

가

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가 23

.

:

14 (60%) 2 mm (90%) 7 (30%), 12 (52%), 3 (13%), 1 (4%)
(82%)

:

가

가

:

:

301-723,

520-2

가

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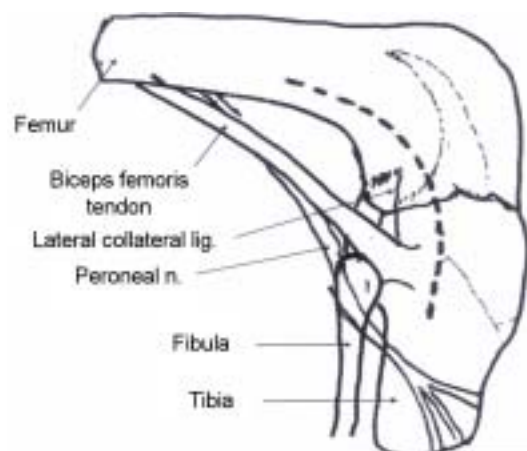


Fig. 1. Incisional orientation: With the knee flexed, a lateral curved incision made from the distal 3 inches of thigh over the proximal 4 inches of fibula.

13) .
가
12) .
8) .
가
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1) .
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23 12
11
2 , 1
7 , 3 ,
4 .
2.
가
1999 12 2001 5
1 가 가 23
12
28 , 19 .
38 74 , 14
9 . Schatzker
II 7 , III 3 ,
V 6 , VI 7 .
(Table 1).

1.
23 12
11
2 , 1
7 , 3 ,
4 .
2.
가
30°
4 cm Gerdy
(Iliotibial band)
Gerdy
(Fig. 1).
가
가 ,
(Coronary ligament)

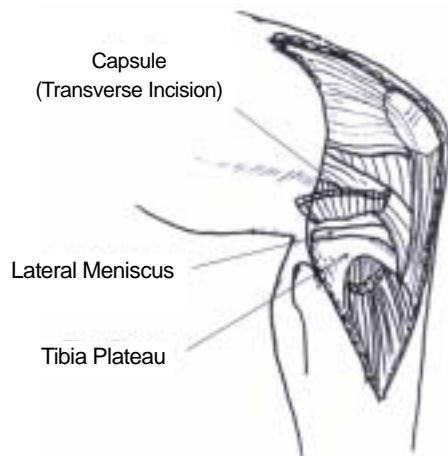


Fig. 2. Transverse incision on capsule for exposure of intraarticular

(Fig. 2).

가

(roof)

Schatzker V, VI 가

가

3 (pull-out suture)

3

4

(Fig. 3).

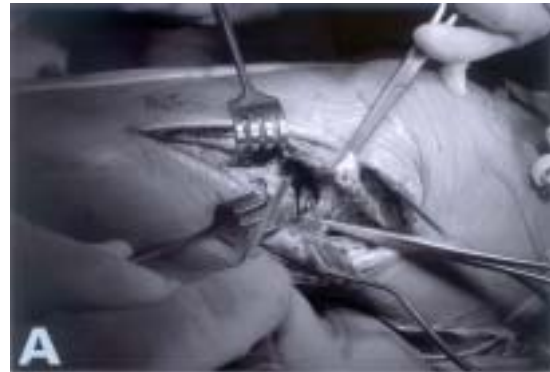


Fig. 3A-C. (A) Lateral meniscus is released from its lateral attachments at the coronary ligament and elevated to expose the tibial articular surface. (B) Tibial articular surface is released and reduction and temporary fixation can be done. (C) After fixation of the fracture, meniscus is repaired

Schatzker type V, VI

가

(Antigliding

plate) , 가

plate osteosynthesis, MIPO) (Minimal invasive 3 .

4. 가

3. 가

30° , 2 mm

2~3 가 2 mm

(quadriceps strengthening exercise) 가 .

2~3 가 ,

(CPM) , ,

4~6 , , , ,

Table 1. Summary of cases

No.	Age	Sex	Schatzker type	Bone graft	Hohl's score	Knee ROM	Remarks
1	51	M	2	AIBG*	95	0°~135°	
2	66	F	2	Allograft	81	0°~120°	
3	72	F	2	No	75	10°~110°	Osteoarthritis
4	51	F	2	AIBG*	89	0°~135°	
5	48	M	2	AIBG*	87	0°~130°	
6	38	M	2	No	93	0°~130°	
7	48	M	2	Allograft	92	0°~130°	
8	69	F	3	Allograft	94	0°~135°	
9	58	F	3	Allograft	83	0°~120°	
10	69	F	3	No	90	0°~130°	
11	51	M	5	No	90	0°~135°	
12	49	M	5	Allograft	82	0°~130°	Moderate pain
13	52	F	5	No	82	0°~120°	
14	67	F	5	No	84	0°~130°	
15	41	M	5	No	82	0°~110°	
16	60	M	5	No	92	0°~135°	
17	44	M	6	Allograft	84	0°~130°	Moderate pain
18	74	M	6	No	86	0°~120°	Skin infection
19	54	F	6	Allograft	80 [†]	0°~120° [†]	Nonunion Reoperation
20	43	M	6	No	73	0°~125°	Moderate pain
21	58	M	6	Allograft	77	0°~90°	
22	41	M	6	No	65	5°~110°	Osteoarthritis
23	72	M	6	Allogra	83 [†]	0°~110° [†]	Varus deformity Reoperation

*AIBG = Autogenous iliac bone graft [†]Result after reoperation

Table 2. Relationship between postoperative radiography and clinical follow up

	No. of Pt's(%)	Mean Hohl's score
Anatomical	7 (30%)	91.2 (83~95)
<2 mm	16 (69%)	81.2 (65~90)
>2 mm	0	0

Table 3. Hohl's Functional score

Grade	No. of Pt's (%) (N=23)
Excellent (90~100)	7 (30%)
Good (80~89)	12 (52%)
Fair (70~79)	3 (13%)
Poor (<70)	1 (4%)
Mean	84

, , , , Hohl
 7) (90~100), (80~89
) , (70~79), (70) .

 , 가 가

 ,
 . 7 (30%), 2 mm
 14 (60%) 2 mm
 (Table 2).
 가 Hohl
 7) 7 (30%), 12 (52%),
 3 (13%), 1 (4%)
 (82%) . 2

 , 123° 가 (Table 2, 3).
 2 ,
 . Schatzker VI

 가
 , 4

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 가 1 ,
 가 가 .
 1

2
 ,
 가
 Schatzker VI
 가 (Locking),
 ,
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 , Hohl, Apley, Sc-
 hulk Schatzker Schatzker
 가
 . Schatzker III 가
 , II VI
 , II VI
 V
 Schatzker 가
 I, II VI 가

 가
 , , ,
 2,7)
 8,13) ,

가 , 12
 8) 2 Schatzker VI
 가 , 가
 Tscherne 9)
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 가 ,
 가 가 가
 4 가 가 가
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 가 가 , Walker¹⁵⁾
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Abstract

Lateral Submeniscal Approach in the Treatment of Tibial Condyle Fracture

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Purpose: To evaluate the radiologic and functional results of treatment in proximal tibial plateau fracture using lateral submeniscal approach, which is a relatively minimally invasive approach to tibial condylar articular surface.

Materials and Methods: Twenty three cases of tibial plateau fracture which treated with submeniscal approach were analyzed with one year follow up. The results were evaluated by immediate postoperative radiographic and Hohl's clinical evaluation.

Results: Tibial articular surface could be in operation field and the articular surface could be restored the anatomically by elevating the depressed articular surface and bone graft to the empty space. The postoperative radiography showed that most cases (91%) could be reduced adequately (within 2 mm). The clinical evaluation by Hohl's criteria revealed excellent 7 cases (30%), good 12 cases (52%), fair 3 cases (13%), and one poor case (4%).

Conclusion: Submeniscal approach can identify the articular surface and intraarticular soft tissues with minimal incision, and allows anatomical reduction, sufficient bone graft, rigid plate fixation and soft tissue treatment, therefore it is one of the good approach in treatment of proximal tibial plateau fracture.

Key Words: Tibial plateau fracture, Submeniscal approach

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