



13, 3, 2000 7

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&lt; &gt;

:

: 1990 1 1997 12

20

Pipkin

: 20

가 19 (95%),

가 15 (75%)

. Pipkin

2

4

7 (35%)

9 (45%)

12

15

9 (60%)

가

8

3 (37.5%),

12 8 (66.7%)

Pipkin

3

1

2

9

6

3

(50%),

, 3

4

11

9

5

(56%)

2 ,

1 ,

1 ,

1 .

:

가

12

가

가

가

:

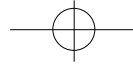
657

(140-743)

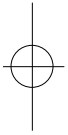
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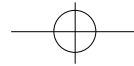
Fax : (02) 794-9414

E-mail : yssuh.@ hosp. sch. ac. kr



1791 Astley Cooper가<sup>23)</sup>, 1869 Birkett<sup>2)</sup>가 . 12 . 12 . 4 , 5 , 1 K 2 1 . 1957 Pipkin<sup>21)</sup> 25 4 . 2 가 , 1973 Epstein<sup>7)</sup> 242 39 4 , 1 . 1990 1 1997 12 1 Pipkin 1 2 가 20 2 7 5 , 2 , 3 2 , 4 9 2 , 7 6 12 19 , 1 , 18 76 35.5 . 가 15 , 2 , 가 2 , 1 . 4 , 4 , 3 , 20 가 19 (95%) 6 4 가 , 가 15 (75%) Dash-board injury가 . Pipkin 2 4 7 (35%) 9 (45%) 20 6 가 14 2 , 6 , 3 , 3 , 6 12 1 , 12 24 2 1 , 1 . 24 3 1 20 Pipkin 4 2 6 , 1 6 12 14 가 1 8 24 3 . 1 Pipkin 4 20 8 6 3 1





2 . 1 , 4 , 2 . 1

Pipkin 2 6 2 9 3 , 3

1 5 6 (67%) , 3 4 11

12 15 5 (45%)가 1 2

9(60%) , 가 .

5 1 2 9 6 3

1 (50%), 3

3 4 11 9 5

8 3 (56%)

5 , 12 가2

2 , 6 , 4 . , 1 , 1 ,

8 3 (37.5%), 12 8 1 .

(66.7%) .

Pipkin 1 2

2 7 5 3 ,

2 2 1 , 1

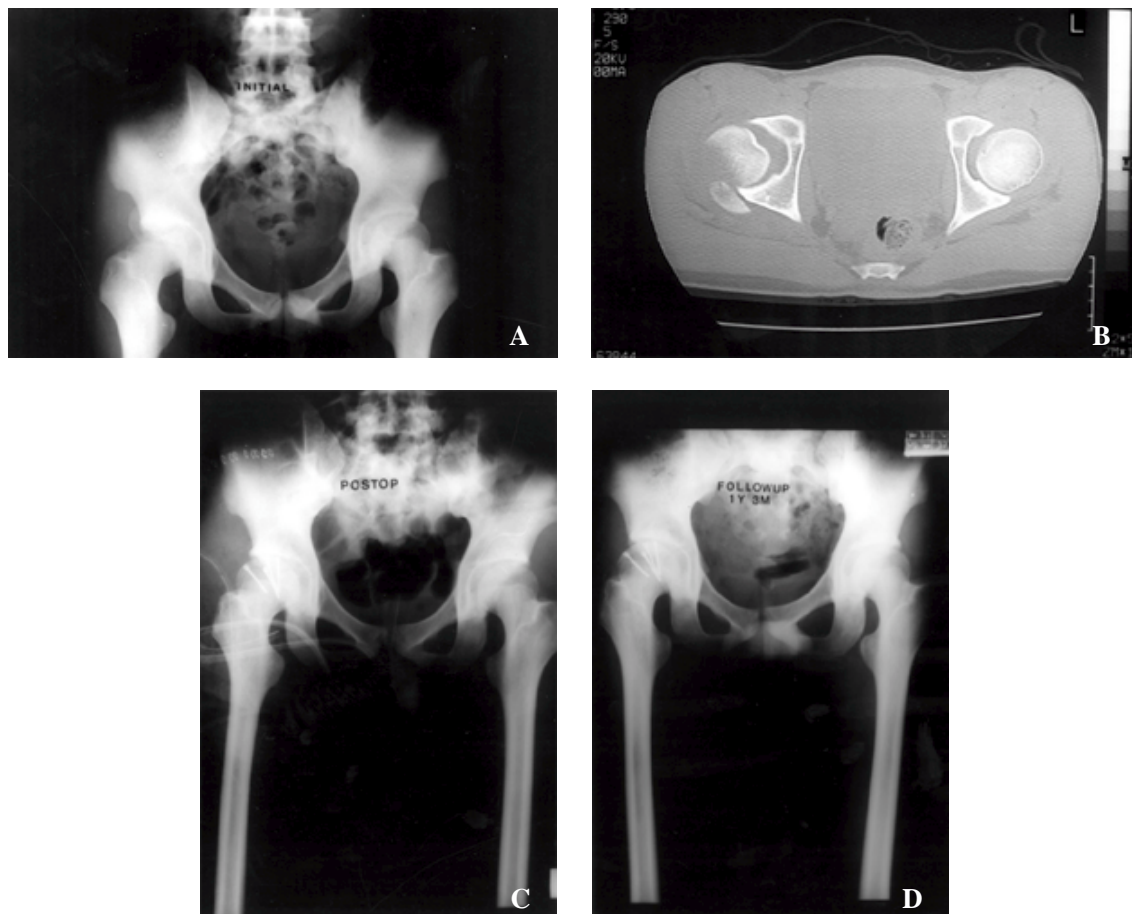
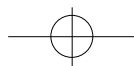
3 2

4 9 가 가

2 7 1 .

**Table 1.** Characteristics of 20 cases

Case	Age/Sex	Type of Fx	Treatment	Follow-up	Result
1	21/M	Type 1	Conservative Tx.	1y 10m	Fair
2	31/M	Type 1	Excision of fragment	2y 4m	Good
3	31/M	Type 2	Conservative Tx.	1y	Good
4	31/M	Type 2	Conservative Tx.	1y 3m	Good
5	32/M	Type 2	Conservative Tx.	2y 3m	Good
6	29/M	Type 2	Conservative Tx.	4y 8m	Fair
7	18/M	Type 2	OR & IF with screw(x4)	1y 3m	Good
8	29/M	Type 2	Conservative Tx.	1y 5m	Fair
9	31/M	Type 2	CR & TF with K-wire & pin	1y 5m	Excellent
10	22/M	Type 3	OR & IF with screw & pin	4y 10m	Poor
11	24/M	Type 3	OR & IF with screw & pin	6y 4m	Poor
12	27/M	Type 4	Conservative Tx.	1y	Fair
13	58/M	Type 4	Excision of fragment	2y 7m	Good
14	24/M	Type 4	Conservative Tx.	1y 7m	Fair
15	76/F	Type 4	T.H.R.A	1y 8m	Good
16	60/M	Type 4	Bipolar endoprosthesis	1y 2m	Good
17	43/M	Type 4	OR & IF with screw(X3)	1y 1	Good
18	24/M	Type 4	Excision of fragment	3y 5m	Poor
19	67/M	Type 4	Excision of fragment	1y 10m	Excellent
20	31/M	Type 4	OR & IF with screw	8y	Poor



**Fig 1A.** Initial film of pelvis AP radiograph, showed large fragment of superolateral portion of right femoral head(Pipkin type II).

**1B.** Post-reduction CT scan showed large posterosuperior femoral head fragment.

**1C.** AP radiograph after operation of hip. Herbert screw(x4) fixation was done.

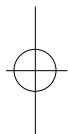
**1D.** 1 year 3 months after operation.

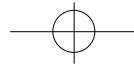
가 3  
41 25) Epstein 10)  
2/3  
가 20 19 (95%)  
35.5

가 Dash-board injury가 가  
1,6,8), 85% 가  
10),  
8,23)  
90°  
가



가 , 60 ° 가 26)  
 23)  
 6). Birkett<sup>2)</sup> 14,18),  
 , Epstein<sup>7)</sup> Watson  
 Jones<sup>30)</sup> dissecting blow 가  
 31)  
 40-75% 20,24),  
 70.8% 80%  
 31)  
 Stewart<sup>27)</sup>  
 , , Judet view,  
 Urist  
 Brumback<sup>3)</sup> 144 Epstein<sup>6,7,8,9)</sup>  
 2 47% 가 1  
 20% , 4  
 9 (45%) 가 2 7 (35%)  
 1), 가 1/3 1/4  
 30),  
 가  
 10),  
 가 , Sarmiento<sup>25)</sup>  
 21).  
 가  
 1,7,8,9,15,20,24), 6  
 14,15). 24 가 3  
 12 12  
 12 24 12 8 (66.7%) 8 3 (37.5%)  
 31). 12 15  
 9 (60%) 12 Bromberg Weiss<sup>4)</sup>  
 2 1 , 1  
 , 24 , Upadhaya Moulton<sup>28)</sup>  
 3 1 , 가 , 가  
 1 가  
 Shenton  
 30), 2 mm 24% ,





A



B



C

**Fig 2A.** Initial film of pelvis AP showed femoral neck fracture and anteromedial large femoral head fragment(Pipkin type III).

**2B.** Herbert screw(x2) and Haggie pin(x3) fixation was done.

**2C.** 6 years 4 months after operation, showed avascular necrosis and collapse of femoral head after removal of loosening Haggie pins .

73.3%

. Yang<sup>31)</sup>

가

16)

90

1

2

9

6

3 (50%),

3

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4

11

9

5 (56%)

1

2

9

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3

6 (67%)

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3

4

11

5 (45%)가

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가

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21)

7)

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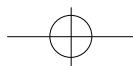
8

6

4

1

9



10)  
가 6,8,9)

Sarmiento Laird<sup>25)</sup>  
가

가 6-8  
가 5

6  
12

, 10-20%  
1), 17 2

1,8)  
19),  
23)

가 30),  
9)  
10 15

10-17%  
19), Epstein<sup>7)</sup>  
가

8 60-70%  
6

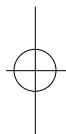
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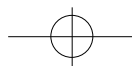
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## REFERENCES

- 1) **Brav EA** : Traumatic dislocation of the hip : Army experience and results over 12 years. *J Bone Joint Surg*, 44-A:1115-1136, 1962.
- 2) **Birkett J** : Quoted by Christopher F, Fracture of the head of the femur. *Arch Surg*, 12:1049-1061, 1926.
- 3) **Brumback RJ** : Fracture of the femoral head. Proceeding of the fourteenth open scientific meeting of *The Hip Society*, 181-206, 1986.
- 4) **Bromberg E and Weiss A** : Posterior fracture dislocation of hip. *South Med J*, 70:8-11, 1977.
- 5) **Davis JB** : Simultaneous femoral head fracture and traumatic hip dislocation. *Amer J Surg*, 80:893-895, 1950.
- 6) **Epstein HC** : Posterior fracture-dislocation of the hip : comparison of open and closed methods of treatment in certain types, *J Bone Joint Surg*, 43-A:1079-1098, 1961.
- 7) **Epstein HC** : Traumatic dislocation of the hip, *Clin Orthop & Rel Res*, 92:116-141, 1973.
- 8) **Epstein HC** : Posterior fracture-dislocation of the hip : Long term follow up. *J Bone Joint Surg*, 56-A: 1103-1127, 1974.
- 9) **Epstein HC** : Traumatic Dislocation of the Hip. Baltimore, *Williams and Wilkins*, p172-215, 1980.
- 10) **Epstein HC, Wiss DA and Cozen L** : Posterior fracture dislocation of the hip with fracture of the femoral head. *Clin Orthop & Rel Res*, 201:9-17, 1985.
- 11) **Ghormley RK and Sullivan R** : Traumatic dislocation of the hip. *Am J Surg*, 85:298-301, 1953.
- 12) **Hougaard K and Thomsen PB** : Coxarthrosis following traumatic posterior dislocation of the hip. *J Bone Joint Surg*, 69-A:679-683, 1987.
- 13) **Hougaard K and Thomsen PB** : Traumatic

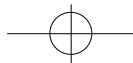




- fracture dislocation of the hip with fracture of femoral head or neck, or both. *J Bone Joint Surg*, 70-A:233-238, 1988.
- 14) **Hougaard K, Lindequist S and Nielsen LB** : Computerised Tomography after posterior dislocation of the hip. *J Bone Joint Surg*, 69-B:556-557, 1987.
  - 15) **Jacob JR, Rao JP and Ciccarelli C** : Traumatic dislocation and fracture dislocation of the hip : A long term follow-up study. *Clin Orthop*, 214:249-263, 1987.
  - 16) **Kelly RP and Lipscomb PR** : Primary vitallium mold arthroplasty for posterior dislocation of the hip with fracture of the femoral head. *J Bone Joint Surg*, 40-A: 675-679, 1958.
  - 17) **Mayers MH, Telfer N and Moore TM** : Determination of the vascularity of the femoral head with Technetium-99m-sulfur colloid : Diagnostic and prognostic significance. *J Bone Joint Surg*, 59-A:658-664, 1977.
  - 18) **Ordway CB and Xeller CF** : The transverse computerized axial tomography of patients with posterior dislocation of the hip. *J Trauma*, 24:76-79, 1984.
  - 19) **Pickett JC** : Injuries of the hip. *Clin Orthop*, 4:64-75, 1954.
  - 20) **Pietrafesa CA and Hoffman JR** : Traumatic dislocation of the hip. *J.A.M.A.*, 249:3342-3346, 1983.
  - 21) **Pipkin G** : Treatment of grade      fracture-dislocation of the hip. *J Bone Joint Surg*, 39-A:1027-1042, 1957.
  - 22) **Reigstad A** : Traumatic dislocation of the hip. *J Trauma*, 20:603-606, 1980.
  - 23) **Roender LF and Delee JC** : Femoral head fracture associated with posterior hip dislocation. *Clin Orthop & Rel Res*, 147:121-130, 1980.
  - 24) **Rosenthal RE and Coker WL** : Posterior fracture-dislocation of the hip : An epidemiologic review. *J Trauma*, 19:572-581, 1979.
  - 25) **Sarmiento A and Laird CA** : Posterior fracture-dislocation of the femoral head, Report of case. *Clin Orthop & Rel Res*, 92:143-154, 1973.
  - 26) **Smith GR and Loop JW** : Radiologic classification of posterior dislocations of the hip : refinements and pitfalls. *Radiology*, 119:569-574, 1976.
  - 27) **Stewart MJ** : Management of fracture of the head of the femur complicated by dislocation of the hip. *Ortho Clin North Am*, 5:793-798, 1974.
  - 28) **Upadhaya SS and Moulton A** : The long-term results of traumatic posterior dislocation of the hip. *J Bone Joint Surg*, 63-B:548-551, 1981.
  - 29) **Urist MR** : Fracture-Dislocations of the hip joint. *J Bone Joint Surg*, 30-A:699-727, 1948.
  - 30) **Watson-Jones R** : Fracture and joint injury. 5th ed. Vol. 2, p885-894, New York, *Churchill Livingston*, 1976.
  - 31) **Yang RS, Tsuang YH, Hang YS and Liu TK** : Traumatic dislocation of the hip. *Clin orthop & Rel Res*, 265:218-227, 1991.







## Abstract

## Posterior Hip Dislocation with Femoral Head and Neck Fracture

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**Purpose :** In the femoral head fracture associated with posterior dislocation of hip, we analyzed the clinical results according to the fracture types and treatment methods to promoting the guide of treatment.

**Materials and Methods :** We used 20 cases of fractured femoral head with posterior dislocation of hip from January 1990 to December 1997, and analyzed the treatment methods and clinical results according to the Pipkin classification.

**Results :** Among the 20 cases, male was 19 cases(95%), motor vehicle accident contributed 15 cases(75%), and the case of type II and IV of Pipkin classification were 7(35%) and 9(45%) cases. Closed reduction performed within 12 hours after injury with good results was conducted in 9 cases(60%) among the 15 cases. According to the treatment methods after closed reduction, good result was showed only 3 of 8 cases(37.5%) in the conservative treatment, whereas 8 of 12 cases(66.7%) in the operative treatment.

According to the type of Pipkin classification, good result was showed 3 of 6 cases(50%) in conservative treatment and all of 3 cases in operative treatment among the 9 cases of type I and II, whereas none of 2 cases in conservative treatment and 5 of 9 cases(56%) in operative treatment among the 11 cases of type III and IV.

The following complications were encountered; 2 cases of avascular necrosis, 1 case of traumatic arthritis, 1 case of peroneal nerve palsy and 1 case of nonunion

**Conclusion :** Good results were obtained in patients with early, stable, and accurate reduction. The Computed Tomogram was helpful to find the small fragment and check the accurate reduction. Open method that restoration joint congruity seemed to be the better procedure than closed method.

**Key Ward :** Femoral head fracture. Posterior hip dislocation.

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