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75	2
가 가	20
:	45
:	8
1	1 가
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620-5

TEL: (043) 840-8251 FAX : (043) 844-7300
E-mail: kdkim@kku.edu

19 1 가 12
 가 가 가 4 32 , 24
 77 Boyd-Anderson Kyle
 modification 9) 19 ,
 1
 (Table 1). Singh Index
 가 3 17 grade 3
 (

) Gamma nail

Table 1. Type of intertrochanteric fracture by Boyd-Anderson classification.

	Number
Type I	0
Type II	0
Type III	19
Type VI	1
Total	20

가 2), 가,
 , ,
 , 가 가
 (calcar femorale)
 1,7). 가 ,
 ,
 (Calcar replacement stem)

2.

rasping

Modular Calcar Revision System(Johnson & Johnson, DePuy, USA) , 12

1.
 1991 8 2001 1
 75

가가 20 75
 95 78.4 6 , 14
 가 .
 16 , 3 1 .

8
 (Fig 1, 2). 30 1 40
 45 . 1
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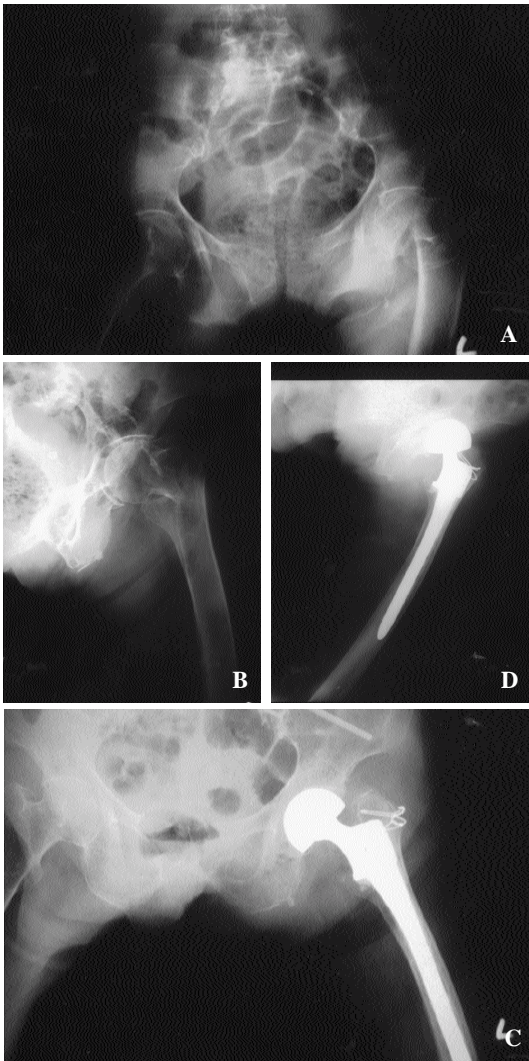


Fig. 1-A, B : Preoperative both hip anteroposterior and left lateral radiography of 91 year-old female patient shows type intertrochanteric fracture according to Kyle modification of the classification of Boyd-Anderson.

Fig. 1-C, D : One year and 2 months follow-up, both hip anteroposterior and left lateral radiograph after bipolar hemiarthroplasty using calcar replacement stem.

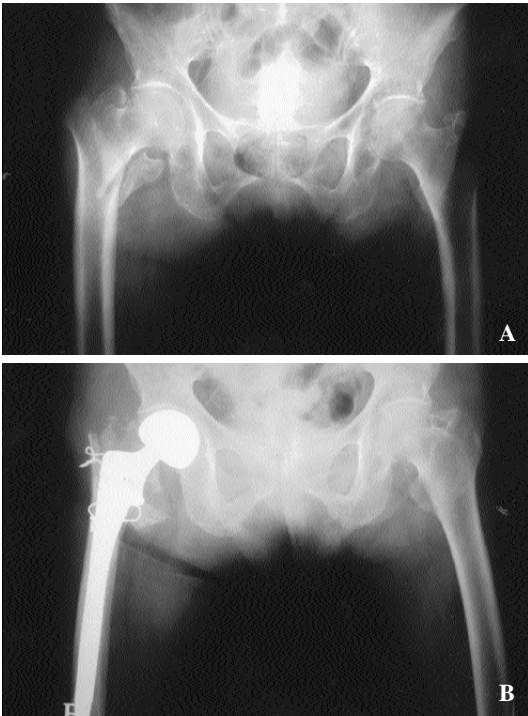


Fig. 2-A : Preoperative both hip anteroposterior radiography of 86 year-old female patient shows type intertrochanteric fracture according to Kyle modification of the classification of Boyd-Anderson.

2-B : Two years and 3 months follow-up, both hip anteroposterior radiograph after bipolar hemiarthroplasty using calcar replacement stem.

가

1.

가			
1			
. Harris			
92	84.7	66	9
(45%), 8	(40%), 3	(15%)	(Table 2),
5	12	8	
	4	2	(10%), 6
9	(45%), 8	7	(35%) 10
			1 (5%)

6.9 (Table 3). 가 1 2

가
12 (60%), 4 (20%), 3 (15%)
1 (5%)가 4 (20%)
2 (10%), 3 (15%), 1 (5%),
4 (20%) 2 (10%)가
1 (5%), 1 (5%)
12 가 1 (5%)가
1 (5%)

Table 2. Post-operative Harris Hip score

	Number
Excellent	9
Good	8
Fair	3
Total	20

Table 3. Timing of Full Weight Bearing

	Number
<4 weeks	2
4-6 weeks	9
6-8 weeks	7
8-10 weeks	1
Total	20

Table 4. Complications.

Complication	Number
General	
Post-operative Psychosis	2
Gastrointestinal problem	3
Pneumonia	1
Anemia	2
Urination difficulty	4
Local	
Wound infection	
Superficial	1
Deep	1
Dislocation	1
Severe thigh pain	1
Total	16

3 5 가 (Table 4).

가
Gamma nail ()

가 , 가 ,
Hayward⁶⁾ 40
182 37.5% nail plate 35%,
124 19.2 , Rao¹⁴⁾ 4%

3,10,13,15) . 80

Haentjens⁴⁾ Toronzo¹⁷⁾

, , ,

Haentjens⁴⁾ 100

91

, 9

78%

75

. Moore¹¹⁾. Harris⁵⁾Jeffrey⁸⁾

, 가

. Stern

Angerman¹⁶⁾ 105 8 (7.6%)

1 ,

1 , 4

, 1 , 1

12)

3-4

,

8

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Abstract

Bipolar Hemiarthroplasty Using Calcar Replacement Stem for Unstable Intertrochanteric Fractures in Elderly Patients

Duk-Hwan Kho, M.D., Kyou-Hyeun Kim, M.D., Ju-Young Shin, M.D.,
Sin-Woo Lim, M.D., Dong-Heon Kim, M.D.

*Department of Orthopaedic Surgery, College of Medicine, Konkuk University,
Chung-ju, Korea*

Purpose : The purpose of this paper is to analyze the operating time, timing of ambulation, functional results and complications using the calcar replacement stem for the severely comminuted unstable intertrochanteric fractures in the elderly patients.

Materials and Methods : From August 1991 through January 2001, 20 elderly patients over the 75 year old patients had undergone bipolar hemiarthroplasty with calcar replacement stem for the treatment of unstable intertrochanteric fractures.

Results : The mean operating time was 45 minutes and mean Harris Hip Score was 84.7. Ambulation with walker was started at post-operative 8 days and full weight bearing was 6.9 weeks, each. Complications were 2 cases of wound infection, 1 case of severe thigh pain and 1 case of dislocation.

Conclusion : Early ambulation, functional restoration and decrease of the complications with bipolar hemiarthroplasty using calcar replacement stem for severely comminuted unstable intertrochanteric fractures in elderly patients, therefore this methods seems to be one of the effective treatments.

Key Words : femur, intertrochanteric fracture, bipolar hemiarthroplasty, calcar replacement stem

Address reprint requests to _____

Dong-Heon Kim

Kyo hyun dong 620-5, Chung Ju, Korea,

Kon-kuk University

TEL : (043) 840-8251

FAX : (043) 844-7300

E-mail : kdkim@kku.edu