

# Open Rotator Interval Lesion for Shoulder Instability

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## Shoulder instability의 종류

1. TUBS
2. AMBRI (MDI) recently, better understandings
3. Microtrauma or development lesions (intermediate group)

## Rotator interval lesion *Neer*

Ant. Instability — *Rowe and Zarins*

RI defect — *Warren*

Type I (contracted) / II (unstable) *Nobuhara*

Traumatic RI tear “Hidden RI lesion”

subcoracoid impingement painful shoulder — *Le Huec, Walch*

## Anatomy

Coracohumeral ligament, SGHL

Rotator interval capsule (Harryman)

\* Coracohumeral ligament

Clear, well-developed (59/63), absent (4/63)

*Neer*

Variable size (97%)

*Depalma*

Folded cap - inverted “v” shape(9/12)

*Cooper*

fused definable edge(2), true lig.(1)

Thin cap fold (10/11), robust(1)	<i>Warner</i>
Envelop the cuff, reinforce the RI, RIC	<i>Harryman</i>
CHL-B-SGHL	<i>Walch</i>

## Biomechanics(function)

Inferior and posterior (Harryman)  
 Inferior and anterior (Nobuhara)  
 Inf (Sulcus) + AP instability  
 \* Inferior translation  
 0 abd : SGHL+ negative pressure  
 90 abd : post band of IGHL

## Open RI Lesion - RI defect

Incidence ? : Normal / unstable  
 20/37(54%) *Rowe and Zarin*  
 Size ? : variable  
 the larger, the greater inf.laxity

## Diagnosis - RI lesions

Stress radiology  
 MRA ?  
 No definite criteria  
 normal / classic MDI ?  
 Dynamic instability test  
 (ant / post drawer, sulcus )

## # Our experiences

instability patients(recurrent subluxation,16) and cadaver(3)에서 rotator interval 관찰, relationship 평가

\* 본인이 기억하는 뚜렷한 trauma / sports injury 병력  
 general laxity없이 한쪽 견관절, instability > 2yrs

No complete D/L ?, male(19-26)

이학적 검사상 심한 하방(sulcus>+2-3) 및 AP 불안정증

\* stress radiology : subacromial (acromion-H.H) distance

Control (20)            open RI defect

11mm(8-18)            43mm(38-65)

MRI : No Bankart lesion, capsular laxity, wide RI

\* RI closure : simple imbrication (3) / cap.shift through RI

\* F/U 13 Mons.(6-26)

\* Clinical outcomes

Pain 2.5 -> 4.5, ROM full recovery

Stability 8.5 -> 13.5

Shift through RI / RI imbrication(2/3)

Open RI defect observed in the variable size at the 14 cases

2.0 (0.5-3.5) x 1.5 (0.5- 2.3) cm / 2 thin membrane

Cadaver 1.5x0.5, 2.0x1.0, 0.5x0.5 cm

## Controversy

1. Open rotator interval lesion ?

Simple imbrication시 흔히 residual inf. laxity가 남는다

2. RI capsule, not always open in the instability patients

3. Can we make the instability ?

Heavy lifting-gradually traction

susceptible structure : RI(CHL,SGHL)?

Open RI defect + Microtrauma

## Summary

1. Open rotator interval lesion, related with the capsular laxity, could be another cause of the instability, the sizes and shapes were variable.

2. RI imbrication and capsular shift could be thought adequate treatment for the inferior and AP instability with no other lesions