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Salter-Harris Type I & II

. . .

= Abstract =

Treatment of Distal Tibial Epiphyseal Fracture Salter-Harris Type I & II

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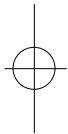
It is known that the Salter-Harris type I and II fractures of the distal tibial epiphysis usually can be treated by conservative method. But according to Spiegel, unpredictable group (type II) fractures might have more complications than expected when treated by conservative method without accurate reduction. Eleven cases in type I or II fractures were treated at the National Police Hospital between March 1992 and March 1997.

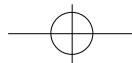
If more than 2mm displacement was present compared to contralateral side after closed reduction, open reduction and internal fixation method was done and in those all cases, periosteal interposition was found on the operative field that might interrupt anatomical reduction and cause late complications such as angular deformity.

Key Words : Distal tibia, Epiphyseal fracture, Displacement

:
가 58 (138-160)

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1992 3 1997 3

S-H Type

, 1

가 2mm

Harris Type I (S-H Type)

Salter-

11 11

5), Spiegel 10) , Type 10 36 16

가

1.

2 14 9 6

가 1,2,3,7) (Table 1).

S-H Type

2.

가7 가 3 , 1

Table 1. Case Summary.

Case	Cause of Injury	Age	Sex	Type	Treatment
1	T.A.*	9	F	Tibia-Fibula-Torus fx	OR/IF † with Steinmann pin
2	T.A.	11	M	Tibia-Fibula fx	OR/IF with K-wire
3	T.A.	13	F	Tibia-Fibula fx.comm.	OR/IF with Screw
4	T.A.	4	M	Tibia-Fibula fx	OR/IF with K-wire
5	T.A.	2	F	Tibia-Fibula fx	OR/IF with K-wire
6	T.A.	10	M	Tibia-Fibula fx	OR/IF with K-wire
7	Slipdown	14	F	Tibia-Fibula fx	CR & Cast
8	Slipdown	13	F	Tibia-	CR & Cast
9	T.A.	3	M	Tibia-	CR & Cast
10	Falldown	9	M	Tibia-	CR & Cast
11	Slipdown	12	M	Tibia-	CR & Cast

* T.A. : Traffic Accident

† OR/IF : Open Reduction and Internal Fixation

‡ CR : Closed Reduction



3.
11 S-H Type 4 , 3.
Type 가 7 . 가 7
5 14
4. 6 1 (S-H Type , K-
5 (S-H Type 2 , Type 3))
6 (S-H Type 2 , 20
Type 4) . 11 16
가 2mm , , , ,
가
2mm , 2 3
2mm
3 1.
K- , 13 S-H Type
4mm
4mm
4 8 6 10
(Fig1-A,B,C,D).
8
8
2.
4 S-H Type
3mm
3mm K-
1. 12
2mm 가
6
(Fig2-A,B,C,D).
3.
2 S-H Type 5mm
3mm
K-
13
(Fig3-A,B,C,D).

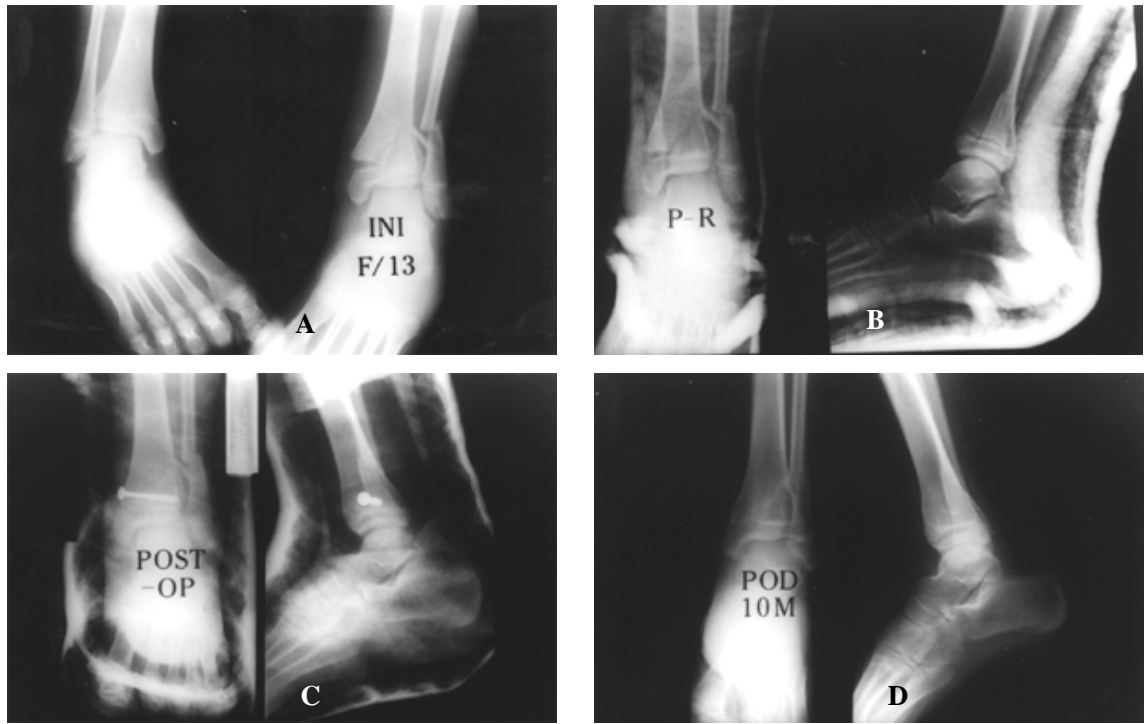


Fig 1-A. 13 years-old female patient. Salter-Harris type II. Initial both AP radiograph shows 4mm displacement compared to contralateral side.
B. Post-reduction radiograph shows no change.
C. Post-op radiograph. Screw fixation state.
D. Postoperative 10 months radiograph.

(low risk group) Salter-Harris Type , Type
 , Type , 2mm 가
 Type Type , (unpredictable
 group) Type , (high risk
 group) 2mm 가 Type
 Type , Type , Juvenile Tillaux
 Type 가 group 6.7%,
 16.7%, 32% ,
 . Salter-Harris , , ,
 Type , , , ,
 5) 2) Type , ,
 11 2 . 6,9,10)
 가
 . Spiegel 10) 237 S-H type
 가 가

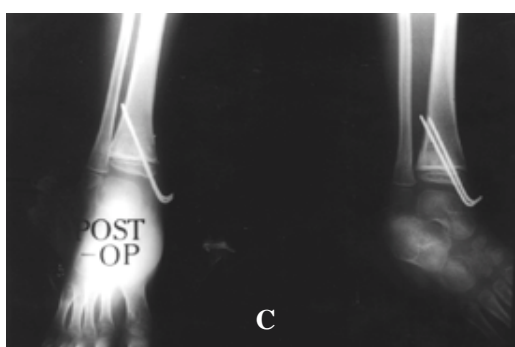
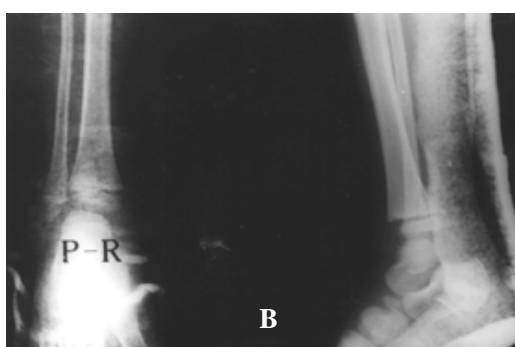
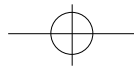


Fig 2-A. 4 years-old male patient. Salter-Harris type II. Initial both AP radiograph shows 3mm displacement compared to contralateral side.
B. Post-reduction radiograph shows no change.
C. Post-op radiograph. K-wire fixation state.
D. Postoperative 12 months radiograph.

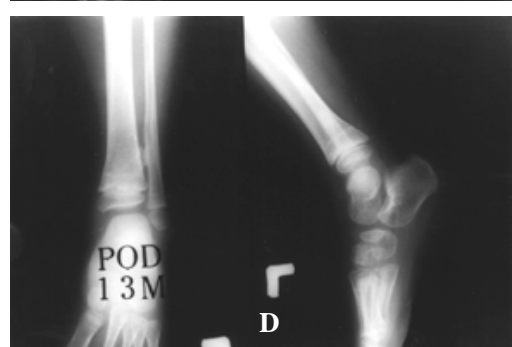
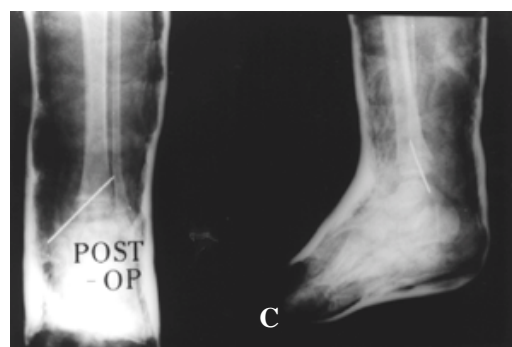
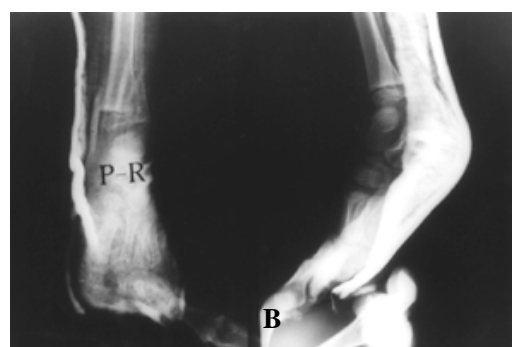
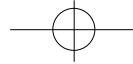


Fig 3-A. 2 years-old female patient. Salter-Harris type I. Initial radiograph shows 5mm displacement.
B. Post-reduction radiograph shows 3mm displacement compared to contralateral side.
C. Post-op radiograph. K-wire fixation state.
D. Postoperative 13 months radiograph.



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type II

type III IV

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3) Kling 7) type II
가
- 1) 2mm 가
- 6 2
- Canale 4) 가
- 2mm
2mm
- 1992 3 1997 3
S-H Type
11
2mm
- 가 2mm
- 1) , , , , :
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