

March 2005 Newsletter



Editorial - The COX2 inhibitors fiasco: Who is to blame?

Doctors were a little asleep at the switch and allowed the drug company, and the direct to patient ads affect their prescribing habits. Suddenly, a drug that had been on the market for 4 years is withdrawn. MD's were blindsided. Most of us felt that this was one of the best drugs that we had for osteoarthritis. Now we are taking a step back to the bad old days of gastrointestinal bleeding with Naproxen. Patients were afraid, and stopped the drugs, but their arthritis flared. They were told to check with your doctor, but we didn't know what to tell them. You would think that in the age of communication that we would have access to all the information necessary to make an informed judgment. One of the internal training documents from Merck was called "Dodge Ball Vioxx", and was specifically aimed at the physician's question of increased cardiovascular events with Vioxx compared to Celebrex. The technique suggested was to dodge the question. The level of trust between the grass roots physicians, and those physicians doing the drug trials (and getting well paid) was shaken. The Cleveland Clinic makes millions by their extensive clinical drug trials. The New York Times reported that one of the critics of Vioxx who worked at the clinic was also a paid consultant to a hedge fund that bet the shares of Merck would fall. In fact Merck's shares plummeted to \$33, from \$45.07, the day it announced plans

to withdraw Vioxx. This format of clinical drug trials is certainly not going to change in the near future, as this is the established path to develop and test new drugs. The COX-2 drugs expanded the market of those patients who could take these drugs for pain control. and to control inflammation in arthritis. However, the bottom line is that the physician is ultimately responsible for his prescribing habits. So, when the ad says “ask your doctor if Vioxx is right for you”, I am going to be a little more vigilant.

This awareness comes hard on the heels of a study published in the Feb issue of Annals of medicine that older physicians appear less likely to be delivering accepted standards of care. In fact, the number of years in practice is inversely proportional to quality of care provided. These findings turn conventional wisdom on its head. Physicians with more experience, like people in many walks of life, are believed to have built up a reservoir of knowledge and skills that puts them at an advantage when delivering quality care. The bottom line is that all physicians, in spite of the increasing demands of practice, need to be very diligent about keeping up to date.

What can physicians do at the present time?

We can, and should, wait for more definitive, large, long term studies. We need to know if drugs like Celebrex are safe over the long term. But, how do you manage the patient in your office today? How can the physician reduce the risk of gastrointestinal side effects? He can proscribe NSAID's only to those patients who do not respond to aspirin and ibuprofen. He can select the drug with the

lowest toxicity, and he can prescribe the lowest dose, for the shortest possible time. What are safe alternatives to NSAID's? I would suggest that you explore, and use other alternative treatments for local disease. For example, for osteoarthritis in the knee, activity modification, local injections of both steroids and hyaluronic acid, bracing, and weight reduction.. This means spending more time and effort in the education and treatment of these patients.

What's new from the academy AAOS 2005 Washington DC

Papers from the AAOS 2005

At the symposium "Is Arthroscopic Surgery the new Gold Standard?", This was the first year that more than half of the audience stated that they did the procedures arthroscopically, rather than open. The trend towards doing most of the surgery arthroscopically continues.

There were a couple of papers that were fairly straightforward, such as showing that smoking is associated with a higher incidence of cuff tears, and workman's compensation patients did not do as well as non-compensation patients, but on the whole the papers did add to the existing knowledge on the rotator cuff. Gerber contributed to the long term follow-up on the conservative treatment of cuff tears, and the fate of re-tear after a cuff repair.

Paper No: 337 Functional and Structural Outcome after Arthroscopic Rotator Cuff Repair

Hiroyuki Sugaya, MD Joji Moriishi, MD Funabashi Kazuhiko Maeda, MD
Funabashi Akihiro Tsuchiya, MD Funabashi

The purpose of this study is to compare the functional and structural outcome of single-row and dual-row fixation after arthroscopic full-thickness rotator cuff repair. Eighty cuff repairs were evaluated at 35 months after repair. Thirty-nine shoulders were repaired using the single-row, and 41 shoulders using the dual-row technique. The postoperative integrity of the cuff was determined with MRI. There was no difference between the single and double row repair when evaluated with the UCLA and ASES scoring systems, but the MRI revealed better cuff integrity with the double row repair.

Paper No: 332 Clinical and Structural Outcome of Conservatively Treated Massive Rotator Cuff Tears

Patrick Oliver Zingg, MD Bernhard Jost, MD Zurich Martin Buhler, MD
Atul Sukthankar, MD Volketswil Christian Pfirrmann, MD Christian Gerber, MD

The purpose of the study was to determine natural history of massive rotator cuff tears. (massive is two or more tendons torn). A small number, 19 patients, were followed for 4 years with clinical and x-ray evaluation. .

Non-operative treatment was selected in older patients with low demand. At 4 year follow-up, the mean relative Constant score was 83%, and the subjective shoulder value 68%. Pain averaged 11.5 points at the visual analog scale, active forward flexion and abduction 136*, and abduction strength 3 kg. Radiographically glenohumeral osteoarthritis progressed, and the acromiohumeral distance decreased. The size of the tear progressed, and 4 of the 8 tears became irreparable. Fatty muscle degeneration increased approximately one stage in all three tendons. Patients with three-tendon tears showed more progression of osteoarthritis.. The relatively good clinical and functional results can be maintained, but degenerative structural changes show a significant progression. Younger patients with repairable tears should be informed about the risk of 50% of the tears becoming irreparable within 4 years.

Paper No 333. Smoking Increases the Risk for Rotator Cuff Tears

Keith Michael Baumgarten, MD David Gerlach, MD Leesa M Galatz, MD
Sharlene A. Teefey, MD William D. Middleton, MD Konstantinos T Ditsios, MD
Jamie Menendez, RN

This study showed that patients with rotator cuff tears have an increased rate of smoking compared to controls. It is of interest to note that other potential risk factors such as manual labor and activity level were not associated with an increase in cuff tears. .

Paper No 338. Long-Term Outcome after Structural Failure of Rotator Cuff Repairs

Bernhard Jost, MD Zurich Matthias Zumstein, MD Zurich Christian Pfirrmann, MD Christian Gerber, MD

Since the long-term outcome after re-ruptures or open rotator cuff repairs is not known, twenty patients with MRI confirmed re-ruptures were reviewed after 3 and 7 years. The average age was 59 years at time of repair. Patients were assessed clinically, with standard x-rays, and MRI. The size of the tear did not progress from 3 to 7 years. Eight patients had fully healed the tear; and seven of them had a re-rupture affecting only the supraspinatus. Fatty muscle degeneration of the infraspinatus progressed. The acromiohumeral distance further decreased. But, fatty degeneration of the supraspinatus and of the subscapularis did not progress. Glenohumeral osteoarthritis remained static. At the most recent follow-up, the relative Constant score averaged 88%, the mean subjective shoulder value was 74%, and nineteen of the twenty patients were either very satisfied or satisfied.

At long-term, the clinical outcome after structural failure of rotator cuff repairs did not change over time, and remained significantly improved over the preoperative state in terms of pain, function, and strength. The re-rupture size did not progress over time. Small re-ruptures also had a potential to heal.

Paper no 339. Complications following Arthroscopic Rotator Cuff Repair

Kenneth Brislin, MD Larry D Field, MD Felix H Savoie III, MD

The purpose of this study was to determine the complication rate for a consecutive group of patients undergoing arthroscopic rotator cuff repair. This retrospective chart review found a complication rate of 10%, mostly related to post-operative stiffness. Other complications included deep vein thrombosis (1), reflex sympathetic dystrophy (1), persistent pain (1), infection (1), and death (1). The postoperative stiffness resolved adequately in all but one patient at an average of 4.7 months. This patient subsequently underwent an arthroscopic capsular release at 4 months postoperatively.

Paper no 340. The Effect of Co-Morbidity on Pain, Function and General Health Status After Rotator Cuff Repair

Robert Tashjian, MD Ralph Frank Henn, MD Lana Kang, MD Andrew Green, MD

In this study of 125 patients with chronic rotator cuff tears, the authors evaluated the relationship between medical co-morbidities, and the postoperative outcome of rotator cuff repair. Outcome was evaluated with the DASH, SST, visual analog scales (pain, function and quality of life), and the SF-36. A greater number of co-morbidities was associated with worse improvement from preoperative pain, function, DASH, and general health. In addition, a greater number of co-morbidities were associated with less postoperative general health status, SF36 physical function, SF36 bodily pain, SF36 general health, SF36 vitality. In conclusion, patients with increased numbers of medical co-morbidities appear to have less improvement in their shoulder pain, function and general health status as a result of rotator cuff repair.

Paper no 341. Workers Compensation Patients Have Worse Pain, Function, and General Health after Rotator Cuff Repair

Ralph Frank Henn, MD Lana Kang, MD Robert Tashjian, MD Andrew Green, MD

This study group of 125 Workman's Compensation patients who underwent repair of a chronic rotator cuff tear were evaluated one year after surgery, prior to settlement of WC claims. Outcomes were assessed with the Simple Shoulder Test (SST), Disability of Arm Shoulder and Hand (DASH), three visual analogue scales (VAS) (shoulder pain, shoulder function, and quality of life) and the Short Form 36 (SF36). The results were that the Workman's Compensation patients were significantly younger, and had lower marriage rates, education level, preoperative SST scores, and SF36 physical function, and social function scores. One year postoperatively, these patients reported worse performance on the SST, DASH, all VAS, and the SF36, and had worse improvement on the DASH, both shoulder VAS, and SF-36 pain. Rigorous multivariate analysis controlling for age, sex, co-morbidities, smoking, marital status, education, symptom duration, work demands, expectations, and tear size confirmed that a workman's compensation claim patient was a predictor of worse SST, DASH, VAS, and SF-36 scores. Workman's Compensation patients report worse outcomes, even after controlling for confounding factors. This study provides substantial evidence that a Workman's Compensation claim can have a negative effect on the outcome of treatment.

Paper No 343. The Tension Required to Repair the Supraspinatus Tendon to Bone Rapidly Increases following Injury

Gerald R Williams Jr, MD Jonathan Gimbel, MS Jonathan Paul Van Kleunen, MD Samir Mehta, MD Louis J Soslowsky, PhD

The objective of this study was to determine the relationship between rotator cuff tendon repair tension and time from injury in a rat model. A full-thickness supraspinatus tendon tear was surgically created by releasing the insertion site. Repair tension was measured following 0, 2, 4, 9, and 16 weeks

post-injury using a tensiometer. Repair tension rapidly increased after injury. The increase in repair tension at 2 weeks post-injury was more than half the overall increase in repair tension at 16 weeks. This suggests that increased repair tension may be the result of something other than fatty replacement, and fibrosis of the muscle belly. These findings suggest that early rotator cuff repair will be associated with lower repair tension.

Paper No 344. Vascular Proliferation and NSAIDs in the Torn Rotator Cuff

Simon Frostick, MD Arvind Rawal, MD Anuradha Sheth, MD Venessa Rayner, BSc Jo Gibson, BSc Margaret M Roebuck, PhD

Rotator cuff tissue, obtained at debridement from 53 patients undergoing surgical repair was fixed and embedded. Pathological assessment was performed on H&E sections. Ongoing vascular proliferation was identified by plump endothelial cells and budding of vessels. The drugs considered were NSAIDs (including Aspirin, Ibuprofen and Diclofenac), COX 2 inhibitors & Opiates. Of the 35 patients taking analgesics, vascular proliferation was absent or reduced in 22. 20 of these patients were also taking NSAIDs. Four patients were taking only COX-2 inhibitors, and all these patients had increased vascularity. 23 patients were taking codeine based analgesics. Of 10 patients using codeine without NSAIDs, 8 demonstrated active ongoing vascular proliferation.

In this study, patients taking NSAIDs showed a significant reduction in ongoing vascular proliferation that could impair healing of the cuff tear.

There were several other interesting papers presented at this years academy. I have always felt that doing a case at night was associated with more problems, and here is the proof. Maybe I just didn't like doing cases at night!

Paper No: 032 Is **After Hours Surgery Associated with Adverse Outcomes?**

William Michael Ricci, **MD** Kevin Coupe, MD Ross K Leighton, MD Angel Blackwell, MA John R Schwappach, MD

The premise of this paper was that increased daytime operating time for trauma surgery has the potential to reduce complication rates. Since the treatment of fractures is sometimes performed after normal daytime operating hours, the consequence of performing operations under less than ideal conditions was studied. 148 consecutive patients with either a femoral (n=76) or tibial (n=72) shaft fracture treated with intramedullary nailing were included in this prospective study. Patients were divided into those treated during “daytime hours” from 6:00 am to 4:00 pm (DH group, n=78) and those treated “after hours” from 4:00 pm to 6:00 am (AH group, n=70). Compared to the DH surgery, the average operative time and radiation exposure was less for the AH-tibia group, and similar for the AH-femur group. Complications occurred more often AH for both tibial (41%) and femoral (29%) nailing than for DH surgery (tibia 18%, femur 11%). Three times as many patients treated AH (n=16) required removal of prominent hardware. The results indicate that nailing of femoral and tibial shaft fractures after hours was associated with increased complications, but not increased operative time or radiation exposure. The non-ideal conditions associated with after hour surgery (such as surgeon fatigue and personnel unfamiliar with the procedure) can be blamed for the increased incidence of complications, especially the increased rate of prominent hardware.

The authors concluded that increased daytime operating time for trauma surgery has the potential to reduce complication rates.

Paper No 351 The Incidence of Wrong-Site Surgery in Knee Arthroscopy

Daniel J Albright, MD W Jason McDaniel Jr, MD

The purpose of this study is to determine how often wrong-site knee arthroscopy occurs among surgeons performing knee arthroscopy in the United States. The

study hypothesis is that wrong-site knee arthroscopy is a relatively rare event considering the number of knee arthroscopies performed each year.

All 1,575 active U. S. members of the Arthroscopy Association of North America were polled with a confidential survey. 1,391 surgeons (83%) responded. Those who responded averaged 48.2 years of age and had been in practice for an average of 15.8 years. 108 (8.5%) surgeons had performed a wrong-site knee arthroscopy at least once during their career. In two cases, the patient was felt to have suffered a permanent disability. There was a monetary settlement in 58 cases. The incidence of wrong-site knee arthroscopy in this group is approximately 1 per 26,581 cases. When the surgeons who had performed wrong-site knee arthroscopy were compared with those who had not, the wrong-site surgeons were older, had been in practice longer and had a higher yearly case volume of knee arthroscopy cases. These findings are highly statistically significant. 95% of the surgeons who responded were aware of the American Academy of Orthopaedic Surgeons Sign Your Site Wrong-Site Surgery Prevention Program.

The authors concluded that knee arthroscopy wrong-site surgery is a relatively rare event considering the total number of knee arthroscopies performed per year in the United States. The risk of performing a knee arthroscopy wrong-site surgery increases with age, years of practice, and yearly case volume.

Paper No 401 The Effect of Donor Age on the Mechanical Properties of Soft Tissue Allografts

Charles J Gatt, Jr MD Jason Savage, BS Bryon Lauer, BS Anton Steiner, BS Stuart Archer, MD

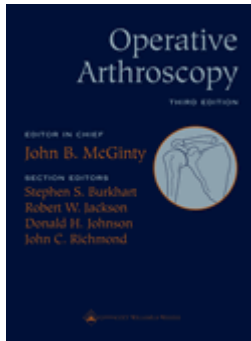
Approximately 20% of ACL reconstructions in the U.S. are performed with allogenic tissue. The most commonly requested allograft is a patellar tendon. However, the supply of this tissue does not meet the demand. Consequently, ACL reconstructions using soft tissue allografts are being performed more

frequently. The hypothesis of this study was donor age does not affect the mechanical properties of soft tissue grafts used for ACL reconstruction.

Semitendinosis, gracilis, tibialis anterior, tibialis posterior and peroneus longus tendons were used for this study. Allograft specimens that had been rejected for clinical use but had been prepared following industry standards were obtained from an AATB certified tissue bank. The donor age ranged from 15-87 years. Each specimen was mounted on an Instron Mechanical Tester using cryoclamps. A 50N load was applied to each specimen, length, width and thickness were recorded. In addition, each specimen was sized using cylinders. Specimens were preconditioned and pulled to failure at a rate of 100mm/min. For each tendon type, the data was analyzed as a function of donor age separated by decade. The results showed that the average ultimate load for each tendon was: Gracilis 624N, Semitendinosis 951N, Tibialis Anterior 1579N, Tibialis Posterior 1941N and Peroneus Longus 1531N. One-way ANOVA testing did not demonstrate significant differences in ultimate load between age groups. In addition, one-way ANOVA testing did not demonstrate significant differences between age groups for tendon stiffness and Youngs Modulus. Some surgeons express concerns regarding allograft donor age and tendon type. Our data suggest that the tendons tested in this study or combinations thereof, have acceptable or even superior mechanical properties, when compared to patellar tendon, for ligament reconstruction surgery. In addition, donor age does not affect the mechanical properties of the tendons tested in this study.

The authors concluded that donor age has no effect on the mechanical properties of soft tissue allografts that are used for knee ligament reconstructions.

McGinty's Operative Arthroscopy Textbook



Extensively revised and updated for its Third Edition, **Operative Arthroscopy** remains the most comprehensive and authoritative reference in this rapidly advancing specialty. World-renowned experts describe the latest instrumentation and techniques and detail proven minimally invasive procedures for the knee, shoulder, elbow, wrist, hip, foot, ankle, and spine.

This edition gives experienced and training orthopaedic surgeons the state-of-the-art information they need to stay current and increase the coverage in their practice. New topics include meniscus repair with implantable devices, arthroscopic knot tying, post-traumatic and post-surgical shoulder stiffness, the thrower's shoulder, thermal capsulorrhaphy, fractures about the shoulder, arthroscopic radial head resection, arthroscopic management of the stiff elbow, elbow arthroscopy in the throwing athlete, hip arthroscopy in the athlete, arthroscopic-assisted management of ankle fractures, osteochondral autografts of the talus, and subtalar arthroscopy.

Hundreds of quality illustrations--including full-color arthroscopic views, surgical exposures, and line drawings--guide surgeons in technique and clinical decision-making. The text offers stepwise intraoperative instruction on commonly performed procedures, including cruciate ligament reconstruction, meniscal repair, stabilization of the shoulder, treatment of rotator cuff tears, and meniscal and chondral allografts.

This edition includes a free DVD of surgical procedures, with over 200 minutes of select authors' video to demonstrate key surgical points and techniques.

See full description at:

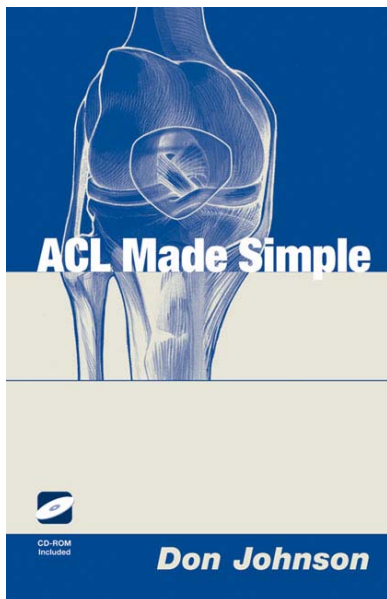
<http://www.lww.com/product/?0-7817-3265-4>

ACL Made Simple

All you wanted to know about the ACL is now available in this book and CD from Springer. See the web site at:

[http://www.springer-](http://www.springer-ny.com/detail.tpl?cart=10722687896533522&isbn=0387401466)

[ny.com/detail.tpl?cart=10722687896533522&isbn=0387401466](http://www.springer-ny.com/detail.tpl?cart=10722687896533522&isbn=0387401466)



ACL Made Simple is a book/CD-ROM combination that educates orthopedic residents, athletic trainers, and various medical support staff about the fundamentals of ACL injuries. The content is both thorough and practical. Readers benefit from comprehensive discussions of diagnosis, partial tears, treatment options, operative techniques, and complications. This definitive guide also outlines a six-month rehabilitation program complete with goals, stages, and exercises. More than 150 photographs and diagrams illuminate key concepts. The CD-ROM is keyed to each chapter and compliments the text, making it easy for users to locate sections of particular interest. The numerous graphics and narrated video clips are dynamic

tools that highlight topics including the mechanism of injury, physical examination, and surgical techniques.

Table of Contents

Contents: Introduction, Diagnosis, Partial Tears of the ACL, Treatment Options, Graft Selection, Hamstring Graft Reconstruction Techniques, Patellar Tendon Graft Technique, Rehabilitation, Complications, Results, references

Upcoming Meetings

- **ISAKOS biennial Meeting** Hollywood Florida, April 1-7, 2005
Contact www.isakos.com
- **Residents and Fellows Arthroscopy Conference** Palm Island FL. April 22-23, 2005. Contact Karen Sousa at Linvatec - ksousa@linvatec.com
- **AANA Spring Meeting** – Vancouver BC, Canada May 12-15, 2005
Contact www.aana.org
- **San Diego Shoulder Course** - June 22-25, 2005
Contact www.shoulder.com
- **AANA Fall Course** Dec 1-4, 2005 JW Marriott Desert Ridge Resort & Spa. Phoenix, Arizona. Contact AANA www.aana.org