



**ABSTRACTS PRESENTED AT THE
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IN OFFICE PERCUTANEOUS TRIGGER DIGIT RELEASE, Sanjay Desai, M.D., OrthoVirginia, Richmond, Virginia.

Trigger digit release is one of the most common procedures undertaken by hand surgeons. Most are done in a hospital or an ASC setting. 130 patients underwent percutaneous trigger digit release in an office setting with local anesthetic. All but 3 patients had successful resolution of their symptoms, the failures required open release and tenosynovectomy. No neurovascular injuries or infections were noted. Indications for the procedure were failure to respond to 2 steroid injections. The digit had to be actively triggering while in the office. Contraindications include lack of active triggering, previous surgery in the area of the A1 pulley and an overly anxious patient. 10% of the patients required a follow-up steroid injection for persistent tenosynovial inflammation. Patient satisfaction was high. Cost savings compared to a facility make this technique useful.

SUPERIOR CAPSULAR RECONSTRUCTION: EARLY RESULTS, Tally E. Lassiter, Jr., M.D., Columbia-Bassett Medical School, Cooperstown, New York.

Superior capsular reconstruction is a new and promising technique, first pioneered by Dr. Teruhisha Mihata in 2007. It is a surgical technique to treat massive rotator cuff tears, particularly in patients too young for reverse shoulder arthroplasty. It is an arthroscopic technique of reconstructing the superior capsule of the shoulder joint with fascia lata or dermal patch providing a superior restraint to humeral head migration, so that the remainder of the rotator cuff can function to lift the arm. Early results show markedly improved range of motion and diminished pain, and are very promising. However, limited numbers of patients have greater than 2 year follow-up. Nonetheless, superior capsule reconstruction offers a therapeutic bridge for massive rotator cuff tear treatment providing time before attempting reverse shoulder arthroplasty as a more long lasting treatment.

DYSFUNCTION OF THE LATERAL BRANCH OF THE SUPERFICIAL RADIAL NERVE ASSOCIATED WITH RADIAL COLLATERAL LIGAMENT INJURIES OF THE THUMB METACARPOPHALANGEAL JOINT (A CASE SERIES WITH CADAVERIC DISSECTIONS), Sravan C. Dhulipala, M.D., Gary M. Lourie, M.D., The Hand and Upper Extremity Center of Georgia, Atlanta, Georgia.

Purpose: Present a case series of seven athletes who were treated with a previously undescribed injury pattern combining dysfunction of the lateral branch of the Superficial Radial Nerve (SRN) associated with radial collateral ligament (RCL) injury involving the thumb metacarpophalangeal joint (MP). Diagnostic workup along with surgical treatment is presented.

Methods: Seven high level athletes were treated with RCL injury of the thumb MP joint. Their presentation, assessment of ligament injury and grade of severity is presented. In addition progressive neuropraxic injury involving the lateral branch of the SRN is assessed. Preoperative anesthetic block of the lateral branch was carried out in each patient to confirm its neuropraxic dysfunction. Cadaveric dissections were performed in seven specimens to document the course of the nerve, its proximity to the ligament and the capsule of the MP joint, along with its innervation of the joint. Surgical treatment directed

at the ligament, the nerve, and consistently found osteophytes were assessed.

Results: All seven patients exhibited injury to the RCL of the thumb MP joint occurring in athletic activity which resulted in ulnar stress to the RCL. In all but two (5 patients) grade of severity was I to II with a definite endpoint on stability testing present. In all seven patients an anesthetic block proximal to the MP joint in the distribution of the lateral branch of the SRN relieved the discomfort confirming a component of neuritic pain. Seven cadaveric dissections confirmed the course of this nerve and its innervation of the MP capsule. Successful relief of pain and stability of the joint was obtained with surgical repair of the RCL, neurolysis and wrapping of the nerve with a tissue engineered allograft product, and when necessary, excision of a post-traumatic osteophyte.

Conclusion: The combination of RCL injury involving the thumb MP joint associated with neuropraxic stretch injury of the lateral branch of the SRN, along with compression by a post-traumatic osteophyte has not been documented previous. The fact that the vast majority (5/7), over 70% % of the cases were partial ligament injuries may make detection of this injury pattern more difficult for the clinician. The knowledge of the pertinent neuroanatomy and the findings in this case series should better serve to shed light on its existence and successful treatment.

PROXIMAL INGROWTH COATING DECREASES RISK OF LOOSENING FOLLOWING UNCEMENTED SHOULDER ARTHROPLASTY USING MINI-STEM HUMERAL COMPONENTS AND LESSER TUBEROSITY OSTEOTOMY, Michael Morwood, M.D., Duke University Medical Center, Durham, North Carolina

Background: Mini-stem humeral component (MSHC) use during total shoulder arthroplasty (TSA) provides bone preservation and ease of revision. MSHCs rely solely on proximal metaphyseal fixation; some early reports demonstrate an unacceptably high rate of early loosening. To our knowledge, no study analyzing the effect of proximal porous coating on MSHCs has been performed.

Methods: Retrospective review of consecutive patients who underwent anatomic TSA utilizing coated or uncoated MSHCs with minimum 2-year follow-up. Post-operative radiographs were assessed for risk of or frank stem loosening, subsidence, and presence of radiolucencies. Range of motion (ROM), outcomes scores (VAS pain, ASES, and SANE), and any complications were noted.

Results: 68 shoulders with mean follow-up of 27.3 months (range 24-50 months) were analyzed. 34 had proximal coating, and 34 were uncoated. In the coated group, no stems loosened, 1 (2.9%) subsided, and 7 (20.6%) developed radiolucencies. In the uncoated group, 1 stem (2.9%) became aseptically loose (requiring revision after 26 months), 7 (20.6%) were judged at risk of loosening (2 due to subsidence), and 15 (44.1%) developed radiolucencies. There was also an increased risk of proximal medial humeral radiolucencies among uncoated MSHCs. There were no significant differences in final ROM or outcomes scores.

Conclusion: MSHC use is appropriate for TSA, achieving desired pain relief and functional improvement. Overall, component loosening appears uncommon at early follow-up; however, uncoated stems appear to be at greater risk of loosening and developing radiolucencies. Selecting a MSHC with proximal porous coating may decrease the risk of implant-related complications.

Level of Evidence: Level III, Retrospective Cohort Study

THE EDUCATION OF SURGICAL RESIDENTS AND FELLOWS VS PATIENTS CENTERED OUTCOMES, W. Jerry Oakes, M.D., The University of Alabama, Birmingham, Alabama.

Everyone would agree, that hands-on surgical training requires the active participation of learners in the performance of surgical procedures. Ever patient desires the best clinical outcome. These two viewpoints run counter to each other. With simple surgical procedures, active resident participation can easily be accepted by all. As the complexity and risk of procedures increases, the willingness of patients to

consent to be operated upon by a trainee diminishes and some procedures have irreversible steps that cannot be undone by the attending surgeon if an undesirable result occurs. Discussing these issues with the patient in the informed consent process can be ripe with generalization that knowingly misleads the patients.

LONG-TERM OUTCOME OF STEP-CUT ULNAR SHORTENING OSTEOTOMY FOR ULNAR

IMPACTION SYNDROME, Loukia K. Papatheodorou, M.D., Dean G. Sotereanos, M.D., University of Pittsburgh; Orthopaedic Specialists - UPMC, Pittsburgh, Pennsylvania.

A retrospective review was performed of 164 consecutive patients who underwent step-cut ulnar-shortening osteotomy for ulnar impaction syndrome. The goal of the osteotomy was to reduce ulnar variance by a few millimeters (mean overall shortening of 2.5 mm). Fixation was performed with a volar plate and a lag screw. This study demonstrates that the step-cut ulnar shortening osteotomy is a safe and reliable technique resulting in rapid healing and an early return to functional activities. The volar placement of the plate diminishes the need for implant removal. It is a simple and less expensive technique for ulnar shortening without the use of special instrumentation in patients with ulnar impaction syndrome.

TREATMENT OF SYMPTOMATIC DISTAL INTERPHALANGEAL JOINT ARTHRITIS WITH OPEN

CHEILECTOMY, Loukia K. Papatheodorou, M.D., Dean G. Sotereanos, M.D., University of Pittsburgh; Orthopaedic Specialists - UPMC, Pittsburgh, Pennsylvania.

Seventy-eight patients with symptomatic distal interphalangeal (DIP) joint osteoarthritis were retrospectively reviewed. Open cheilectomy and debridement of the DIP joint was performed in all patients. The DIP joint was immobilized for 4 weeks postoperatively. At a mean final follow-up of 37 months (24-62 months), there was a significant improvement in mean VAS pain scores and DIP flexion contracture. No postoperative infections or other complication were noted. No reoperations were performed during the follow-up period. In patients with symptomatic DIP joint osteoarthritis, open DIP cheilectomy is a safe and effective alternative procedure to arthrodesis. This surgical technique reduces pain while preserving DIP joint motion.

PREDICTING OUTCOMES OF ADULT SPINAL SURGERY- A NEW POINT SYSTEM, David C. Urquia, M.D., Augusta Orthopaedics, Augusta, Maine.

A prospective review of outcomes from a Central Maine spine practice, that explores the question if surgical outcomes can be predicted, using preoperative data.

A national on-line survey of Piedmont Society membership was also performed, summarizing opinions on outcomes analysis.

We defined 23 preoperative medical and psycho-social spine co-morbidities, then assigned relative point value to each. Elective surgery was performed if total points less than 8 (eight). We also defined 14 single-elimination criteria for more extreme preoperative co-morbidities.

Using 2016 data, 82 elective spinal surgeries were performed that met criteria (average point total of 4.2). 19 cases were cancelled based on high co-morbidities (average point total of 10.2)

The overall 30-day re-operation/readmission rate was 2.5%

We concluded that this prospective screening method has the potential to reduce re-operation and readmission rates, and minimized the need for formal preoperative medical clearance. More data collection will be necessary from functional and patient-satisfaction surveys to prove predictive value for this screening point system.