

# 가 (TSP)

< >

: (TSP) 가 .

: 1998 1 2000 12  
1 가 가 70

. 10 (1 ), 15

(2 ) AO , , ,

: 1 8.57mm, 2 14.75mm  
(P=0.04). 1 3.81 , 2 3.93  
(P>0.05). 1 0 , 2 14 가

6.41mm .

: 가

.

:

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가

Doppelt<sup>6)</sup>

)

가

가 screw

(TSP) 가  
TSP가 가

barrel

Doppelt<sup>6)</sup>

1998 1 2000 12

70

1 가가 25

25

10 (1 )

15 (2 )

AO

A2

A3

1 78.1 2 8

10 가

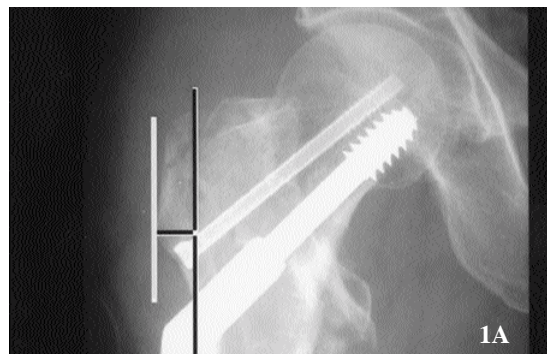
, A2가 6 (A2-1: 1 , A2-2: 3  
, A2-3: 2 ), A3가 4 (A3-2: 4 )

2 78.8 6 ,

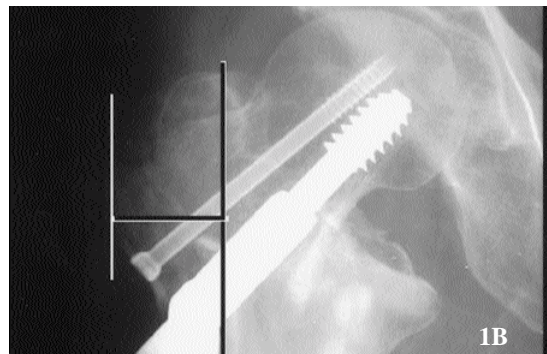
9 가 11 ,

가 2 , 가 2 A2가 13 (A2-1:

6 , A2-2: 4 , A2-3: 3 ) A3가 2 (A3-3: 2 )



1A



1B

**Fig 1.** The measurement of lateralization of greater trochanter at immediate post op and last follow up x-ray

가

(fig.1).

paired T-test

1 1

6

1

DHS

가

TSP

1

8.57mm

DHS

2

14.75mm

(P=0.04).

1

3.81 ° 2

3.93 °

(P>0.05).

1

2

14

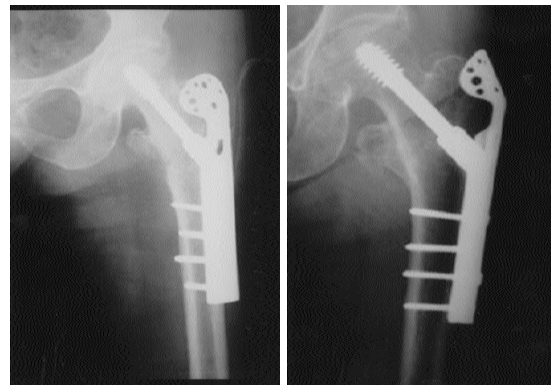
(93%)

6.41mm

(Table 1),(Fig2, Fig3).

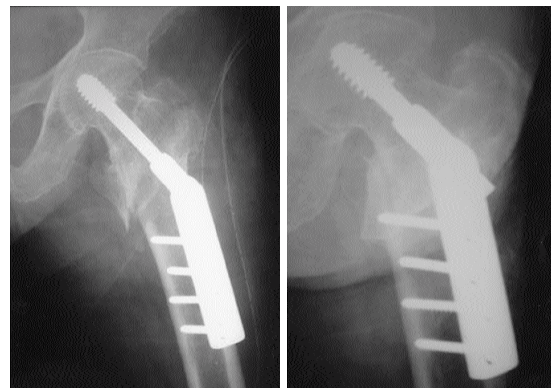
**Table 1.** Comparative results of Group 1 and Group 2

	Group 1 (DHS + TSP)	Group 2 (DHS)	P-value
Sliding of lag screw	8.57mm (0.73 - 13.19mm)	14.75mm (1.36 - 37.7mm)	0.04
Change of neck-shaft angle	3.81 ° (0.3 - 9.9 °)	3.93 ° (1 - 12 °)	>0.05
Lateral displacement of greater trochanter	0	6.41mm (4.1 - 19.0mm)	0.00



**Fig 2-A.** Immediate post op film. Fixation using DHS with TSP.

**2-B.** Last follow up film. Minimal sliding of lag screw was noted.



**Fig 3-A.** Immediate post op film. Fixation using DHS only.

**3-B.** Last follow up film. Excessive sliding of lag screw and lateralization of greater trochanter was noted.

7,12,14)

가

연구자	연구 방법	연구 대상	연구 결과
16)	5%	A2	A3
3,10,11,20)	5~21%	가	가
4,18)	(trochanteric)	stabilizing plate, TSP	TSP
5,10,17)	TSP	가	가
15)	가	TSP	1
8.57mm,	14.75mm	TSP	Babst 1) 9.5mm
2	TSP	Babst 1) 9.5mm	12.1mm, 14.75mm
Jacob 9)	15.7mm, Steinberg 19)	TSP	가
Flores 8)	16mm	Babst 1)	1 0 2
14	가	TSP가	가

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## Abstract

## Treatment of Unstable Intertrochanteric Fractures in Elderly Patients

### -Comparison between DHS and Additional TSP-

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**Purpose :** The purpose of this study was to compare the results by only Dynamic HIP Screw(DHS) with those by DHS and additional Trochanter Stabilizing Plate(TSP) in the operative treatments of unstable intertrochanteric fractures.

**Materials and Methods :** From January 1998 to December 2000, twenty-five cases of unstable intertrochanteric fractures in the patient over 70 years old were reviewed with minimal follow up of one year.

Ten cases(group I) were treated with DHS and additional TSP. Fifteen cases(group II) were treated with only DHS. The cases were analyzed according to the type of fracture by AO classification, the cause of trauma, the age of patient. We evaluated the sliding of lag screw, the change of neck-shaft angle and lateral displacement of greater trochanter by comparison of last follow up radiographs with immediate postoperative radiographs.

**Results :** The degree of sliding of lag screws was average 8.57 mm in group I and average 14.75 mm in group II( $P=0.04$ ). The change of neck-shaft angle was average 3.81 degree in group I and average 3.93 degree in group II( $P>0.05$ ). There was a significant difference between group I(0 case) and group II(14 cases) in lateral displacements of greater trochanter. In group II, the degree of lateral displacement of greater trochanter was average 6.41 mm.

**Conclusion :** We consider that additional TSP is more effective method for reducing excessive sliding of lag screw and lateral displacement of greater trochanter than only using dynamic hip screw in the treatment of unstable intertrochanteric fracture.

**Key words :** Femur, Unstable intertrochanteric fracture, DHS, TSP

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