

---

< >

: 1/3

: 1996 1 2000 1

(Denis-Weber B, Lauge-Hansen )

6 가 가 44

21 1/3 II 23

가 ,

: I 92 , II 89 (P>0.05)

I 21 20 (95%), II 23 21 (91%)

I 1 , II 2

II 1 가

:

:

: , 1/3

---



---

:

1

TEL : 958-8346

FAX : 964-3865

E-mail : CShan29@netsgo.com

37.1 (21 -60 )  
11 , 10  
10.3 6.2  
가 (4 -11 )  
Langen-Hansen - 1/3  
II 가 14 ,  
Denis-Weber B 1/3 (one-third tubular - 71 ) I 41.1 (27  
plate) 14 9  
. II 11.0  
(2 -24 ) 6.0 (4 -8 )  
, 가 . I , II  
가 I  
1 3  
II  
Denis- 1/3  
Weber B  
.  
.  
.  
.

1996 1 2000 1 , K- ,  
,  
(Denis-Weber , ,  
: B , Lange-Hansen : - )  
2  
6 가가 4  
44 . 44 가 25  
, 가 19  
39.1 (21 -71 ) 10 6  
(2 -43 ) .  
I  
21 1/3  
II 23  
.  
.  
I ,  
11 , 10 .


1 (4%)

가

I

1 (4%)

15)

. II

12 (52.2%)

가

3

(13.0%)

2

1,15,16)

(8.6%)

, 8 (34.8%)

Jacobsen <sup>5)</sup>

가

66%

75%

가

1982 Brunner Weber<sup>2)</sup>

antiglide plate

4,9,10,11,13,18)

가

가

가

3,6,10)

가

가

1)

Tornetta <sup>16)</sup>

9,13,14,17)

7,8,12,14,17)

K-

가

가

6,15) 가

(Denis-

Weber B )

AO

가

10)

1/3

6

가 6

가

## REFERENCES

1. **Bankston AB, Anderson LD and Nimityongskul P** : Intramedullary screw fixation of lateral malleolous fracture. *Foot Ankle Int*, 15: 599-607, 1994.
2. **Brunner CF and Weber BG** : Special Techniques in Internal Fixation. New York. Springer:125-135, 1982.
3. **Chapman MW**: The American Academy of Orthopaedic Surgeons, St. Louis, Mosby Co. 31:75-91, 1982.
4. **Hughes JL, Weber H, Willenegger H and Kuner EH**: Evaluation of ankle fractures. Non-operative and operative treatment. *Clin Orthop*, 138:111-119, 1979.
5. **Jacobsen S, Honnens LM, Jensen C, et al**: Removal of internal fixation-the effect on patients ' complaints: a study of 66 cases of removal of internal fixation after malleolar fractures. *Food Ankle Int*, 15: 170-171, 1994.
6. **Johnson EE and Davlin LB**: Open ankle fracture. *Clin Orthop*, 292:118-127, 1993.
7. **Lambert KL**: The Weight-Bearing Function of the Fibula. A Strain Gauge study. *J Bone and Joint Surg*, 53-A:507-513, 1971.
8. **Mast JW and Teipner WA** : A Reproducible Approach to the Internal Fixation of Adult Ankle Fractures: Rationale, Technique, and Early Results. *Orthop Clin North America*, 11:661-679, 1980.
9. **Mitchell WG, Shanftan GW and Sclafani SJ** : Mandatory Open Reduction. Its Role in Displaced Ankle Fractures. *J Trauma*, 19:602-615, 1979.
10. **Muller ME, Allgower M and Willenegger H** : Maunal of Internal Fixation :Technique Recommended by the AO-Group. New York, Springer, 292-299, 1979.
11. **Olerud S, Karlstrom G and Danckwardt-Lilliestrom G** : Treatment of open fracture of the tibia ankle. *Clin Orthop*, 212:136-150, 1978.
12. **Pettrone FA, Gail, Mitchell et al**: Quantitative Criteria for Prediction of the Results after Displaced Fracture of the Ankle. *J Bone and Joint Surg*, 65-A:667-677, 1983.
13. **Phillips WA, Schwartz HS and Keller CS** : A Prospective, Randomized Study of the Study of the Management of Severe Ankle Fractures. *J Bone and Joint Surg*, 67-A:67-78, 1985.
14. **Ramsey PL and Willian H** Changes in Tibiotalar Area of Contact Caused by Lateral Talar Shift.. *J Bone and Joint Surg*, 58-A:356-357, 1976.
15. **Schaffer, JJ and Manoli A.**: The antiglide plate for distal fibula fixation. *J Bone Joint Surg*, 69A: 569-604, 1987.
16. **Tornetta P III and Creevy W**: Lag screw only fixation of the lateral malleolous. *J of Orthop Trauma*, 15:119-121, 2001.

## Abstract

## Result of Fibular Fixation Using Screw in Ankle Fracture

Chung Soo Han, M.D., Yang Sun Im, M.D., Sun Teak Cheong, M.D.

*Department of Orthopedic Surgery, Orthopaedic Surgery, School of Medicine,  
Kyung Hee University, Seoul, Korea*

**Purpose :** To compare the use of screw only fixation with lateral one-third tubular plate fixation of non-comminuted oblique fracture of the lateral malleolus and report the advantages of screw only fixation

**Materials and Methods :** From January 1996 to January 2000, we had operated 44 cases of non-comminuted oblique fractures of the lateral malleolus (Denis-Weber type B, Lange-Hausen classification supination-external rotation injury). All cases had a follow-up period of over 6 months. There were 21 cases of cortical or bone screw fixation (group I) and 23 cases of one third tubular plate fixation (group II). Radiologic and clinical outcome parameters were used to compare group I with group II.

**Results :** There were no significant difference in bone union rate and period between group I and group II (group I : 92 days, group II : 89 days). All cases of both groups recovered a complete range of motion after cast off. There was 1 case superficial infection in group II.

**Conclusion :** The radiologic and clinical results and complications between screw only fixation and one-third tubular plate fixation at non-comminuted lateral fibular fracture have no difference. The advantage of screw only fixation at non-comminuted lateral malleolar fracture is a small incision, short operation time and decreased patient 's complaints as compared with a similar group of patients treated by fixation with a lateral one third tubular plate fixation.

**Key Words :** fibular fracture, screw fixation, one-third tubular plate

**Address reprint requests to** \_\_\_\_\_

Chung Soo Han  
Department of Orthopaedic Surgery, Kyung Hee University  
1 Hoiki-dong, Dongdaemoon-gu, Seoul, Korea  
TEL : 958-8346  
FAX : 964-3865  
E-mail : CShan29@netsgo.com