management. *J Bone Joint Surg*, 59-B: 402-407, 1977.
- 11) **Ray RD, Johnson RJ and Jameson RM** : Rotation of the forearm. An Experimental study of Pronation and Supination. *J Bone Joint Surg*, 33-A: 993-996, 1951.
- 12) **Reckling FW** : Unstable fracture-dislocation of the forearm. *J Bone Joint Surg*, 64-A: 836-857, 1982.
- 13) **Stanley E and De la Garza JF** : Monteggia fracture-dislocation in children. In : Rockwood CA Jr, Wilkins KE and Beaty JH ed. *Fracture in children, 4th ed.* Philadelphia, *JB Lippincott Co* : 548-586, 1996.
- 14) **Stoll T, Willis RB and Palrison O** : Treatment of the missed Monteggia fracture in the child. *J Bone Joint Surg*, 74-B: 436-440, 1992.
- 15) **Theodorou SD** : Dislocation of the head of the radius associated with fracture of the upper end of the ulna in children. *J Bone Joint Surg*, 51-B: 700-706, 1969.

