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## Blade Plate

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&lt; &gt;

: condylar blade plate

blade plate

: condylar blade plate

C 2 )

. 95

condylar blade plate

85

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A 10

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4

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13.2

25

1, 6

1

1 가

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blade plate

가

: , blade plate

가 ,

가 2,12,23).

가

2,5).

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\* 1998 24



6 50% .

condylar blade plate

2.

blade plate

AO A2, A3, C1, C2

condylar blade plate

, AO C3 ,

, Gustilo-Anderson 3

condylar blade plate

1.

1990 9 1998 9

condylar blade plate 12

4 9

6 1

(Table 2).

1 6 9

2

가8 , 가4 , 18 , C

73 44 . 가 . C

10 가 가 7 blade

가 3 , 가 6.5mm

가 1 . AO (Fig. 1).

A2 3 , A3 7 , C2 2 blade plate

3

Gustilo-Anderson 1 (Table 1).

blade (seating hole)

10 , 5 , blade plate

5 39가 . 95 condylar

blade plate

가 2 , 2 10 plate

가 3 , 가 1 , 가 10 85

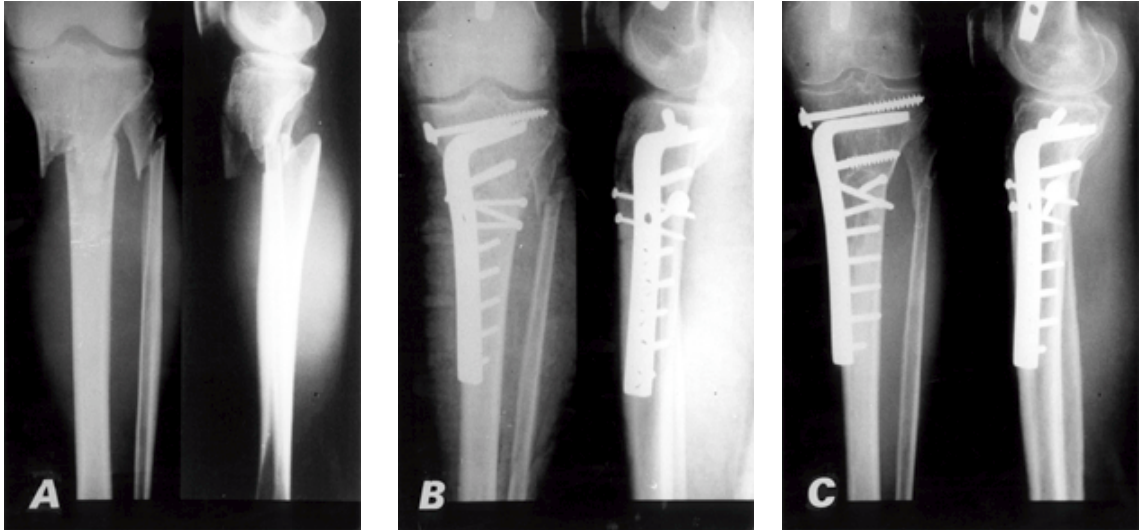
**Table 1.** AO Classification of Fracture

Fracture type	No. of cases
Type A, Extra-articular fracture	10
Type A2	3*
Type A3	7*
Type C, Complete articular fracture	2
Type C1	0
Type C2	2*
Total	12

\* including an open fracture

**Table 2.** Time from Injury to Operation

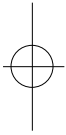
Time to operation	No. of cases
<24 hours	2
0 - 1 week	1
1 - 2 weeks	6
2 - 3 weeks	2
>3 weeks	1
Total	12



**Fig 1A.** Initial radiographs show AO type C2 fracture of the left proximal tibia in a 60-year-old man.

**B.** Postoperative radiographs show that undisplaced articular fracture was fixed with a 6.5 mm cancellous screw and multifragmentary metaphyseal fracture was reduced directly and fixed with the lag screws and the 95° condylar blade plate.

**C.** Final radiographs show good fracture healing with anatomic alignment.

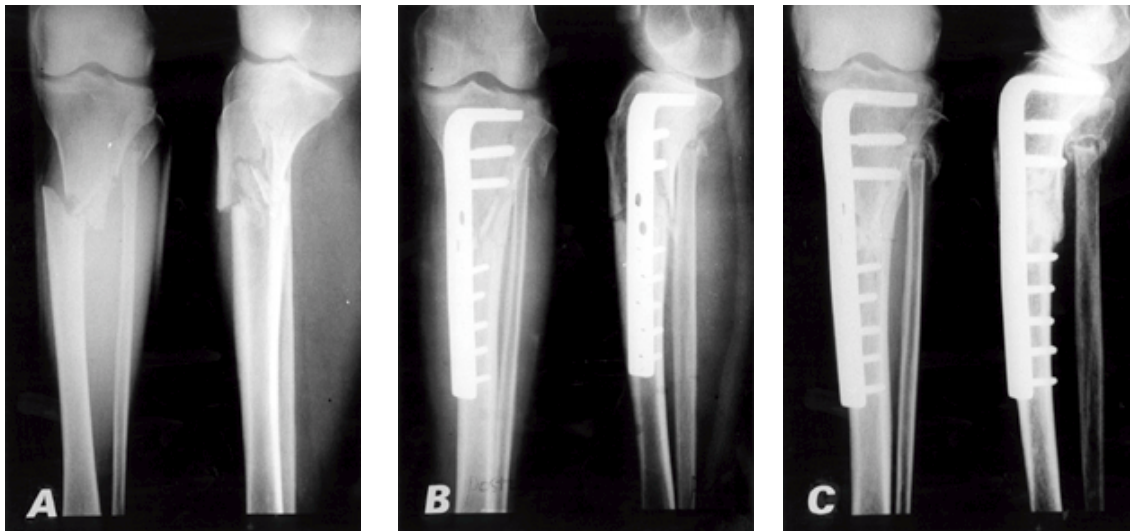
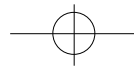


(Fig. 2).

(Fig. 1) 가 4

(Fig. 2).

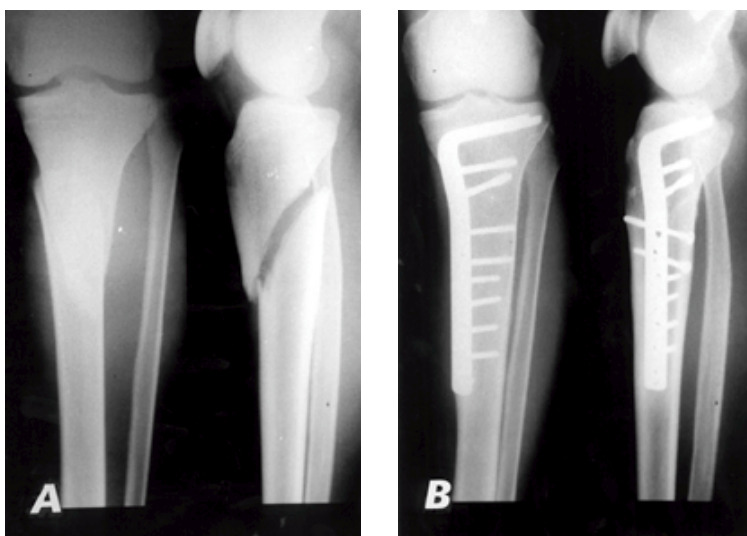
가 2  
3-4  
16  
25  
9-25 13.2  
1 가 C2  
가 25  
6  
1 9 6  
(Fig. 3).



**Fig 2A.** Initial radiographs show AO type A3 fracture of the left proximal tibia in a 73-year-old woman.

**B.** Postoperative radiographs show that the fracture was reduced in excellent alignment by indirect reduction technique and fixed with the modified 85° condylar blade plate.

**B.** Final radiographs show solid union with excellent alignment.



**Fig 3A.** Initial radiographs show AO type A2 fracture of the right proximal tibia in a 19-year-old man.

**B.** Final radiographs show good fracture healing with 6 degrees of varus malunion.

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120

(Table 3).

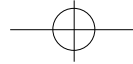
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2/3 가 ,

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5-11%  
3,6,7,12,20),

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2,7,19,23)

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1990 9

condylar blade plate

. blade plate

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2,16,23),

가

9,15,16,22),

blade plate

1996 Carpenter Jupiter<sup>5)</sup>가

16 blade

1,2,12,14,18,19).

plate

1/3

blade plate blade

가 7,11,12).

Buehler <sup>4)</sup>

Kim <sup>10)</sup> blocking pin

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5,9,15,16,21,22).

가

5).

A3

가 60

A3 C2

가 6 blade plate

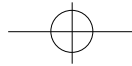
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**Table 3.** Complications

Complication	No. of case
Delayed union	1
Malunion (6° varus)	1
Loss of knee motion (10° / 120°)	1
Reflex sympathetic dystrophy	1
Total	4

가

가



512 • / 13 3

가

Carpenter Jupiter<sup>5)</sup> 7  
95 condylar blade plate

(convex side)

95 condylar blade plate

blade plate

AO A2, A3, C1, C2

가

95 condylar blade plate

가

95 condylar blade plate 85

plate

blade plate

blade plate

, A2 C1

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A3 C2

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condylar blade plate

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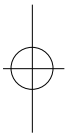
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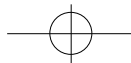
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blade plate



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## Abstract

## Blade Plate Fixation of Proximal Tibial Fractures

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**Purpose :** This study demonstrates the effectiveness of the blade plate as an implant for the operative management of proximal tibial fractures.

**Materials and Methods :** Twelve proximal tibial fractures (AO classification, 10 type A and 2 type C) were treated by direct or indirect reduction and condylar blade plate fixation. The condylar blade plate was fixed on the anteromedial surface of the proximal tibia and cancellous bone graft was performed in 4 fractures with severe cortical comminution or bone defect in early cases. At the final follow-up assessment, the patients were evaluated as to subjective symptoms, objective findings, and radiographic findings.

**Results :** All fractures were healed in an average of 13.2 weeks (range, 9.0 to 25.0 weeks). There were 3 major complications of a delayed union, a 6-degree varus malunion, and a reduced range of motion of the knee related with associated multiple fractures of the ipsilateral lower limb, but there were no soft tissue problems, loss of fixation, infection, nonunion, and traumatic arthritis. A few patients complained a prominence of the plate on the anteromedial side of the proximal tibia.

**Conclusion :** Blade plate fixation is a reliable method of stable fixation to obtain good results for proximal tibial fractures by early rehabilitation and good fracture healing, particularly in patients with osteoporosis and cortical comminution.

**Key Words :** Tibia, Proximal fracture, Blade plate

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