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Essex-Lopresti

. . . .

= Abstract =

The prognostic factors in Tongue shaped calcaneal fractures treated by Essex-Lopresti method

Jong-Oh Kim, M.D., Dong-Wook Kim, M.D., Young-Do Koh, M.D.,
Jae-Doo Yoo, M.D., and Dong-Wook Lee, M.D.

*Department of Orthopaedic Surgery, College of Medicine,
Ewha Womans University, Seoul, Korea*

There is a great difference in opinion regarding the treatment of intraarticular fractures of the calcaneus. In Essex-Lopresti method, a heavy Steinmann pin is introduced into the cancellous part of tongue fragment and the fracture is reduced by lifting the fragment by the level effect of the Steinmann pin.

The authors had treated 38 cases in 36 patients with displaced intraarticular tongue shaped fractures using Essex-Lopresti axial fixation at our hospital from 1993 to 1997. We obtained the following results.

1. Of 36 patients, 31 patients were male and 5 female
2. The main cause of fractures were fall from height in 86 percent of cases and spine

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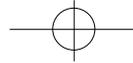
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Tel: 650 - 5144 Fax: 642 - 0349

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injury was associated in 8 cases(22%).

3. The favorable result was obtained in 29 cases(76%).

4. The poor prognostic factors in functional outcome were old age, comminution of fracture, osteoporosis and the loss of correction in Böhler angle at postoperative and follow up X-rays.

Key Words : Calcaneus, Tongue shaped intraarticular fracture, Essex-Lopresti axial fixation.

가 ,21 78 35 .

가 ,가 2.

가31 (86%),

3 (8%), 가2 (6%) .

6,

3.

36 14 (39%) ,

8 (22%) 가 ,

가 ,

가 ,

가

4. Böhler

Böhler

가 16 ,0 10

가 15 ,10 20 가 7 , 5.9

(Table 1).

5.

8 (22%),

30 (78%) .

1993 5 1997 1

Essex-Lopresti

1 10

가가 36 ,38

6.

50 8

-2.5SD 가 2

Table 1. Initial Böhler angle

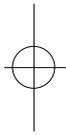
Angle	No. of cases
< 0°	16
0° 10°	5
10° 20°	7

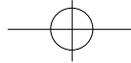
1.

36 가 31 (86%), 가 5 (14%)

가 , 20 가 13 ,30 가

14 ,40 가 3 , 50 가 4 ,30





330 • / 12 2

, 6 -1SD -2.5SD . 20 13
 , 30 12 , 2
 , 40 2 , 가1
 , 50 2 ,
 가6 가
 가 가 40
 가 15) (Table 2), 38 29 가 (Table 4).
 (76%) 9
 (24%) (Table 3).
 2.
 8 2
 1.
 , 6 ,

Table 2. Criteria used in assessment of result (Salama)

Excellent :	Patient satisfied. Normal mobility of joint Asymptomatic broadening of the heel No pain
Good :	Patient satisfied but occasional pain Walking ability unaffected Slight limitation of inversion Mild flat foot
Fair :	Patient not entirely satisfied (reserved) Pain after exertion Walking ability markedly reduced Limitation of tarsal movement Special shoes
Poor :	Patient not satisfied Pain even on slight effort Walking ability markedly reduced Severe limitation of joint movement Change of occupation

Table 3. Functional result

	Essex-Lopresti method
Excellent	15 (42%)
Good	14 (34%)
Fair	7 (18%)
Poor	2 (6%)

Table 4. Age

Age	> Good	< Fair
20 - 29	13	0
30 - 39	12	2
40 - 49	2	1
50 - 59	1	3
60 - 69	1	3

P < 0.05

Table 5. Comminuted fracture

	> Good	< Fair
Comminuted	2	6
Non comminuted	27	3

P < 0.05

Table 6. Osteoporosis

(> 50 yrs. old)

BMD Y-score	> Good	< Fair
above -1.0SD	1	1
-1.0 -2.5SD	1	3
below -2.5SD	0	2

P > 0.05

Table 7. Final Böhler angle

Angle	> Good	< Fair
< 10°	1	8
10° - 20°	3	1
21° - 30°	11	0
> 30°	14	0

P < 0.05

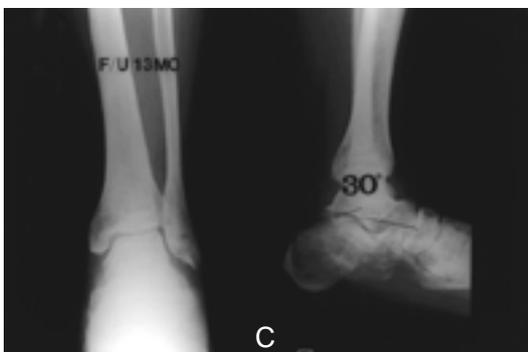
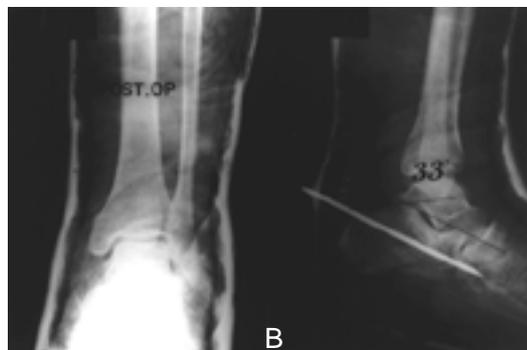
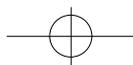


Fig 1-A. Initial AP, lateral x-ray (Böhler angle 12°).
B. Immediate postoperative AP, lateral x-ray (Böhler angle 33°).
C. At final follow-up, the result was excellent.

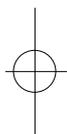
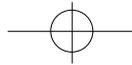


Fig 2-A. Preoperative AP, lateral x-ray (Böhler angle 8°).
B. Immediate postoperative AP, lateral x-ray (Böhler angle 22°).
C. At final follow-up, The result was poor.





30 27 , 3

(Table 5).

3. , 9).
-2.5SD 50 8 Cave⁵⁾ 75%
, -2.5SD 2 , 1) 90%
가4

(Table 6).

4. Böhler Essex-Lopresti⁶⁾ 가
Böhler 5.9 24.5 ,
22.8 1.7 ,
(7%) 가
Böhler 가
Böhler 10 ,
가 1 , 가 8 , 10 ,
1 , 10 , 28 , 가

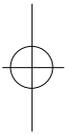
(Table 7).

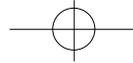
1. , 30
32 2m 가 ,
, 가 40 40
Böhler 12 33 ,
13 Böhler 30 가
Salama 가 (Fig. 1).

, high energy

Essex-Lopresti

2. King¹⁰⁾
66 3m (sustentaculum tali)
, Böhler
-2.5SD 8. 21. 16 가
8. , Salama 가
(Fig. 2). 2/3가





, Harris⁸⁾ Gallie⁷⁾

가
가

, Thompson¹⁶⁾

Böhler

가

hler
of talus)

B
(Spur of the lateral border
(congruity)

clamp

Essex-Lopresti

50

29 76%

, 38

가 Böhler
2

, 10

10
2)

, -2.5SD

Böhler

가

Böhler

가 가
Böhler

가

가

가

가

가

가

Böhler

가

Böhler
가

, Böhler

가

가

Essex-Lopresti

1)

1,14), 2)

4), 3)

1), 4)

11-13), 5)

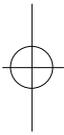
8)

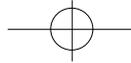
Steinmann

1993 5

1997 1

가





	가가	36	38
1. Salama		38	29
(76%)			
2.	가		가
	40		,
3.			가
4.			
5.	,	Böhler	
6.		Essex-Lopresti	
		,	가
	, Böhler		가
			,
			가

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