

가 48 7.1 (5 ~ 10 1)
47 Harris-Galante Tanzer
19 (39.6%) 52.5 (30 ~ 95
2 가 1
가
가

가

2,14,18,21-25)

1,10)

2,3,14,18,21-25)

가

가 가 18,21), Kim Rubash⁽⁴⁾

가 ,

1995 41

4

가 12.2%

22)

가

194

가 7
가 가 48

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Student's t-test Chi-square
test , p
0.05

1990 5 1994 2

Ficat stage

48 5 가 5 7 1 39.6% 30 95

10 1 7 1 21 52.5 7 (15%)

10 , 9 가 8 32 71 47 가 38 가 10

Dal⁹⁾ 가 12

pad가 Harris-Galante 1 2 3,4,5 8

Bi-articular (Zimmer, , 14 10,11,12 Grade 1 9 , Grade 2가 7 , Grade 3가 1 , Grade 4가 2

(stability) Engh⁷⁾ (Fig. 1). Grade 1 9 , Grade 2가 7 , Grade 3가 1 , Grade 4가 2

가 (subsidence) 4mm 5 4 11 1mm 가 가 (P>0.05)(Table 1). 가 2 (4%), 10 (21%) tear-drop 48 1 (2.1%) 23-25)

Tanzer³⁰⁾ Gruen¹¹⁾ Johnston¹³⁾ DeLee Charnley⁶⁾

Grade 1 1cm 2cm , Grade 2 2~3cm, (local), (multifocal), (diffuse)

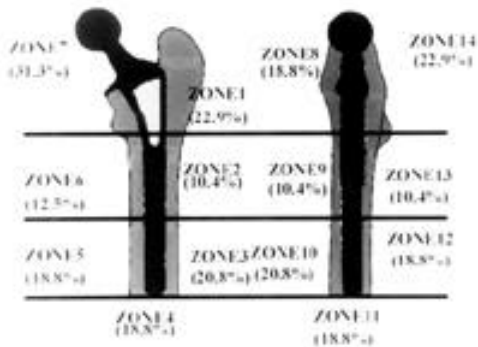


Fig. 1. Distribution of osteolysis according to the zones(Gruen et al, Johnston et al).

Table 1. Relationship of osteolysis with risk factors.

	Osteolysis (+)	Osteolysis (-)	P-value
Gender (male : female)	17 : 4	21 : 6	p > 0.05
Age (yrs)	45 ± 9	48 ± 13	p > 0.05
Weight (kg)	62.3 ± 10.5	1.5 ± 9.3	p > 0.05
Underlying disease	Alcohol : 8	Alcohol : 13	p > 0.05
	Trauma : 4	Trauma : 5	
	Idiopathic : 3	Idiopathic : 7	
	Steroid : 4	stroid : 4	



Fig. 2. Radiograph shows extensive osteolysis and linear fracture in the right acetabulum and moderate osteolysis in the femur 8.8 years after bipolar hemiarthroplasty for the treatment of osteonecrosis of the femoral head.



Fig. 3. Retrieved bipolar cup shows significant wear on the polyethylene rim.

가 (Fig. 2).
12 (25%)

5
, 가
2
. 12 7
가 12 5
rim
(Fig. 3).

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ABSTRACT

Osteolysis in Association with a Bipolar Hemiarthroplasty for Osteonecrosis of the Femoral Head

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Purpose : To analyze the incidence, contributing factor, distribution and progression of the osteolysis with non-cemented bipolar hemiarthroplasty in patients with osteonecrosis.

Materials and Methods : We have reviewed the 48 bipolar hemiarthroplasties for osteonecrosis of the femoral head. The average follow-up period was 7.1 years (range, 5~10.1 years), and the average age of the patients was 47 years. The Bicentric-bipolar cup and uncemented Harris-Galante stem was used in all hips. Osteolytic lesions were evaluated according to the evaluation system of Tanzer et al.

Results : Endocortical femoral osteolysis developed in 19 hips (39.6%) between 30~95 months after surgery. These lesions were evenly distributed in the whole zone. Age, sex, and body weight did not influence the occurrence of the osteolytic lesion. Femoral and acetabular osteolysis was found in one hip.

Conclusion : The present study showed a high incidence of osteolysis after bipolar hemiarthroplasty in patients with osteonecrosis. Bipolar hemiarthroplasty is not recommendable for treatment of osteonecrosis of the femoral head.

Key Words : Osteonecrosis of the femoral head, Bipolar hemiarthroplasty, Osteolysis