

clinical conduit

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Prognostic Factors that Influence Rehabilitation Success Following Rotator Cuff Repair Surgery: Part 5 – PATIENT SATISFACTION



My orthopedic physical therapy residents and I recently conducted a comprehensive review of the literature on the factors that predict success following the surgical repair of the rotator cuff (RC). We organized our findings into six categories and had our findings published in the *The Physician and Sportsmedicine* late last year. The variables we discussed included tendon healing, restoration of strength and mobility, pain levels, patient satisfaction, and functional outcomes. While these factors are interdependent they each influence the final result. This 5th section describes the short and long-term “satisfaction” outcomes patients should anticipate based on their unique presentation.

A simple but insightful evaluation of a patient's contentment with a clinical intervention is to assess their satisfaction. Many tools have been used to assess this “quality of care” perspective including their retrospective willingness to repeat the surgical intervention, propensity towards recommending the intervention to others, overall satisfaction with their health-related quality of care, or economic judgment of the intervention's worth. However, the most common mechanism of assessing patient satisfaction is to use a single global measurement based on a question that reflects satisfaction with the surgical intervention and/or the subsequent rehabilitation process. The response to this question is usually constructed on some type of ordinal analog scale anchored by a continuum ranging from very unsatisfied to very satisfied.

Many variables may impact patient satisfaction including socioeconomic, cognitive, and affective components. Inherently tied to the patient's perception of satisfaction is the actual outcome and how the patient's expectations align with this status. In fact, O'Holleran et al⁷⁶ showed a relationship between the patient's satisfaction and their actual functional outcome. In his study, seven prognostic determinants accounted for 66% of the variability in patient satisfaction scores. These factors include current pain level, ability to return to work, difficulty with toileting, dysfunction lifting 20 lbs, willingness to recommend the surgery to another, active forward elevation, and the ASES score. Surprisingly, age, sex, workers' compensation status, and the presence of glenohumeral osteoarthritis did not correlate with outcome satisfaction.

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Arthroscopic Menisectomies in Patients with Osteoarthritis



All of our professional social media sites are making a big deal out of the recent article on the effectiveness of the physical therapy in comparison to arthroscopic knee surgery (Katz JN, et al, *N Eng J Med*, 2013). For those not familiar with the article it was a large, multicenter, randomized controlled trial that evaluated management strategies in older adults with meniscal tears and concurrent mild-to-moderate osteoarthritis. The results showed similar improvement between arthroscopic surgery and non-operative rehabilitation in regards to self-report functional outcomes with no difference in adverse outcomes between groups at both a 6 and 12-month follow-up. There was a large crossover (30%) of subjects that were initially allocated to the

non-operative arm of the trial to a surgical intervention (presumably due to inadequate progress). While these results speak well to the effectiveness of a well-structured and evidence-based rehabilitation program I think we need to acknowledge some important elements of the results that will be pointed out by our surgical colleagues. In implementing the conclusions of these finding I think it is important to remember the points listed on the next page.

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Upcoming Courses for 2013

Advanced Manual Therapy Series
Clinical Orthopedic Rehab Education

2013 Dates - Plano, TX

- Part 2: The Upper Quarter - Jun 1-2 (Shoulder-Elbow-Wrist-Hand)
- Part 3: Lumbopelvic Spine - Jul 13-14
- Part 4: Hip/Knee - Aug 24-25
- Part 5: The Lower Quarter - Oct 19-20 (Leg, Ankle, and Foot)

A detailed description of the course content and learning objectives is available at our web site — www.continuing-ed.cc

Single course attendance is allowed on a space-available basis
Only 5 spots are left for each course

Meniscectomy vs. PT in Patient with OA continued ...

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FYI – this is a free full-text article that can be found on the New England Journal of Medicine web site – www.nejm.org



1. Generalization of the results should be limited to a specific age-group (all subjects were over 45 and the mean age of the subjects was approximately 60).
2. The vast majority of self-report improvement was realized in the first 3 months (in other words, the best intervention, be it surgery or PT, will be manifested relatively quickly—so don't be afraid to convert to the alternative intervention if progress is not achieved early on).
3. 3/4 of the eligible participants declined to enroll in the trial with the vast majority citing a strong treatment preference for (or against) surgery (in other words—patients know what kind of treatment they want). This unfortunate, but unavoidable selection bias may have influenced the results.
4. While the therapy program outlined in the supplementary appendix was appropriate and evidenced-based we are not supplied with the frequency of therapy, the amount of supervision offered, or the criteria for discharge.
5. The functional outcome tools (WOMAC and KOOS) used as the dependent variables are not specific to the pathology of interest. All subjects had OA—but the study was really looking at whether one intervention (or the other) is better for treating the confounding variable—meniscal pathology.

This is a must read article for those that see knee patients and the supplementary rehabilitation table would be a valuable resource in the management of these types of patients.



Question of the Month: Achilles Tendinopathy Diagnosis

How do you differentiate Achilles tendinopathy from an Achilles tear?



Actually, a tear is quite easy to differentiate from a tendinopathy. We know that there are a number of maneuvers that will identify a tear. The Thompson test (squeezing the calf) has both a high sensitivity (0.96) to rule out and a high specificity (0.93) to rule in a tear of the Achilles. The Matles test (resting dorsiflexed position when lying prone with the knee flexed to 90°) has similar sensitivity (0.88) and specificity (0.85) qualities. If you combine the above tests with a palpable gap in the tendon you'll have virtually perfect diagnostic accuracy for a tear of the Achilles.

On the other hand, diagnosing an Achilles tendinopathy relies pretty much on the subjective report of pain in the area most commonly involved area (2-6 cm proximal to the insertion) and reproduction of the concordant pain complaint upon palpation (Sensitivity = 0.84; Specificity =

0.73 with a high Kappa level of agreement). These results (a positive likelihood ratio over 3.0 and a negative likelihood ratio under 0.3) represent a small to moderate shift in the probability of the tendinopathy diagnosis.

The greater difficulty in diagnosing a tendinopathy is that there a number of pathologies that may present in a similar fashion. These diagnoses include retrocalcaneal bursitis, painful os trigonum, partial Achilles rupture, tarsal tunnel syndrome, posterior tibialis tendon dysfunction, flexor hallucis tenosynovitis, stress fractures, or osteochondral lesions of the talus.

A recent study found 10 tests that have been proposed to diagnose the presence of Achilles tendinopathy. These tests could generally be lumped into one of three categories: 1) Subjective report of symptoms; 2) Palpatory findings; or 3) Tendon loading tests. Given

that the Achilles tendon is a contractile tissue I was surprised with the low diagnostic value of the tendon loading tests. Passive dorsiflexion and single leg heel raise testing both suffered from very low sensitivity values (however they were quite specific). The tendon loading tests also had the lowest levels of both intra and intertester reliability.

It was also interesting to see that while both tendon thickening and crepitus with motion were extremely specific they were equally insensitive. In other words, just because there isn't the hypercellularity of a "fat" tendon upon visual inspection you can't rule out tendinopathy as the cause of Achilles pain. For more information you may want to look at the article – Hutchinson AM, et al, *Foot Ankl Surg.* 19 (2013):112-117.

Questions you would like addressed in a future issue can be sent to mulliganpt@tx.rr.com

References

All references for the post-operative rotator cuff prognostic factors article are available on line at www.continuing-ed.cc/newsletter.htm

Rotator Cuff Success Prognosis: Patient Satisfaction continued -



Objective variables at follow-up associated with less satisfaction included stiffness and weakness in forward elevation, positive impingement signs, pain with horizontal adduction, and acromioclavicular joint tenderness.⁷⁶ These are all variables that can be monitored and address by restoring posteroinferior capsular mobility via manual therapy.

Tashjian et al al⁷⁰ found that patient satisfaction most highly correlated with the pain, function, and general health status of the patient after a RCR. Demographically, married, currently working, and nondisabled patients had the greatest satisfaction. Achievement of pre- and post-op expectations also positively correlated with patient satisfaction.

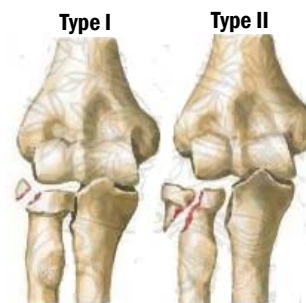
While it would seem intuitive that patient satisfaction ratings are directly tied to provider competence, it is important to recognize the role and value of positive communication, partnership-building, education about appropriate expectations, and generous distribution of medical information and advice. Unaddressed perceptions and expectations may decrease patient's satisfaction much faster than technical incompetence as most patients do not have the education, experience, or sophistication to distinguish the quality of medical care. Conversely, all patients can judge empathy, concern, and thoughtful attention to the patient's unique needs. For this reason we recommend the use of the Global Rating of Change (GROC) and/or a Patient Specific Functional Scale (PSFS) as a part of judging the patient's satisfaction.

The GROC scale is a tool that can be used at any interval in time and allows the clinician to judge the patient's overall satisfaction with their condition in comparison to a previous point in time. Each response is given a numerical value on an ordinal scale ranging from -7 (a very great deal worse) to a +7 (a very great deal better). This single value can provide insight and guidance in the therapist's subsequent decision-making with regards to intervention strategies.

The PSFS is an assessment tool that can be used with any orthopedic condition and ensures the patient's personal reasons for undergoing the surgical intervention are being solicited and addressed. The patient is asked to identify up to three important activities that they were unable to do or having difficulty with prior to the surgical intervention. This tool is particularly valuable in that it is able to reflect on the patient's perception of their current status as compared to their pre-op state. The challenge of each functional activity is rated on its current difficulty and the total score for all rated activities are summed and compared to an earlier time. The minimum detectable change (90% CI) for the average total score is 2 points or 3 points for any single activity score.⁷⁷

The next issue will present prognostic factors that impact post-operative self-report functional outcomes.

Early Mobilization after Radial Head Fractures



We've known for years that early mobilization of the elbow following non-operative intervention for

smaller fractures (< 30% involvement) with minimal displacement (< 2mm) result in better recovery and functional outcomes. The question of "how early is early mobilization?" has yet to be adequately addressed. A recent study published in the *Journal of Orthopedic Trauma* by Paschos NK, et al, was designed to shed light on this question.

In this study, subjects were randomized into one of three groups within 12 hours of their injury. All three groups delayed active pronation/supination until one week later but group 1 was started immediately on active elbow flexion and extension, group 2 waited 2 days before starting pain-free AROM, and group 3 delayed initiating sagittal plane motion until completing one week of immobilization in a "half" cast.

Subjects were evaluated at multiple intervals for pain levels, restoration of range and strength, and improvement in self-report function. The study showed early mobilization results in excellent functional recovery with restoration of strength and mobility in as little as 4 weeks. ROM and pain complaints rarely persisted in the subjects that began moving in the first 2 days. However, the group that delayed active range of motion for two days did the best. In other words, a short period of "convalescence" may be in order following this acute trauma and immobilization for as little as one week may begin to slightly impact and/or delay desired outcomes.

Reference: Paschos NK, Mitsionis GI, Vasiliadis HS, Georgoulis AD. Comparison of early mobilization protocols in radial head fractures. *J Orthop Trauma*. 2013 Mar;27(3):134-9.



"Featured Internet Link"

The PT Podcast



One of our orthopedic physical residents turned me on to this site. PT Podcast is a web site run by Eric Meira, PT, SCS, CSCS, who is a physical therapist from Oregon. He hosts interviews with clinical and education leaders in the field of sports physical therapy. Over the past couple of years he's sat down and interviewed a number of influential therapists about their careers, research, and a variety of clinical topics. Most of the interviews are a little over an hour in length. I've listened to a few and they were quite insightful and interesting. Also on the web site are recorded online journal clubs where the hosts look at two current articles and discuss the implications for clinical practice. You can subscribe through an RSS feed or download previous recordings from iTunes.

www.ptpodcast.com

Previous issues are archived at
www.continuing-ed.cc/newsletter.htm



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2013

Clinical Orthopedic Residency Education Series: June 1-2: The Upper Extremity



We have about 5 spots left for Part II (The Upper Extremity) of our Clinical Orthopedic Residency Education series. The course is scheduled for June 1-2 in Plano, TX. This course is designed to focus on the evaluation and management of common pathologies of the shoulder, elbow, wrist, and hand.

This course will be taught by Ed Mulligan and resident faculty from UT Southwestern Medical Center and will cover examination and intervention strategies for the shoulder, elbow, wrist, and hand. All of the material is based on current evidence with over 50% of the on-site course work devoted to lab demonstration and practice. For more information on the 2013 advanced clinical orthopedic education series please visit our web site at www.continuing-ed.cc/residencycourse.htm.



Who will return to play sooner?



Compound Tibia Fracture



Achilles Tendon Rupture

For fans of basketball we witnessed a couple of well-publicized lower leg injuries in the past couple of months. First was the compound tibial fracture suffered by Kevin Ware of Louisville during the NCAA Basketball tournament. Then a few weeks later it was Kobe Bryant of the Los Angeles Lakers that ruptured

his Achilles tendon. The first injury was gruesome to watch as he landed from a jump after trying to block a shot. Kobe's injury seemed rather innocuous. It just looked like he slipped while driving to the basket and was reported to have asked the defender a typical question for those that have ruptured their tendon

– "did you kick me in the heel"? While one injury was tough to watch and the other not so bad – I wonder which of these players has a better chance of an early and successful return to play? The sports fan knows that many famous players have retired after tearing their Achilles tendon (Isiah Thomas, Shaquille O'Neal, and Charles Barkley). Others have returned but were they as good as before the injury (Chauncey Billups, Elton Brand, Dominique Wilkins)? In the NFL, we know that there are about 5-6 Achilles ruptures/year and that about 2/3 of these players return to sport (albeit at a reduced performance level on average). Both of these basketball players will probably require 6-9 months of rehab but I predict that the Louisville player will have a better outcome. Why? He's younger and I've not seen anything reported regarding a medical co-morbidity like osteopenia or a tumor that precipitated the fracture. Weight-bearing can start earlier (although there is good evidence behind an early functional mobilization and weight-bearing protocol for post-op Achilles repairs) and healing should progress quicker for the bone than a soft-tissue repair of what was probably an already degenerative tendon. Only time will tell.

If you're interested in the evaluation and management of Achilles-related injuries you may enjoy our home study on Achilles Tendinopathy. This inservice can be read and/or viewed free of charge. A post-test for CEU credit is available at <http://www.continuing-ed.cc/homestudy.htm> for a reasonable fee.

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