

Acromioplasty, Mumford, Biceps What's the Indication with Rotator Cuff Tears?

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Financial Disclosure

- Consultant
 - Smith & Nephew Endoscopy

You just finished a cuff repair using your best x-row technique +- Biologic +- Augments

- What do you do with the....
 - Acromion
 - Always SAD?
 - Never SAD?
 - Sometimes?
 - AC joint not tender – small spur
 - AC resection?
 - "Co-plane" AC?
 - Leave AC joint alone?
- Biceps
 - Always RX with tenotomy or tenodesis?
 - See what it "looks like" with the scope?
 - Always leave it alone?



I almost always do an Acromioplasty with a Rotator Cuff Repair

ASAD with Cuff Repair

Practice patterns for subacromial decompression and rotator cuff repair: an analysis of the ABOS database

- 2004-2009, significant shift to ASAD and scope cuff repair among your surgeons.
- However ... there was an increasing frequency of arthroscopic rotator cuff repair performed without subacromial decompression

Mauro, Jordan, Irrgang, Harner. JBJS Am 2012

Analysis of rotator cuff repair trends in a large private insurance population.

- 151,866 cuff repairs ...2004-2009
- 74% arthroscopic
- Steady decline in performance of open rotator cuff repair.
- Concomitant acromioplasty is performed approximately half the time, and this trend is increasing slightly.
 - These findings were consistent across age, sex, and region in the United States.

Zhang, Montgomery, Ngo, Hame, Wang, Gamradt. JARR 2013

Is acromioplasty necessary in the setting of full-thickness rotator cuff tears? A systematic review

- 354 patients: ASAD and Scope Cuff Repair
- 4 Studies: Two Level 1 and Two Level 2
- Conclusions
 - "... does not support the routine use of partial acromioplasty or CA ligament release in the surgical treatment of rotator cuff disease. "
 - "... In some instances, partial acromioplasty and release of the CA ligament can result in anterior escape and worsening symptoms. "

Famillari...McFarland. J Orthop Traumatol 2015

Arthroscopic Repair of Full-Thickness Rotator Cuff Tears With and Without Acromioplasty: Randomized Prospective Trial With 2y fu

- Abrams, Gupta, Hussey, Tetteh, Karas, Bach, Cole, **Romeo**, Verma
- Am J Sports Med. 2014
- 95 patients
 - 43 non-acromioplasty
 - 52 acromioplasty
- The results of this study demonstrate no difference in clinical outcomes after rotator cuff repair with or without acromioplasty at 2 years postoperatively.

SAD at time of Cuff Repair

- Myth
 - Impingement
 - Armstrong: 1949
 - Neer: 1972 95% of impingement due to acromion.
 - Bigliani: 1986 Type III acromion
 - Nirshel: 1989 said primary tendon disease. Debride without ASAD
 - He was a "heretic"
 - Ellman 1987, Paulos 1987: ASAD for impingements with cuff tears
 - Scope cuff repairs w ASAD became reality – Magic v Illusion
- Data
 - No need for ASAD

My Practice

- I rarely do ASAD unless large spur and small-medium cuff tear.
- I never do ASAD in large or massive tears.

AC (asymptomatic) with Cuff Repair

Results of arthroscopic treatment of rotator cuff tear with the resection of symptomatic acromioclavicular joint with degenerative changes.

- 40 patients into two groups - No Difference in Results
- 1. Symptomatic AC Joint
 - Supplementary resection of a painful AC joint with arthritis during RC tear repair provides good, long-term outcomes.
- 2. Asymptomatic AC joint
 - In contrast to patients with asymptomatic AC joint arthritis, the coexistence of a torn RC and symptomatic AC joint with arthritis, can worsen shoulder function in the preoperative period.

Blasiak ... Pol Orthop Traumatol. 2013

Biceps Rx with Cuff Repair

The effect of biceps procedure on the outcome of rotator cuff reconstruction.

- Three Choices
 - Tenotomy
 - Tenodesis
 - No Treatment
- Biceps procedure does not affect the final clinical treatment outcome after rotator cuff repair.
- Recovery from operative treatment may be faster in tenotomized female patients in cases of encountered biceps pathology.

Kukkonen ... Orthop. 2013

A Systematic Review and Meta-analysis Comparing Clinical Outcomes After Concurrent Rotator Cuff Repair and Long Head Biceps Tenodesis or Tenotomy.

- Leroux,Chahal,Wasserstein,Verma, **Romeo**
- Sports Health 2015
- 12 studies
 - 6 tenotomy
 - 6 tenodesis
- Although the postoperative Constant score and rate of biceps deformity favor LHB tenodesis statistically, the clinical significance appears negligible.

Specific patient-related prognostic factors for rotator cuff repair: a systematic review.

- 12 studies ... up to 2013 ... prospective studies that describe prognostic factors affecting outcome in primary RCR.
- Moderate evidence was found for ...additional biceps or acromioclavicular procedures to have a negative influence on cuff integrity at follow-up
- Limited evidence that performance of an additional acromioclavicular procedure has a negative influence on functional outcome.

Lambers...JSES 2014Lambers...JSES 2014



I will continue to do an Acromioplasty with a Rotator Cuff Repair

EBM Evidence Based Medicine

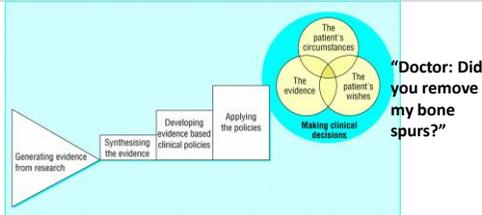
“There has been a shift in practice from an approach involving anecdotes, previous experiences, and experience to one that attempts to incorporate the best and most current available evidence into clinical practice.”

Bhandari ... 2012 ... McMaster University, Canada

Is Anyone Listening?

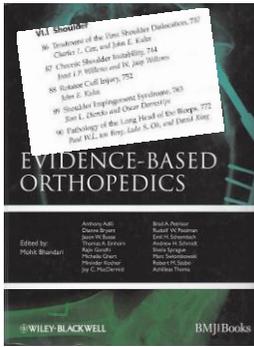
Myth Trumps Science

EBM: How It's Supposed to Work



“Doctor: Did you remove my bone spurs?”

BMJ



- “Acromioplasty has not been shown to affect outcome scores ... “
 - “... but has not been studied to see if it has an effect on healing (overall quality: high)”
- “There is insufficient data to determine the optimal treatment for LHB tendinopathy.”
 - “Clinical data does not show large differences between attachment techniques.”



Barriers

- Time consuming.
- Not enough evidence.
- Does not provide certainty.
- Removes responsibility for the decision from the surgeon.
- Cannot be applied to individual patients.
- Difficulty in finding the best evidence.
- Lacks the humanism of patient care.

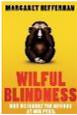
Gossip Trumps Truth



- Nat Acad Science 2007
- Participants relied on gossip about others, even when it contradicted their direct observations.

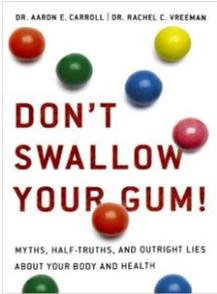
Evidence That Contradicts Our Pre -Existing Ideals.

- Is being stubborn a part of human nature?
- Is this an irremediable flaw of humanity?
- Once you invest in a set of ideas that consistently yield reasonable results, you have little incentive to revise those ideas. You'd need a strong incentive to do so.



Summary: Cuff Repair

- No Evidence for ...
 - Routine SAD
 - Routine AC
 - Biceps Tenodesis v Tenotomy



Why We Cling to Outdated Medical Myths

- Drink 8 glasses water a day.
- Vitamin C will cure your cold.
- Sugar makes your kid hyperactive.
- "It makes complicated material a little bit easier to wrap our heads around."
- Always do an ASAD with cuff repair.



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