



13 , 4 , 2000 10

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K-

. . .

< >

: 50

K-

: 1994 1

1998 8

160

K-

1

가

50

K-

20

Cole

Oblelz

Scheck

가

: Cole Oblelz

Scheck

가

가

가

가

5

12

18

9.8mm,

3.6

20

3

14

: K-

:

K-

1991 Jesse B. Jupiter⁹⁾

가

가

1814 Abraham Colles ' 가

1.5inch

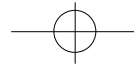
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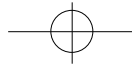




50
20 K
가 , , 20 10mm
5
5mm
AO
가 A2-2가 2 ,
20 10mm A3-2가 18 , Frykman 6)
type I, II가 17 , 3 .
50 79
63.2 , 가 17
, longitudinal pin fixation,
가
Chinese finger
trap DePalma⁵⁾ trans-
styloid pinning, Kapandji¹⁰⁾가 intrafocal
pinning 6 U-
(sugar tong splint) K-
가 Cole Oblez²⁾
X-
1998 8 1994 1
Scheck¹⁴⁾
가 ,
50 20 0 , 4 , 8 ,
K 1 12 (Table 1),
15 가 (0
, 45 (3)
, ,
(Table 2). X- 가
(radial angle), (radial length)
(volar angle) (0),
160 (1), (2)

Table 1. Criteria and result of subjective study

Numeric value	Criteria for subjective study	cases
Excellent	No pain, No disability, No LOM	5
Good	Occasional pain, No disability, Slight LOM	12
Fair	Occasional pain, no disability if careful, Slight LOM	3
Poor	Constant pain, Disability, LOM	
Point	Excellent : 0, Good : 4, Fair : 8, Poor : 12	

**Table 2.** Criteria and result of objective evaluation based on wrist motion (Scheck)

Wrist Motion	Loss of Motion	Numeric value	Result(Cases)
flexion	0-15	Excellent : 0	3
	16-30	Good : 1	15
	31-45	Fair : 2	2
	45 <	Poor : 3	
extension	0-15	Excellent : 0	3
	16-30	Good : 1	15
	31-45	Fair : 2	2
	45 <	Poor : 3	
supination	0-15	Excellent : 0	3
	16-30	Good : 1	15
	31-45	Fair : 2	2
	45 <	Poor : 3	
pronation	0-15	Excellent : 0	3
	16-30	Good : 1	15
	31-45	Fair : 2	2
	45 <	Poor : 3	

Table 3. Criteria and result of objective study based on X-ray finding

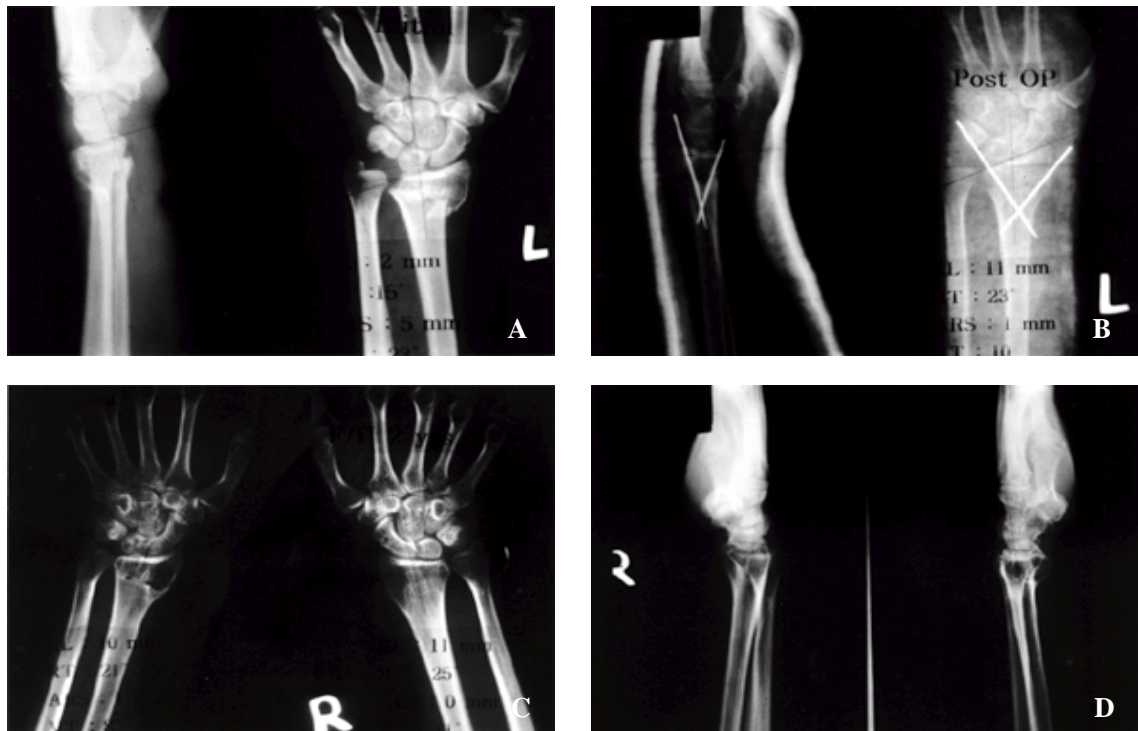
Roentgenogram	Radial angle	Numeric value	Result (Cases)
Radial angle	18-23 °	Excellent : 0	5
	10-17 °	Good : 1	14
	< 17 °	Poor : 2	1
Radial length	10-13mm	Excellent : 0	6
	5-9mm	Good : 1	12
	< 5mm	Poor : 2	2
Volar angle	6-11 °	Excellent : 0	6
	0-6 °	Good : 1	13
	negative angle	Poor : 2	1

가 (9-12) (13-18) 4 (0-4), (5-8), 11mm, 10 21 ,
 3). 가 (Table (Fig. 1B), 2 8
 가 0-4 (Fig. 1C).
 , 5-11 , 12-20 , 20 가
 (Table 4).

61 15 20 5 , 12 3
 , 2mm, 23 (Fig. 1A). 23 , (Table 1), X-

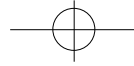
**Table 4.** Overall result of subjective and objective study.

	Sum of Point (Point of Objective and Subjective study)			
	Excellent (0-4)	Good (5-11)	Fair (12-20)	Poor (>20)
cases	3	14	3	0

**Fig 1A.** preoperative radiograph of 61-year female patient.**1B.** Distal radius was well reduced in postoperative radiograph.**1C.** 2-year follow up X-ray compared with normal wrist X-ray shows well healed fracture.

16 , 2.7mm, (Table 4)
 -9.3 22.3 ,
 9.8mm, 1.8 2 가 carbamazepine
 .Scheck , 1 1
 , , , 47
 (Table 2), X-
 ,
 (Table 3).

20 3 , 14 , 3 1814 Colles '

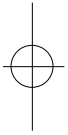


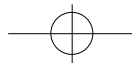
1000 • / 13 4

ligamentotaxis
가 가 , Robert Jones
가 .

Cooney^{3,4)} .
가 .
가
가 20 10mm
Bohler
90
Chinese finger trap
5kg
가
5lb
가 .

Lucas and Sachtjen¹¹⁾ longitudinal pin fixation,
DePalma⁵⁾ , Cole and Obelz²⁾
DePalma
Rayhack
Kapandji 2 4
DePalma⁵⁾ Kapandji¹⁰⁾
Sarmiento¹³⁾
가
50
가
20
10mm
5 5mm
(dorsal and ulnar subluxation)
(radial collateral ligament)
가
Cooney⁴⁾
24.8%
12.5%
50
50
가
Gray⁸⁾
Green and
Wahlstrom¹⁵⁾





가 가

가

가

가

가

1,3,6,8)

1

Cole and Oblatz²⁾

Scheck

X-

4

4)

가

20

3

, 14

, 3

1

1994

1

1998 8

160

50

가

20

K-

80%

50

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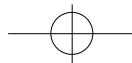
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Abstract

Percutaneous K-wire fixation for Unstable Fracture of distal radius

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Purpose : To evaluate the clinical validity of the percutaneous K-wire fixation in applying to unstable extraarticular fracture of distal radius of patients who are older than 50 years.

Material and Methods : The validity of K-wire fixation was examined, using subjective study of Cole and Oblatz and objective study of Scheck, on the 20 cases of unstable extraarticular fracture of distal radius of patients older than 50 years, who were treated with percutaneous K-wire fixation and followed up more than 1 year, out of 160 patients with distal radius fracture, treated in the department of orthopedic surgery of our hospital from January 1994 to August 1998.

Results : The result was examined with subjective study of Cole and Oblatz and objective study of Scheck. Combined judgement was made by adding up the scores of both objective and subjective study. 5 excellent cases and 12 good cases were brought forth by subjective study. Objective study achieved the result of average 18 degree of radial angle, 9.8mm of radial length and 3.6 degree of volar angle. Combined judgement achieved a good result of 3 excellent cases, 14 good cases and 3 fair cases.

Conclusion : Percutaneous K-wire fixation is expected to be a simple, less invasive, more effective and valuable operation method in the treatment of extraarticular fracture of distal radius with severe comminution

Key Words : wrist, distal radial fracture, unstable fracture, percutaneous K-wire fixation.

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