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
  - Intratendinous
- Full-thickness tear
  - Anterosupreior
  - 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

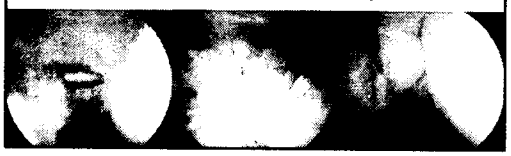
- Group 1 throwing athletes

	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

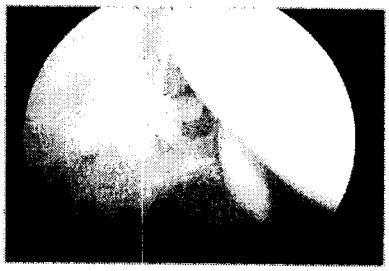
Articular Surface PTRCT

PASTA: Partial Articular Surface Tendon Avulsion

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

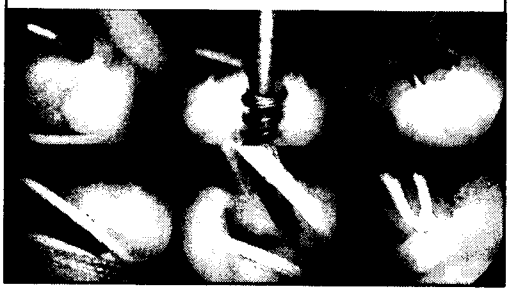


PASTA: Trans-Tendon Repair



Subscapularis PASTA

Subacromial Approach



Subscapularis PASTA

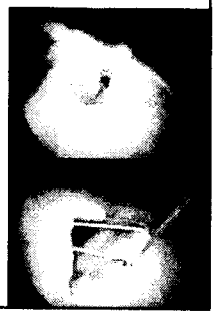
- All intra-articular repair
- 2 anterior portals
- No interval release
- Release MGHL

2005 AAOS

PASTA Lesion of Subscapularis

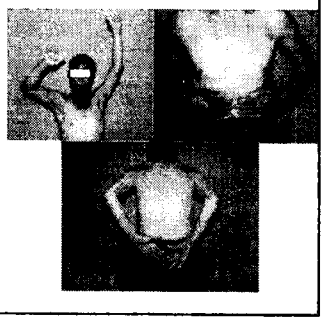
Full-thickness RCT

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



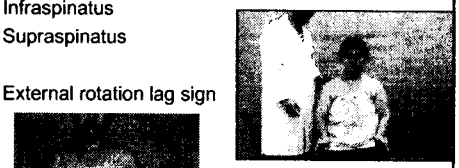
Anterosuperior RCT

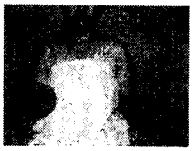
- Supraspinatus
- Subscapularis
- Belly-press sign (Napoleon sign)
- Lift-off test



Posterosuperior RCT

- Infraspinatus
- Supraspinatus
- External rotation lag sign

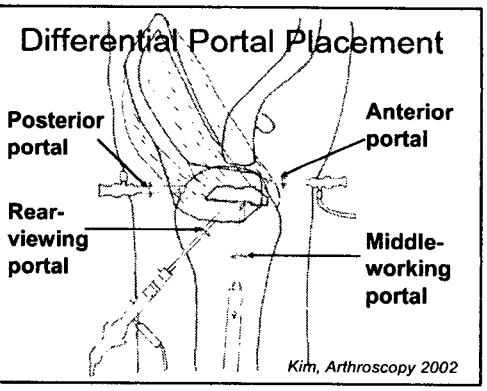




Success of Arthroscopic Repair

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

Differential Portal Placement



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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

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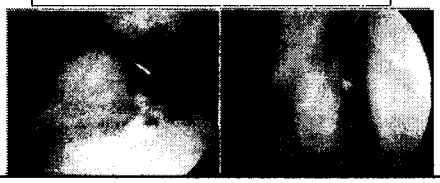
Arthroscopic Repair Step

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

Mobilization

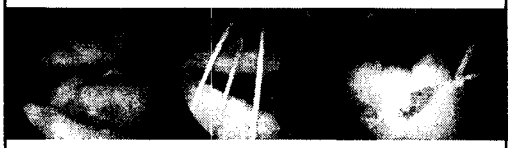
- CH ligament release
- Superior capsule release
- Interval slide



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	Easy
⇩	⇩
Mini-open Salvage Repair	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