

1

2

: III 가

: 1996 9 1998 5

65 65 (: = 64:1, 23)
25 (A), 40 (B).
32 16 (C), 16
(D). T1

() 3/4()

Zlatkin

χ^2

: A 25 , I 가 , B 40 I II III

I 가 , (p value, 0.611, 0.567). C 16
, D 16

, II , I 가 , (p value, 0.772).

: 가 .

(glenoid fossa)

(scapular neck)

가

가

, 가 (1-5). (1,5,9-12).

(glenohumeral joint)

가

가

(7),

(4),

(6).

Bankart

(capsular mechanism)

(2),

(inferior glenohumeral ligament)

(1,4,7,8).

(labrum)

1996 9 1998 5

1

2

1999 1 27

1999 4 7

65

65

64:1, 14-55
(23) , (AM-
BRI) 30 , (SLAP) 16 ,
(impingement syndrome) 5 , AMBRI SLAP
3 , (partial thickness rotator cuff
tear, PTRCT) 3 , SLAP PTRCT가 2 ,
2 , AMBRI 1
, AMBRI PTRCT가 1 ,
(Rotator interval lesion) 1 , (loose body)
1 .
가
, grade II
(anterior translation)
, grade I ±
. 65
25
(A) , 20 , 20 (B) .
32
16 (C) , 9
, 7 (D) .
21-gauge
가
, (Iopamiro , Ilsung, Seoul, Korea)

Table 1. Correlation Between Anterior Capsular Insertion Types and Presence or Absence of Anterior Instability of Glenohumeral Joint on Physical Examination at Out Patient.

Group		A		B				Total	
Instability		Present		Suspicious		Absent			
type level	mid	inf	mid	inf	mid	inf	mid	inf	
	Type I	9	14	10	15	10	12	29	41
Type II	9	10	7	5	6	6	22	21	
Type III	7	1	3	0	4	2	14	3	
Total		25		20		20		65	
				40					

Table 2. Correlation Between Anterior Capsular Insertion Types and Presence or Absence of Anterior Instability of Glenohumeral Joint on Physical Examination under General Anesthesia.

Group	C		D				Total	
Instability type	Present		Suspicious		Absent			
level	mid	inf	mid	inf	mid	inf	mid	inf
Type I	6	8	3	6	3	3	12	17
Type II	6	8	5	3	3	3	14	14
Type III	4	0	1	0	1	1	6	1
Total	16		9		7		32	
			16					

500 ml 0.1 mmol/kg Gadolinium-
DTPA(Magnevist , Schering, Germany) 2ml 2m-
mol/LmM 20ml .
1 1.5 Tesla
(Magnetom vision, Simens, Erlangen, Germany)
spin echo T1 T2
3mm,
0.6mm , matrix number 166 × 256,
160-170mm .
T1 ,
() 3/4() 2
Zlatkin (1)
1 (Fig. 1), 1cm
II (Fig. 2),
1cm III
(Fig. 3) .
65
32 ,
(group A,C)
(B,D) X² test

65
Table 1 .
(Group A) I II 가
III , (Group A)
(Group B)

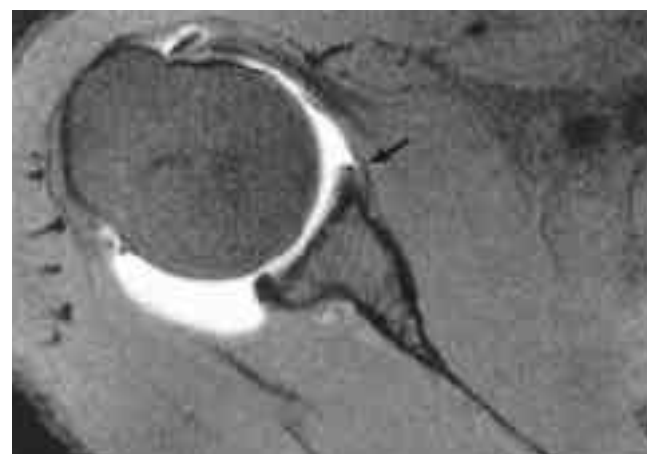


Fig. 1. Anterior capsular insertion type I in a 24-year-old man. Fat suppressed T1(TR/TE= 660/12) weighted axial image shows anterior capsule arising from the labrum.

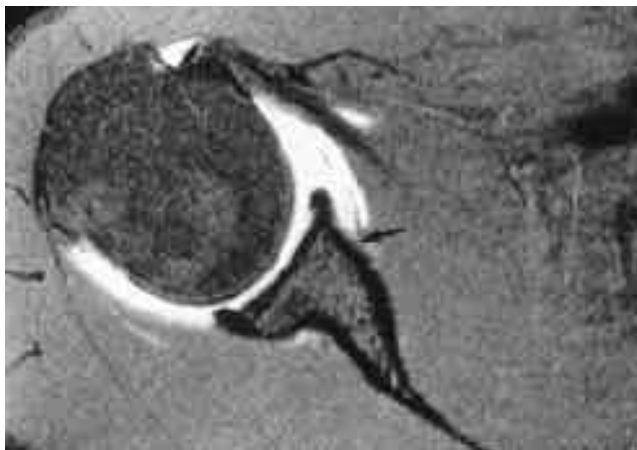


Fig. 2. Anterior capsular insertion type II in a 23-year-old man. Fat suppressed T1 (TR/TE= 660/12) weighted axial image shows anterior capsule arising from the scapular neck within 1cm of the labral base.

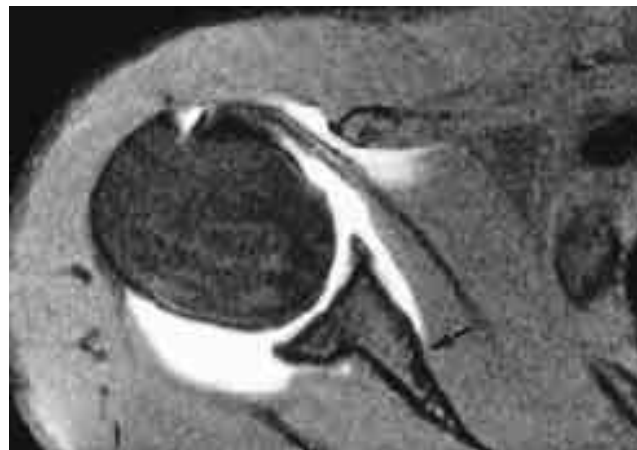


Fig. 3. Anterior capsular insertion type III in a 22-year-old man. Fat suppressed T1 (TR/TE= 660/12) weighted axial image shows anterior capsule arising from the scapular neck more than 1 cm medial to the labral base.

I		가 가	
III	Group A, B	28%, 17.5%	
	Group A, B		
4%, 5%			
II			
Group A, B	36%, 32.5%		
	Group A, B	40%, 32.5%	
	가		
65			
p value	0.611,	0.567	
0.05	가		
	32		
Table 2			
(Group C)	I	II	
III			
(Group D)	II		
I 가	III		
Group C, D	25%, 12.5%		
0%, 6.3%			
II			
37.5%, 50%			
	50%, 37.5%		
32			
p value	0.772,		
0.279	0.05	가	

(stability)	(dynamic),	(static)
(constraints)		
(shoulder girdle)		
	(4,13).	
(displacing force)	(,)	
	(13,14).	
	(tilt)가	
	가	
	(13).	
(coracohumeral ligament)		
(glenohumeral ligament)		
가	가	
(13,14).		
(4,13).		
(anterior and posteiror bands)		(axillary
pouch)	2/3	
(4). 90 °		
가 (fanning)		
90 °		
가		
(4,5,13).		

(13,14). III
 ,
 , Neumann
 (13). I
 1962 , Moseley (5) 96% II
 가 80%, 63% I
 I 가 II
 , II , III Zlatkin 1cm
 , Neumann Mosely
 가 Oever- gaard (type II, partly labral and partly
 II III scapular neck) (5)
 , (subscapular recess)가
 (restrain)
 (1,5,9,12). Neumann II
 , I , Neumann II
 III 가
 (11,15,16). III
 , I
 III ,
 (medial stripping) ' III
 가
 Resnick (13) 65
 III 가 II
 Palmer (6) III 가
 , III 가
 III 가 (49%, 51%),
 I 가 (43%, 48%),
 가
 (Group B, D)
 , I 가 III 가
 가 Palmer II III 가
 III 가
 , II III
 p value가
 가
 ,
 ,
 ,
 가
 Neumann (11) 52
 I II
 47%, 49% , III 4%

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A Study to Assess by Means of MR Arthrography the Causal Relationship between Anterior Capsular Attachment Type and Anterior Instability of the Glenohumeral Joint¹

Yeong Cheol Yoon, M.D., Kyung Nam Ryu, M.D., Yup Yoon, M.D., Yong Girl Rhee, M.D.²

¹Department of Diagnostic Radiology, College of Medicine, Kyung Hee University

²Department of Orthopaedic Surgery, College of Medicine, Kyung Hee University

Purpose : To evaluate by means of MR arthrography the causal relationship between anterior capsular attachment type and anterior instability of the glenohumeral joint.

Materials and Methods : Sixty-five patients (M:F= 64:1; mean age, 23 years), who had undergone shoulder MR arthrography were retrospectively reviewed. There was no history of traumatic dislocation, and medical records relating to anterior instability were available. Physical examination revealed anterior instability in 25 patients(Group A), while in 40 (Group B), this was either suspicious or absent. With the aid of general anesthesia, 32 patients who had undergone surgery were physically examined. Anterior instability was evident in 16 patients(Group C), and suspicious or absent in the remaining 16 (Group D). All images were obtained after intra-articular injection of Gd-DTPA. Fat-suppressed T1 axial imaging was used to evaluate anterior capsular attachment type at mid and distal three-fourths levels of the glenoid fossa. The causal relationship between anterior capsular attachment types and anterior instability was analyzed using the χ^2 test

Results : In group A, type I was most common at distal three-fourths level, and types I and II were equal and more common than type III at mid level. In group B, type I anterior capsular attachment type was most common at both mid and distal three-fourths level. In these groups, no statistical significance was noted between anterior capsular attachment type and anterior instability (p value 0.611: 0.567). In group C, types I and II were equal and more common than type III at both mid and distal three-fourths level, while in group D, type II was most common at mid level, and type I was most common at distal three-fourths level. In these groups, no statistical significance was noted between anterior capsular attachment type and anterior instability (p value, 0.772).

Conclusion : There was no statistically significant difference between anterior capsular attachment type and anterior instability of the shoulder joint.

Index words : Shoulder, dislocation

Magnetic resonance (MR), arthrography

Shoulder, MR

Address reprint requests to : Kyung Nam Ryu, M.D., Department of Diagnostic Radiology Kyung Hee University Hospital
Hoekidong 1, Dongdaemunku Seoul, 130-702 Korea.
Tel. 82-2-958-8622 Fax. 82-2-968-0787