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: 1992 1 1999 1 2

가 17 . ,

lowa ,

Swiontkowski .

: 12 .

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· (p>0.05).

lowa

1 , 1 가 .

9 , 8 , Swiontkowski 9 , 6 , 1 ,

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12 12 , 5 24 .

C-arm ,

1,2,6,12) ,

가 3 ,

6~9% 11,12) , 5 . 3

가 ,

가

13~31% 6 ,

3,4,11,12) 가 5 , 5 ,

3,4,9,10,13,15) 3 -b 1

2

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12 .

1995 1 1999 1

Iowa⁵⁾ ,

Swiontkowski⁸⁾

2 가

(Fig. 1). 16 ,

17 18 65 31.5

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3 , 3 ,

2 가 , 1 1

11 , 6 , 2 , 28.5

1 , 1 가 .

Garden 2 10 , 3 4 , 4 3

15 ,

2 , 1 Gustilo-Anderson 26.8

2 , 1 3 -b .

Mann-Whitney u test

Winquist-Hansen , 1 1 , 2 (p>0.05). 3 -b

2 , 3 8 , 4 6 .

1

32 .

- 1A.** Initial anteroposterior and lateral radiographs of the left femur.
- 1B.** Postoperative radiographs.
- 1C.** Postoperative 26 weeks radiograph showing union of fracture.
- 1D.** Postoperative 2 years radiograph shows no evidence of avascular necrosis.



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Iowa
9 , 8 , Swiontkowski
9 , 6 , 1 , 1 .

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7).

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(Fig. 2).
2 . Winqvist-Hansen 4
1 3.5 cm . 15

sky Johnson¹²⁾

가^{4,10)}. Wollin-
가



Fig. 2. A 56-year-old man sustained ipsilateral femoral neck and shaft fracture.

2A. Initial anteroposterior and lateral radiographs of the right femur.

2B. Postoperative radiographs.

2C. Postoperative 2 years radiograph showing nonunion of femoral shaft fracture.

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14)
152 14
8
6
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Schatzker Barrington⁷⁾
Swiontkowski⁸⁾
Garden 2
10)
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가

sen 4 Winquist-Han-가 3.5 cm 1

가 2

가 1

10) 2

가

REFERENCES

- 1) **Alho A:** Concurrent ipsilateral fractures of the hip and femoral shaft: A systematic review of 722 cases. Ann Chir Gynaecol, 86: 326-336, 1997.
- 2) **Alho A:** Concurrent ipsilateral fractures of the hip and femoral shaft: metaanalysis of 659 cases. Acta Orthop Scand, 76: 19-28, 1996.
- 3) **Bennett FS, Zinar DM and Kilgus DJ:** Ipsilateral femoral neck and shaft fractures. Clin Orthop, 296: 168-177, 1993.
- 4) **Casey MJ and Chapman MW:** Ipsilateral concomitant fractures of the hip and femoral shaft. J Bone Joint Surg, 61-A: 503-509, 1979.
- 5) **Larson CB:** Rating scale for hip disabilities. Clin Orthop, 31: 85-93, 1963.
- 6) **Peljovich AE and Patterson BM:** Ipsilateral femoral neck and shaft fractures. J Am Acad Orthop Surg, 6: 106-113, 1998.
- 7) **Schatzker J and Barrington T:** Fractures of femoral neck associated with fractures of the same femoral shaft. Can J Surg, 11: 297-305, 1986.
- 8) **Swiontkowski M, Rosen H and Helfet D:** Double plating of comminuted, unstable fractures of the distal part of the femur. J Bone Joint Surg, 73-A: 341-346, 1991.

-
- 9) **Swiontkowski MF:** Ipsilateral femoral shaft and hip fractures. *Orthop Clin North Am*, 18: 73-84, 1987.
 - 10) **Swiontkowski ME, Hansen ST and Kellam J:** Ipsilateral fractures of the femoral neck and shaft. *J Bone Joint Surg*, 66-A: 260-268, 1984.
 - 11) **Watson JT and Moed BR:** Ipsilateral femoral neck and shaft fractures. *Clin Orthop*, 399: 78-86, 2002.
 - 12) **Wolinski PR and Johnson KD:** Ipsilateral femoral neck and shaft fractures. *Clin Orthop*, 318: 81-89, 1995.
 - 13) **Wu CC and Shih CH:** Ipsilateral femoral neck and shaft fractures. *Acta Orthop Scand*, 62: 346-351, 1991.
 - 14) **Yang KH, Han DY, Park HW, Kang HJ and Park JH:** Fracture of the ipsilateral neck of the femur in shaft nailing. *J Bone Joint Surg*, 80-B: 673-678, 1998.
 - 15) **Zettas JP and Zetts P:** Ipsilateral fractures of the femoral neck and shaft. *Clin Orthop*, 160: 63-73, 1981.

Abstract**Treatment of Ipsilateral Femoral Neck and Shaft Fractures**

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Purpose: To analyse the result of the treatment of ipsilateral femoral neck and shaft fractures and to consider effective method of the treatment.

Materials and Methods: Seventeen patients with ipsilateral femoral neck and shaft fractures were treated from January 1992 to January 1999 and followed up more than 2 years. Radiologic bony union between each treatment method, complication were analysed. The functional results assessed with Iowa hip rating system and Swiontkowski system.

Results: In femoral neck fractures, bony union was obtained in all cases, average 12 weeks. In femoral shaft fractures, bony union was obtained in all but one case. There was no statistical association bony union time between each treatment method ($p>0.05$). By Iowa hip rating system, nine hips had an excellent result; eight, a good result. According to rating system of Swiontkowski, the result was excellent in nine, good in six, fair in one, and poor in one.

Conclusion: We concluded that early diagnosis of all injuries was needed. To avoid further vascular damage of femoral head, early anatomical reduction of the femoral neck fracture should be performed. And then, shaft fracture was fixed with implants which were most appropriate for that combination of fractures.

Key Words: Femur, Ipsilateral neck and shaft fractures, Treatment

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