

가 .

: 1998 3 2002 3 12 가 가 .

59 53 Kempf ,

: 18.7 (12~28) , Denker 가 가

(Winquist - Hansen 1, 2) 18.1 가 (3, 4) 20.3 가 , 가 18.1

20.5 , 20.8 (p<0.05). 가 20.1 17.9

(p<0.05), 가 가 ,

가 , 1 , 1 가 . 2 (1 , 1)

: 5 가 가 , 가 .

: , , ,

Analysis of Prognostic Factors for Union Time after Unreamed Femoral Nailing

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Purpose: To assess the evaluation of prognostic factors according to union time after unreamed femoral nailing.

Materials & Methods: From Mar. 1998 to Mar. 2002, 53 cases of bone healing were analyzed among the fifty-nine femoral shaft fractures were treated with unreamed femoral nail (AO, UFN) and had been followed for more than 12 months. Clinical bone healing time was analyzed by Kempf's method and were evaluated prognostic factors according to union time.

Results: Mean duration of the bone healing time was 18.7 weeks. According to Denker's classification, functional results were seen over satisfactory at all cases. Bone healing time was more faster at the low communiton group than high communiton group at 18.1 weeks. At the middle portion, bone healing time was fastest. Closed reduction cases were more faster than open reduction cases at 17.9 weeks. Bone healing time was faster that fracture was more close distance from isthmic portion. Bone healing time was not influenced age, isthmic ratio, operation time, associated injury.

Conclusion: All cases were unioned within 5 months without severe complication. That was seen faster bone healing time, in that low communiton, more close distance of fracture from the isthmic portion, closed reduction method.

Key Words: Femur, Shaft fracture, Unreamed femoral nailing, Union period

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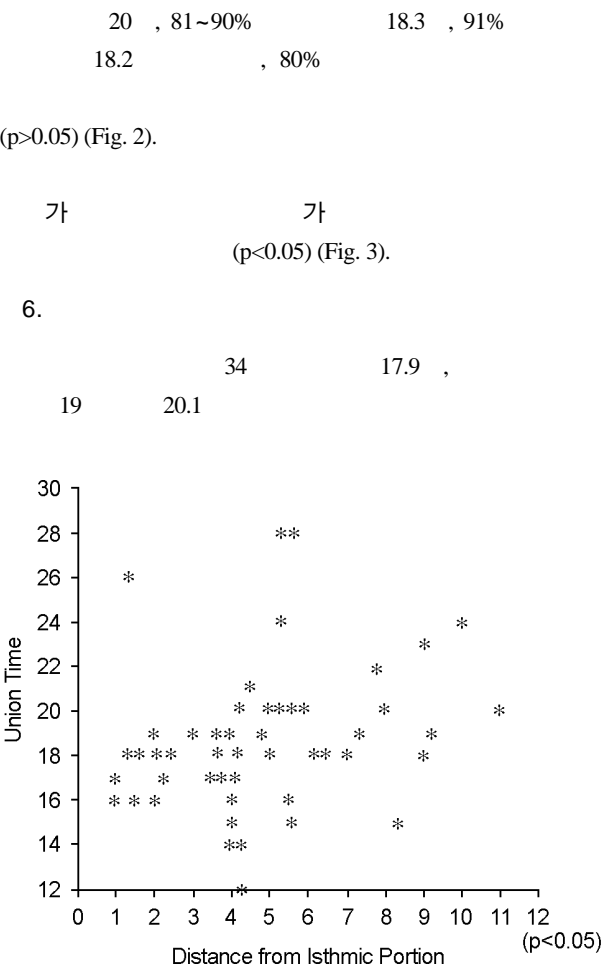


Fig. 3. Union time according to distance from isthmic portion (p<0.05)

가 가

(p<0.05).

7.

Denker 가

(Table 3).

8.

53 4 2

(1 , 1) 가

1 , 1

cast, brace

Table 3. Functional results - Denker's classification

	N (%)
Excellent	50 (94.3)
Satisfactory	3 (5.7)
Poor	-
Very poor	-
Total	53 (100)



Fig. 4A-D. (A) Winquist-Hansen type 1 fracture of a 20 year-old man
(B) 12 months postoperative radiographs demonstrate good union for fracture, excellent Denker's result at last follow up. Isthmic ratio was 83.3%. Bone union was 17 weeks.
(C) Winquist-Hansen type 1 fracture of a 20 year-old man
(D) 18 months postoperative radiograph demonstrating good union for fracture, satisfactory Denker's result at last follow up. Isthmic ratio was 78.5%. Bone union was 21 weeks.

1940 Küntscher⁶⁾

가

4,14,18), 1950

6 가 20.5

1965

20.8

18.1

Küntscher가

7,8) Klemm 5)

가

3, 4

Abbas 1)

1~1.5 mm

가 가

1,5)

1962 Küntscher가

가 7),

Pratt 13)

가,

Pfister 12)

, 1979

가

40 18.8

, 41~60 17.7 , 61 19.1

11)

1 18.4 ,

19) 1 19.5 1

15.2 , 17.7

가

18.7

18.3 , 19.1

17.9 ,

20.1 20)

16.1 , 20.5

3, 4

Winquist-Hansen

, 1 18 , 2 18.4 , 3 20.1 ,

4 20.6 가 가

10)

Winquist-Hansen 1, 2 1 , 4° 1)

가 3, 4

12 , 가 19

가 가

(p<0.05).

9)

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