



13, 3, 2000 7

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Monteggia

. ,

< >

: Monteggia

가

, 가

가

: 1990 1 1998 6 Monteggia 40 1

가 가

24

가 Broberg and Morrey system5)

:

가 16 (66.6%),

8 (33.4%)

66.6%

Bado

1

가

가

17

8

2

, 1

12

1

가 2

3

가 14

2

가 2

6

: Monteggia

: Monteggia

1814 G. Monteggia가

, 1962 Bado¹⁾가

Monteggia

가

:

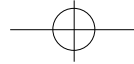
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가 , 1 가 , 가가
 7,31), 가
 가 ,
 7 ,
 17 2
 , Watson-
 Jones²⁹⁾ 95%
 가
 24 Monteggia 1
 3. Bado
 1 15 , 2 3 , 3 5 , 4
 1 1 62.5% 가
 가 9 ,
 가 6 , 가 5 , 가 2 ,
 가 1 .
 4.
 1990 1 1998 6
 Monteggia
 40 1 가가
 24 .
 16 , 4 ,
 3 .
 23 1
 Bado
 , 가 Broberg and Morrey
 system⁵⁾ 5.
 4 ,
 2 , 1
 Fisher 's exact test chi-square test
 SPSS for Windows(SPSS Inc.,
 Chicago, Illinois, USA)
 1.
 16 80 36
 20 가 3 , 30 가 9 50%
 가 18 (76%), 가 6 (24%)
 가 3 .
 가 Broberg and Morrey system
 2.
 7 , 12 , 4
 6 (25%), 10 (41.6%), 6

**Table 1.** Functional results according to the mechanism of injury & the methods of internal fixation

Mechanism of Injury	Satisfactory		Unsatisfactory	
	Excellent	Good	Fair	Poor
Low	2	5		
High	5	4	6	2
				P = 0.05
Methods of Internal Fixation				
Intramedullary nail or				
Tension band wiring	1	1	4	2
Plate & screw	5	9	2	
				P = 0.05

p- value : Fisher 's exact test and chi-square test

Table 2. Functional results according to the Bado classification

Bado classification	Satisfactory		Unsatisfactory	
	Excellent	Good	Fair	Poor
Type	3	7	5	
Type		1	1	1
Type	3	2		
Type				1
				P = 0.25

p- value : Fisher 's exact test and chi-square test

(25%), 2 (8.4%) 66.6%

17 4 , 5 , 6 ,
2 가 8 (47%)

(p=0.05, Table 1). Bado 1 (p=0.008)

3 , 7 , 5 , 2 , Table 3).

1 . 3 3 , (Fig. 1-A,1-B,1-C) 5

2 4 1 . Bado , 9 , 2 가 16

(p=0.2 14 (87.5%)

Table 2). (Fig. 2-A,2-B,2-C) 1 , 1 ,

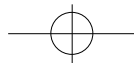
2 , 1 4 , 2 가 8 2

(25%)

2 , 1 , 5

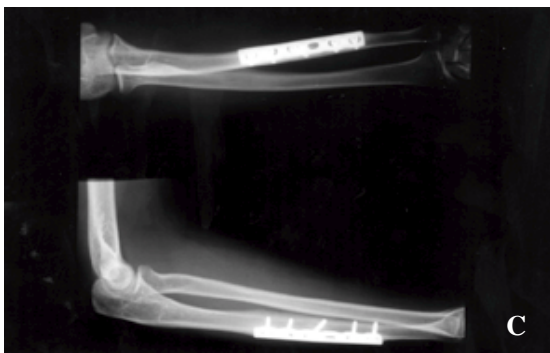
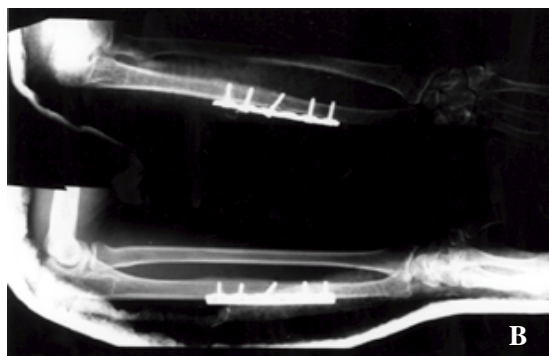
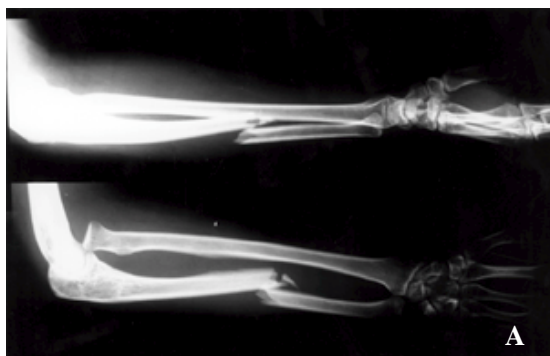
, 7 , 1 가 (p=0.005,

, 1 2 Table 1).

**Table 3.** Functional results according to the level of ulnar fracture

Level of Ulnar fracture	Satisfactory		Unsatisfactory	
	Excellent	Good	Fair	Poor
Coronoid process			2	1
Prox. metapysis		3	1	
Segmental	1	1	2	1
Diapysis	5	7	1	
		P=0.008	(between and)	

p- value : Fisher 's exact test and chi-square test

**Fig 1.** Plate and screw fixation was performed. Anatomical reduction was achieved.**1-A.** Initial radiograph.**1-B.** Postoperative radiograph.**1-C.** Follow-up radiograph.

1814 Giovanni Monteggia가 1/3 Peiro 17) Monteggia 7% , Edward⁸⁾ ,

Monteggia 가 2 Bado¹⁾ 19) 1962 Boyd²⁴⁾ 1 83.3%, Bruce⁶⁾ 1 73%

Monteggia 4 13) , 21) , 28) 가 가 1 24 15 62.5%

lesion , , Monteggia

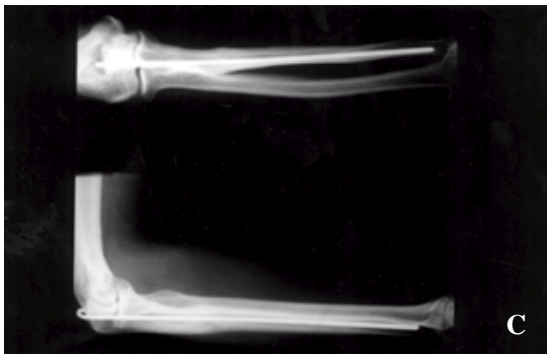
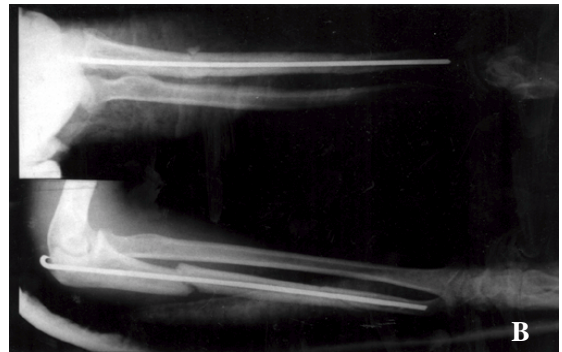
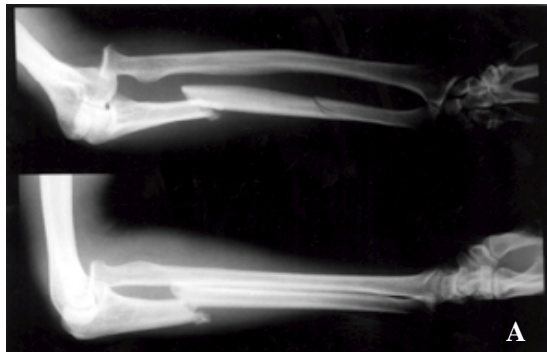
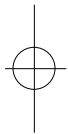


Fig 2. Intramedullary nailing with Rush pin was done to stabilize the ulnar fracture. This radiograph shows inaccurate reduction and non-rigid fixation.

2-A. Initial radiograph.

2-B. Postoperative radiograph.

2-C. Follow-up radiograph.



가 2,23)

Monteggia 가 17 9, 53%

가 7

가

6,11,26), Speed Boyd 24)

가

Evans¹⁰⁾ 가

가

Rockwood Green²³⁾ Monteggia

Tompkins²⁷⁾ 2 Mullick¹⁵⁾ 4

Penrose¹⁸⁾ 가

가

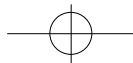
Wright³²⁾ 2 3 15), 4

1 가

Watson-Jones²⁹⁾ 95%

가

21,22) 가

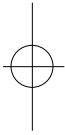
[illegible]

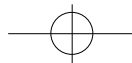
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Abstract

Factors Affecting the Functional Result of Monteggia Fractures in Adults

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Purpose : Monteggia fracture is a combination of ulnar fracture and radial head dislocation. Despite of low incidence, Monteggia fracture has a problem in the treatment. So satisfactory results could not be achieved easily. The purpose of this study was to analyze factors affecting functional results in Monteggia fracture.

Materials and Methods : From January 1990 to June 1998, we retrospectively reviewed 24 patients out of 40 patients who had been treated for Monteggia fracture. The functional assessment was performed with Broberg and Morrey system¹⁰).

Results : Excellent and good results were achieved in 16 cases(66.6%), whereas fair and poor results in 8 cases(33.4%). Satisfactory results were obtained in 66.6% overall. According to the Bado classification, functional results were not different significantly between types. According to the mechanisms of injury, unsatisfactory results were obtained in 8 of 17 patients with high energy injury. Monteggia fractures with ulnar fracture at the diaphyseal level showed satisfactory results significantly compared to others. In terms of the methods of internal fixation, the plate and screw fixation showed satisfactory results in 14 of 16 patients whereas tension band wiring or intramedullary nailing showed unsatisfactory results in 6 of 8 patients.

Conclusion : In Monteggia fractures, factors affecting functional result may be the mechanism of injury, the level of ulnar fracture and the method of internal fixation.

Key Words : Monteggia fracture, Functional result, Prognostic factor

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