

## Arthroscopic Rotator Cuff Repair



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## Aim of This Presentation

- To understand various type of rotator cuff tears
- To present arthroscopic management of rotator cuff disorders

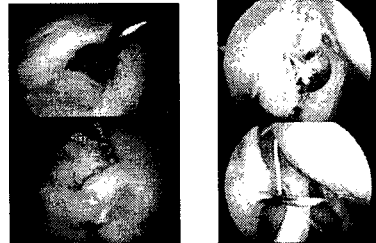
## Rotator Cuff Disorder

- Tendinosis
- Partial-thickness tear
  - Articular surface
  - Bursal Surface
  - Intra-tendinous
- Full-thickness tear
  - Anterosuperior
  - Posterosuperior



## PTRCT

- < 50%: Arthroscopic debridement
- > 50%: Repair



## SMC Results

### Arthroscopic Conversion to Full-thickness Tear & Repair

- 109 ASPTRCT (1995 – 2000)
  - 54 low-grade: debridement ± acromioplasty
  - 55 high-grade: AS conversion & suture anchor repair
- Prospective F/U for 49 months (24 – 129 months)
- Group 1: 49 throwing athletes (Age: 27 years)
- Group 2: 32 non-throwing sports (Age: 31 years)
- Group 3: 28 no sports patients (Age: 56 years)

## ASES Scores

- Group 1 throwing athletes

	Satisfactory	Unsatisfactory	
Grade 1 (12)	10 (83%)	2 (17%)	
Grade 2 (19)	8 (42%)	11 (58%)	10 reop. (repair) → 7 satisfactory
Grade 3 (18)	16 (89%)	2 (11%)	
Overall (49)	34 (69%)	15 (31%)	36 (73%) return >90% level

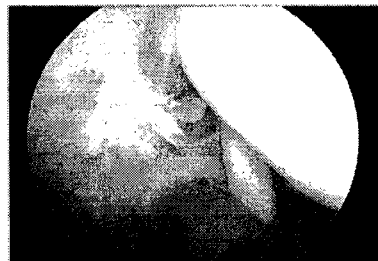
**Articular Surface PTRCT**

*PASTA: Partial Articular Surface Tendon Avulsion*

- Mini-open
- Arthroscopic
  - Conversion to full-thickness tear & repair
  - Arthroscopic trans-tendon repair



**PASTA: Trans-Tendon Repair**



**Subscapularis PASTA**  
Subacromial Approach



**Subscapularis PASTA**

- All intra-articular repair
- 2 anterior portals
- No interval release
- Release MGHL



2005 AAOS

**PASTA Lesion of Subscapularis**



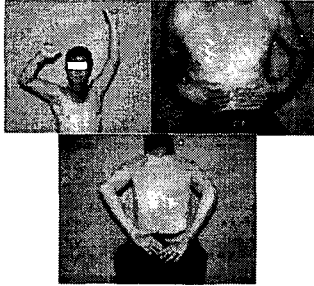
**Full-thickness RCT**

- Small <1cm
- Medium 1-3cm
- Large 3-5cm
- Massive >5cm



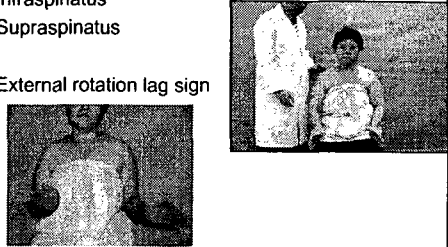
### Anterosuperior RCT

- Supraspinatus
- Subscapularis
- Belly-press sign (Napoleon sign)
- Lift-off test



### Posterosuperior RCT

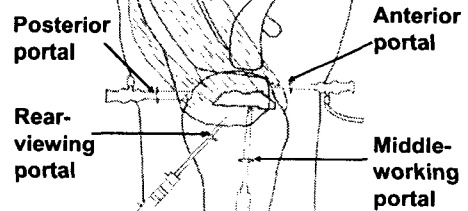
- Infraspinatus
- Supraspinatus
- External rotation lag sign



### Success of Arthroscopic Repair

- Complete visualization
- Easy access to anterior and posterior margins of tear

### Differential Portal Placement



*Kim, Arthroscopy 2002*

### Advantage Differential Portal Placement

#### Rear-Viewing Portal

Better en-face view to anteriorly located tear

#### Middle-Working Portal

Better angulations for both margins of tear



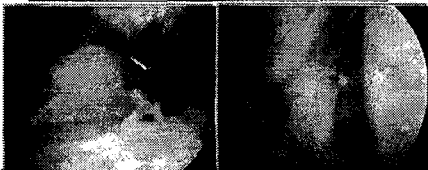
*Kim, Arthroscopy 2002*

### Arthroscopic Repair Step

- Acromioplasty
- Bursectomy
- Tear pattern evaluation
- Mobilization, if needed
- Margin convergence, prn
- End-to-tuberosity repair

### Mobilization

- CH ligament release
- Superior capsule release
- Interval slide



### Rotator Cuff Repair

#### Margin Convergence

Convert large U tear to small or medium C tear



### End-to-Tuberosity Repair

#### Most difficult procedure

- Passing suture through cuff tissue
- Knot tying



#### Decide

Arthroscopic or Mini-open Salvage

If End-to-tuberosity Repair is

Any difficulties



Mini-open Salvage  
Repair

Easy



All-Arthroscopic

### Arthroscopic Versus Mini-Open Salvage Repair

#### Medium and large tears

Surgical outcomes depended on the size of the tear, rather than the method of repair

Kim, Arthroscopy 2003

### Arthroscopic Repair Technique

