Therapy Breakout Session I: Postoperative Rehabilitation After Soft Tissue Surgery About the shoulder

INTRODUCTION

- RTC repair
- SLAP repair
- Frozen shoulder

TREATMENT: PROTOCOL VS CLINICAL JUDGEMENT

- Therapist contacted surgeon and asked: “What is your protocol for RTC repair.”
- Surgeon’s response: “If I refer a patient to you, I assume you are familiar with the protocol.”
- Both are right and wrong
- Search engine “RTC protocol” 1810 results
- Not just RTC but all surgery
  - Reach out to surgeon before seeing patients

RTT Protocol

- Vary greatly and are dependent on the surgeon
- Early passive motion, concerned about stiffness and will start some form of early passive ROM
  - Pt livelihood need to RTW as soon as possible
- Parsons et al (2010) retrospectively evaluated 43 patients that were immobilized for 6 weeks, immobilization did not increase long term stiffness (followed pts for 1 yr) and may improve tendon healing
- Yi et al (2015) systematic review of level 1 & 2 papers “current data do not definitively demonstrate a significant difference between postoperative rotator cuff rehabilitation protocols that stress different timing of mobilization and use of CPM.”

PROGRESSION

- Don’t ask for protocol. Know how far pt is s/p surgery and specific question
- Clearly what was repaired (op note when possible, heard from the surgeon’s therapist)
  - Biceps tenodesis
    - Operative repair to bring biceps down AROM for 6-12 weeks
  - Small vs massive tear
    - Delay AROM for up to 6 weeks
  - Repair of bicep tendon
    - Delay 3-6 weeks
  - SAD, DCE
    - Avoid cross body/sleeper stretch until pain improves
  - Repair of Subscap
    - Limit ER to 0-30 for 4-6 weeks
  - Any type of graft
    - Operative repair or massive RTC repair
    - Avoid joint mobs?
  - Superior capsule repair
    - Sometimes written as Massive RTC repair
    - Avoid joint mobs?
The American Society of Shoulder and Elbow Therapists' consensus statement on rehabilitation following arthroscopic rotator cuff repair

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The American Society of Shoulder and Elbow Therapists (ASEST) identified a panel of members with extensive experience treating patients with arthroscopic RCR to review literature and develop this article.

 Protected PROM fist 6 weeks

Stiffness after 1 year is not common, but pt.’s with DM, thyroid disorders, acute RTC tear, partial-thickness tear and adhesive capsulitis may benefit from additional focus on their PROM during fist 6 weeks.

Muscle performance should begin with AROM with arm in short lever or gravity minimized followed by progressive stresses with a longer lever or higher load positions.

Pt. education is important to success after arthroscopic RCR and should include short-term activity modifications, compliance with home HEP, resolution of shoulder stiffness balance with long-term healing of the RTC.

Re-tear after arthroscopic is not uncommon (25-60%) and can occur within the first 3-6 month.

ROTATOR CUFF (RTC):

Supine FF ER

IR – progress to towel

Scap.

Pec. Strench - Progress to wall/corner

Cross Body – Progress to sleeper

Shoulder

Careful!!!

ROTOR CUFF (RTC): T-BAND

ER IR Ext.

FF Plus

Abd.

Row

RTC TEARS ARE THE “WRINKLES AND GRAY HAIRS OF THE SHOULDER”.

High correlation of RTC tears and increasing age (Yamauchi 2006)

Tears can be asymptomatic but progress to symptomatic (Yamauchi 2001)

RTC protocol for 27 y.o. pitcher vs 85 y.o. couch potato

RTC centralizes the head therapist need to be careful when impingement is present

Your evaluation is not just for the dx it serves to screen for exercises

Opinion

Neer, Hawkins

CAUTION WITH EXERCISES ESPECIAL WHEN DEALING WITH THE “GRAY HAIRS OF THE SHOULDER”

Careful with pullies, need to see elbow/thumbs to avoid stress to capsule
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van Drongelen et al (2013)
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muscle forces and a minor shift of the
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What about older patients that have
shrunken and have less
immobilized and have a weaker
cuff?

SHOULDER JOINT(S):
AC, SC, GH, ST

• Preference is to assess scapular when cleared for AROM
• If shoulder pain is more posterior but not cervical
• “Scapular dyskinesis may be found in association with many
types of shoulder pathologies, although the exact
relationship between dyskinesis and clinical pathology is not
clear.” (Kibler et al. 2013)
• Muscle function
  • Maintains shoulder girdle elevation in adduction
  • Maintains subacromial space
  • Creates a stable base for the Rot. Cuff, biceps and Deltoid
  • If any of these are affected motion will be affected

PRESCRIPTION FOR SCAPULAR
DYSKINESIS?

• Scapular Dyskinesis Tests (SDTs). (Mclure et al 2009)
  • Look at medial and inferior border of scap.
  • 5 reps of shoulder IT and Abd
  • Repeat with wt. (5 lbs if over 150 lbs, 3 lbs if under 150 lbs)
  • Rate
    • Normal: scapula lies flat
    • Subtle: abnormal but not consistent
    • Obvious: clear abnormality in 3/5 trials

SDT- IF MOTION IS FULL ADD
WEIGHT

College Musician Dx with elbow tendonitis. See by therapist issued wrist splint and
instructed to rest for several weeks and then return to therapy.

WHAT IS SHE BEING SEEN FOR?

Do not look for things that are there, with older patients try and give less
exercises.

I DO NOT NEED HELP WHEN
THINGS ARE GOOD (6 VS 3 MO OUT)
RE-TEAR AFTER ARTHROSCOPIC IS NOT UNCOMMON (25-60%....WHO'S AT FAULT?

My opinion:
- I am 100% sure that I do not know but it is always the back in my head during therapy
- Knowing RTC are like gray hair I stress it protection at the end of therapy in older patients
- Discuss hobbies, work, and things that have caused pain in the half
- Talk about overall health

EDUCATION: PT WILL DO WHAT THEY WANT VS THEY WERE NOT INSTRUCTED PROPERLY

- What is the most important part of therapy? My Opinion is Education
- Stress what is repaired and why it needs to be protected
- Constantly review HEP, how many times it is done
  - At the conclusion of therapy HEP will continue and may need to be done as part of a regular program
- When pt can begin to perform activities discuss modifications
  - Assess compensation activities that were pain and discuss again modifications with SLAP repairs

GH LOTS OF MOTION PRONE TO DISLOCATION AND INSTABILITY

- Humeral head 3-4x larger than the glenoid
- Labrum deepens socket by 50%
- LHB originates from the superior glenoid

SLAP TEARS

- SLAP - superior labral anterior posterior tear
- Can involve biceps
  - Tests: If not seen by MD first
    - Clunk test, Crank, O'Brian, Tugman's test
  - Not reliable discuss with MD what and how they test
- Unstable when stress the ant. capsule
  - Avoid high 5 position and reaching behind back

ANTERIOR SHOULDER

- Immobilization for a minimum of 4 weeks but can be longer
  - Will hold longer if pt. still has clicking/pain (4-8 wks.)
  - Discuss bicep involvement
- Initiate AROM continue to protect - progression depends on surgeon and pt. reports of instability
  - When cleared for AROM
    - ER limit to neutral, FF 90, if pain free perform isometric
    - 7 weeks if pain free increase ROM, ER to 45; FF 130 continue with isometrics
  - SLAP may start protected T band exercises
  - Avoid extremes of "High 5", ext. and reaching behind the back
  - May be activity restrictions
  - Educate pt. on activity modifications - especially wt. lifters
  - Combination of ergonomic education and joint protection

SLOW AND STEADY IS GOOD A LITTLE TIGHTNESS IS GOOD

7 weeks: FF 117, Scap 110, ER/IR: 40/30 (0 deg abd)
15 weeks: FF 140, Scap 140, ER/IR 70/40 (90 deg abd)
SLAP/RTC EDUCATION

• Just like ergonomic assessment of work area.
  • Demonstrate/bring pictures or video into clinic

• Specific Modification (Gym)
  • Fly, pec, deck, Dumbbell and Pushing. Keep out in coronal plane: < 90º for cable and pec deck, 60-70º for dumbbell flies and push up. Initial pec deck start position: 30-45º and keep to coronal plane, avoid high line position
  • Latissimus raises: scapular plane (limit to 90º if concerned about impingement)
  • Bent over rows: <30º GH abd, 15º GH ext.
  • Scapula: avoid GH replace with bent over, or sup
  • No lateral pull downs behind back! Can do in front with controlled eccentric, return of bar, 30º reclined, narrow grip (no wider than shoulders)

ADHESIVE CAPSULITIS VS STIFFNESS

• “If you wear your sling too much you will get a frozen shoulder”

• Combination of synovial inflammation and capsular fibrosis.
  • Thickening of coracohumeral ligament and joint capsule in rotation interval
  • Capsular thickening of the axillary recess

ADHESIVE CAPSULITIS

• Treatment
  • Post-op just like tenolysis of fingers will see the day after surgery
  • Stress the importance of moving arm
  • Therapy home vs supervised: Pending ROM and progression,
  • Schedule 2-3 x the fist week and see how they are progressing

FROZEN SHOULDER

• Causes/contributing factors: Not only immobilization and trauma but also
  • Age (40-60)
  • Milgrom 2008
  • Diabetes
  • Thyroid Disorders – more common in women
  • Injuries

• Has a progression:
  • Phase I freezing (2-9 months)
  • Phase II frozen (3-12 months)
  • Phase III thawing (12-42 months)

ADHESIVE CAPSULITIS

• Goal is for pain free motion.
  • Phase I-II maintain motions, Phase III will try to improve motion
  • Gripp et al. (2005)
    • pendulum and passive shoulder-stretching exercises in sup, FE, ER, Add, IR
    • Performed 2 x a day, formal therapy 2 x week
    • 90% satisfactory, 7% surgery
  • Diercks (2004): 2 Year study
    • Group I Supervised Neglect (Pain as tolerated)
    • Group II Partial Therapy (ROM push above pain levels)

• Gentle is key not this!
THANKS!

THANK GOD, IT’S FINALLY OVER
THANK YOU FOR YOUR ATTENTION

BIBLIOGRAPHY


