

11, 4, 1998 10

The Journal of the Korean Society of Fractures
Vol.11, No.4, October, 1998

= Abstract =

Ipsilateral Fracture of the Femoral Neck and Shaft

Chong-Kwan Kim, M.D., Jeong-Hwan Kim, M.D., Dae-Young Kim, M.D

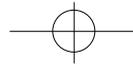
*Department of Orthopaedic Surgery, Masan Samsung Hospital,
College of Medicine, Sungkyunkwan University, Masan, Korea*

Ipsilateral femoral neck and shaft fractures are uncommon and have difficulty in diagnosis. The injury results from high energy trauma. From January, 1990 to March, 1995, 10 cases of ipsilateral femur neck and shaft fractures had been treated. Follow up period varied from 10 months to 3 years (average 1 year 10 month). The purpose of this study is to evaluate the fracture pattern of neck, complications due to delayed operation, and efficient methods of fixation. The neck fractures were minimally displaced or not displaced in 8 cases. The femur shaft fractures were usually comminuted and located at midshaft. The timing of operation was often determined by the patient's status as a multiple trauma victim, but a delay of days to weeks in the fixation of the neck fractures did not seem to increase the complication rate. In 3 cases, diagnosis was delayed, but there was no complication, like as avascular necrosis and nonunion. There was one case of nonunion of femur shaft, and which was treated with bone graft. We could not find the difference in complication rate among the fixation methods. Anatomic reduction and stable fixation seem to be more important than the method of fixation and timing of operation.

Key Words : Ipsilateral femur neck and shaft, Fracture,

2 50 (630-522)

Tel : (0551) 290 - 6035 Fax : (0551) 295 - 6195



16 50

2.

가

7 가 , 2

가 가1 .

3 ,

1 , 1 , 2 ,

2 , 1 , 2 ,

가 가 1 .

3.

6 , 2 ,

1 ,

가1

, Garden 1 2 , 2 6 , 3 2

(Table 1).

4.

3

7 , 2 , 4

, 1 2 (Table 2).

5.

8

, 2

8

1.

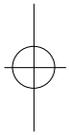
10 8 가 2 가

Table 1. Sites of femoral neck fracture and Garden stage

Site	No.	Garden stage	No.
Basicervical	6	Stage 1	2
Transcervical	2	Stage 2	6
Subcapital	1	Stage 3	2
Comminuted	1	Stage 4	0

Table 2. The interval from injury to operation of femoral neck fracture

Interval(day)	NO.
0 - 1	2
1 - 3	1
4 - 5	2
6 - 10	4
11 -	1



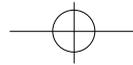


Table 3. Method of fixation

Site (neck/shaft)	No.
MS / Interlocking	6
Recon nail	2
MS / DCP	2

MS: Multiple screw

Recon nail: Reconstruction nail

DCP: Dynamic compression plate

1
.3
()
2 , 1)
(Table 3).
8

가
2
6.
12
1
17.5 2
1
28

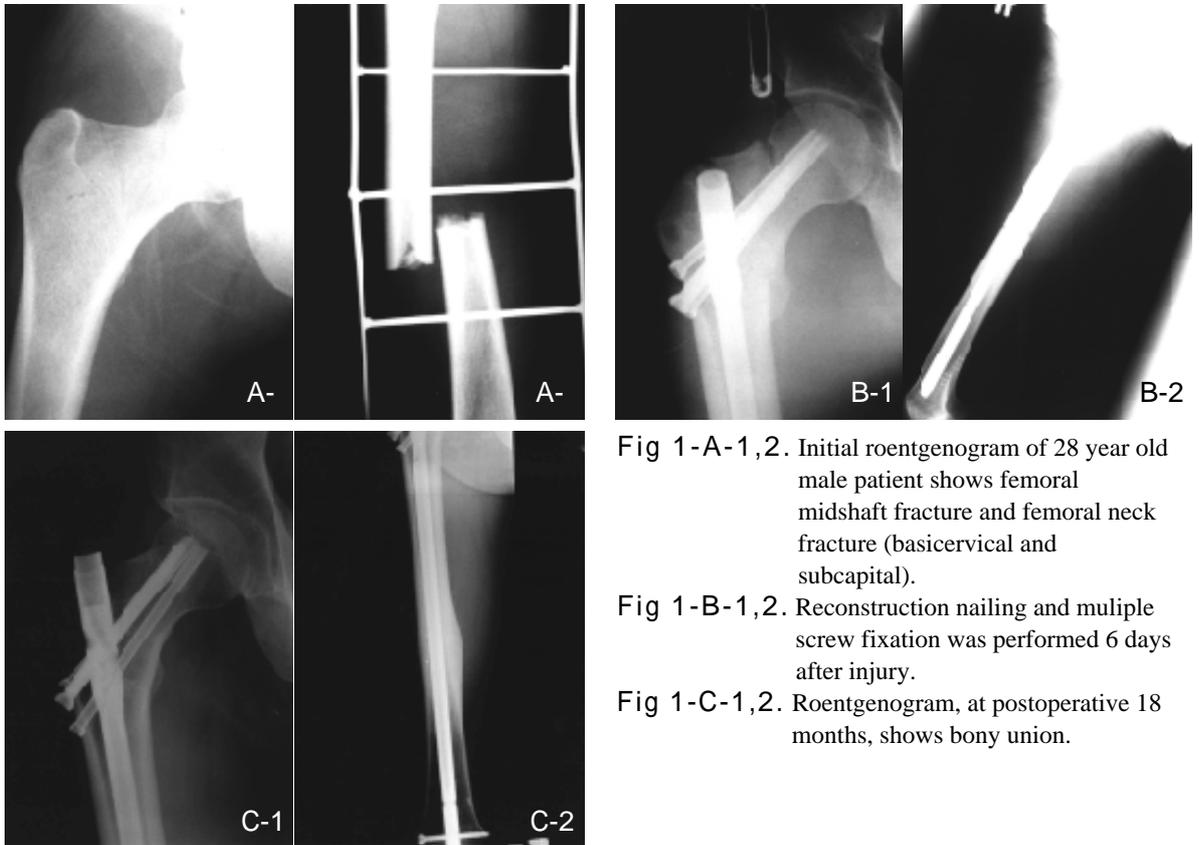
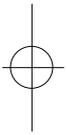


Fig 1-A-1,2. Initial roentgenogram of 28 year old male patient shows femoral midshaft fracture and femoral neck fracture (basicervical and subcapital).
Fig 1-B-1,2. Reconstruction nailing and multiple screw fixation was performed 6 days after injury.
Fig 1-C-1,2. Roentgenogram, at postoperative 18 months, shows bony union.



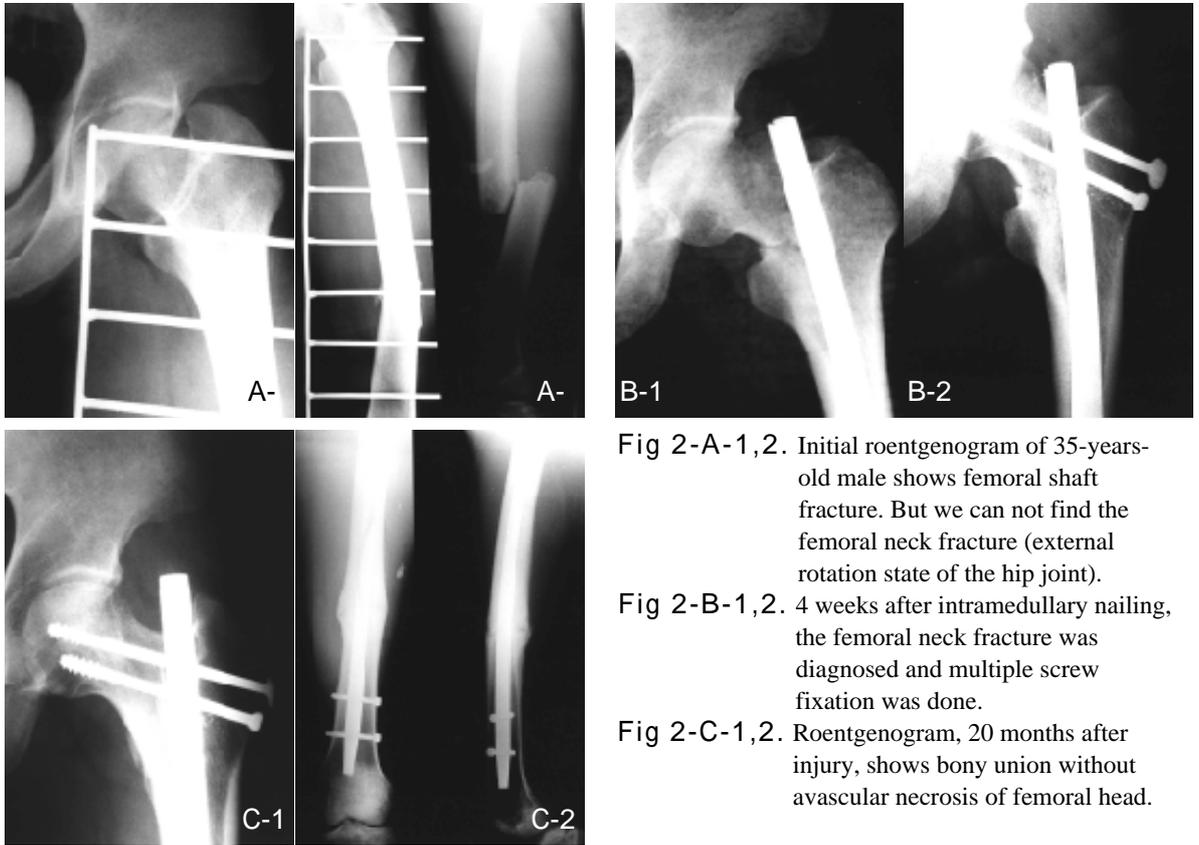
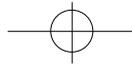


Fig 2-A-1,2. Initial roentgenogram of 35-years-old male shows femoral shaft fracture. But we can not find the femoral neck fracture (external rotation state of the hip joint).

Fig 2-B-1,2. 4 weeks after intramedullary nailing, the femoral neck fracture was diagnosed and multiple screw fixation was done.

Fig 2-C-1,2. Roentgenogram, 20 months after injury, shows bony union without avascular necrosis of femoral head.



4

(Fig 2-B-1,2).

1 8

(Fig 1-A-1,2).

2

(Fig 1-B-1,2),

1 6

(Fig 2-C-1,2).

(Fig 1-C-1,2).

2

35

2.5 6%

15)

가

가 가

1,2,5,8,11)

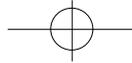
(Fig 2-A-1,2).

Swiontkowski

14)

19%





가

10 3 2) 4

5 3)

Schazker Barrington¹²⁾

Schatzker Barring-

ton¹²⁾ , Bennett 4)

가 13 가

Wollinsky Johnson¹⁵⁾

가

Wollinsky Johnson¹⁵⁾

15 가

Swiontkowski¹³⁾ Swiontkowski 14)

3

Casey Chapman⁸⁾ 15 14

가 6

, 1 ,

, Mackenzie¹¹⁾

가

. Bone 6)

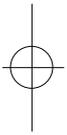
가

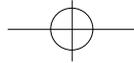
, Casey Chapman⁸⁾ 9

14) . Swiontkowski¹³⁾ Swiontkowski

5

2





1

1

8

가3 ,
가5

Harryman ⁹⁾

Ender

가

Ender

가

Wolinsky Johnson¹⁵⁾

가

1990 1
10

1995 12

8

2

. Bose
1

가

Garden 3

⁷⁾ 5 2

2

가 9

1

. Casey Chapman⁸⁾ 4.5%
, Swiontkowski¹³⁾

Swiontkowski ¹⁴⁾

가

3

. Bennett ⁴⁾

12

REFERENCES

. Bernstein⁵⁾, 1)

Schatzker Barrington¹²⁾

, 26-5: 1434-1440, 1991.

가

, Bennett 2)

⁴⁾

3

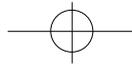
. Chapman Casey⁸⁾
4%

: (4)

, 25-

6:1674-1680, 1990.





- 3) , : , 28-2: 705-712, 1993.
- 4) **Bennett FS, Zinar DM and Kilgus DJ** : Ipsilateral hip and femoral shaft fractures. *Clin Orthop*, 127:156-160, 1977.
- 5) **Bernstein SM** : Fractures of the femoral shaft and associated ipsilateral fractures of hip. *Orthop Clin N Am*, 5:799-819, 1974.
- 6) **Bone LB, Johnson KD, Weigelt J, et al** : Early vs delayed stabilization of femoral fractures. *J Bone Joint Surg*, 71-A:336-340, 1991.
- 7) **Bose WJ, Corces A and Anderson LD** : A preliminary experience with the Russell-Taylor reconstruction nail for complex femoral fractures. *J Trauma*, 32:71-76, 1992.
- 8) **Casey MJ and Chapman MW** : Ipsilateral concomitant fractures of the hip and femoral shaft. *J Bone Joint Surg*, 61-A:503-509, 1979.
- 9) **Harryman II DT, Kurth LA and Davis CM** : Ipsilateral femoral neck and shaft fractures: Report of two cases using an alternative technique. *Clin Orthop*, 213:183-188, 1986.
- 10) **Friedman RJ and Wyman ET** : Ipsilateral hip and femoral shaft fractures. *Clin Orthop*, 208:188-194, 1986.
- 11) **Mackenzie DB**: Simultaneous ipsilateral fractures of the femoral neck and shaft: Report of 8 cases. *South Africa Med J*, 24:459-467, 1971.
- 12) **Schatzker J and Barrington T** : Fractures of femoral neck associated with fractures of the same femoral shaft. *Can J Surg*, 11:297-305, 1986.
- 13) **Swiontkowski MF** : Ipsilateral femoral shaft and hip fractures. *Orthop Clin N Am*, 18:73-84, 1987.
- 14) **Swiontkowski MF, Hansen ST and Kellam J** : Ipsilateral fractures of the femoral neck and shaft. *J Bone Joint Surg*, 66-A:260-268, 1984.
- 15) **Wolinsky PR and Johnson KD** : Ipsilateral femoral neck and shaft fractures. *Clin Orthop*, 318:81-90, 1995.
- 16) **Zettas JP and Zettas P** : Ipsilateral fractures of the femoral neck and shaft. *Clin Orthop*, 160:63-73, 1981.

