

standard radiocarpal and midcarpal arthroscopy, the proximal carpal row was removed with the arthroscopic bur, with care being taken to protect the articular cartilage surfaces of the proximal capitate, and lunate fossa. A soft bandage was applied, which was removed two days postoperatively and early range of motion was instituted. Wrist range of motion, grip strength, and postoperative pain were compared to previous data on open PRCs.

Results: Eighteen patients underwent the procedure, with fourteen patients available for greater than one year follow-up. There were no postoperative complications, and no instances of radiocarpal subluxation despite immediate mobilization of the wrist. There was a significant learning curve, but the procedure was consistently performed in under one hour in the latter half of the study. Patients had less postoperative pain, faster recovery of motion, and faster return to activity compared to the open procedure. Final range of motion and grip strength were nearly identical to the open procedure.

Conclusion: All-arthroscopic Proximal Row Carpectomy appears to be a safe, effective, and reliable procedure for a variety of wrist conditions, and allows for rapid mobilization of the wrist compared to the open procedure. Results appear to be as good as or better than similar patients treated with an open Proximal Row Carpectomy, with less postoperative pain and faster return to activity. Final range of motion and strength is equivalent to the open procedure. There is a significant learning curve, but the procedure may be appropriate for the experienced wrist arthroscopist.

Endoscopic Carpal Tunnel Release: Retrospective Comparison Between Two Endoscopic Techniques (SS-28) *Jorge Luis Orbay, M.D., Igor R. Indriago, M.D.*

Introduction: Carpal tunnel syndrome is the most common peripheral nerve compression disorder. Endoscopic release (ECTR) is a well accepted minimally invasive treatment method that hastens recovery while offering an acceptable complication rate. It can be performed through various techniques using a proximal, a distal or two portals. We have significant experience with the two portal (Chow) and with the one proximal portal (Agee) ECTR methods. This study compares our results and complications with these two methods.

Methods: We reviewed the medical records of all patients treated by the senior author at our center for isolated unilateral CTS using ECTR between January 1991 and August 2009. Bilateral ECTR cases and those presenting other associated surgical procedures were excluded. During this period we used both the two portal

and the proximal portal techniques. The two portal technique (787 cases) was used mainly between 1991 and 1995 while the proximal portal technique (2359 cases) was used more frequently after 1995. All patients were treated as outpatients and under local or regional anesthesia. Postoperative management included a plaster slab short-arm post-operative dressing used for an average of six days, immediate finger motion and early functional use of the hand. Patients were seen at six days, one month and three months after surgery. Final functional results were assessed by measuring digital ROM, assessing for persistence of night paresthesia and for the presence of pain, tingling or numbness.

Results: Of 3,146 hands that fit the inclusion criteria, we were able to follow 91% of them for at least 12 weeks. The mean time for return to work was 10 days. Immediate relief of night paresthesia was reported in 98% patients presenting with this symptom while 67% of patients with constant numbness had complete resolution at final follow-up. Complications include significant pillar pain (7 two portal and 13 proximal portal), transient median neuropathy (2 cases with two portal technique), digital neuropathy (3 two portal 4 proximal portal), laceration of the superficial arch (10 two portal and 4 proximal portal) reflex sympathetic dystrophy (2 two portal and 4 proximal portal).

Conclusion: Both methods provide early return to function and adequate relief of symptoms. The complication rate is acceptably low when the procedure is performed by one surgeon. The two portal technique presented increased incidence of median neuropathy and superficial arch laceration.

Identification of Acetabular Labral Pathology in Asymptomatic Volunteers Using Optimized Noncontrast Magnetic Resonance Imaging (SS-29) *Matthew R. Schmitz, M.D., Warren Kadrmas, M.D.*

Introduction: The objective of this study was to use an optimized noncontrast MRI protocol to identify hip labral pathology, including labral tears and paralabral cysts.

Methods: In this prospective prevalence study, 42 hips in asymptomatic patients with an average of 34 years old (range 27-43) were imaged with optimized noncontrast MRI scans. Two fellowship trained musculoskeletal radiologists interpreted the scans at two different points in time and commented on the presence of labral pathology including paralabral cysts. The results were analyzed for both interobserver and intraobserver reliability.

Results: Acetabular paralabral cysts were identified in 11/42 (26.2%) and 9/42 (21.4%) of the hips by the two respective radiologists with an interobserver reliability of 90.5% (kappa value of 0.74) and intraobserver reliability of 95.2% (kappa value of 0.87). In addition, acetabular labral tears were identified in 35/42 (83.3%) and 33/42 (78.5%) of the hips with an interobserver reliability of 90.5% (kappa value of 0.70) and intraobserver reliability of 95.2% (kappa value of 0.83).

Conclusion: Acetabular labral tears, as a potential source of hip pain, have received a great deal of attention in recent literature. The gold standard for identifying acetabular labral tears is hip arthroscopy, but recent advances in optimized noncontrast MRI have proven effectiveness in identifying intra-articular hip pathology without the invasive nature of hip arthroscopy or gadolinium enhanced arthrography. Acetabular paralabral cysts have also been shown to be associated with underlying labral tears, similar to meniscal cysts in the knee or labral cysts in the shoulder. We report the previously undescribed prevalence of acetabular paralabral cysts and prevalence of labral tears in a young, asymptomatic population. This emphasizes the importance of correlating patient symptoms and using diagnostic, and potentially therapeutic, intra-articular injections when evaluating patients with hip pain and radiographic abnormalities as defined by MRI criteria.

Arthroscopic Management of Femoroacetabular Impingement with Two Year Follow-up (SS-30) *J. W. Thomas Byrd, M.D., Kay S. Jones, M.S.N., R.N.*

Introduction: Femoroacetabular impingement is a recognized etiology of intra-articular pathology and subsequent osteoarthritis in young adults. Arthroscopy has been useful in the management of hip pathology and has been proposed as a method of correcting the underlying impingement. The purpose of this study is to report the results of our early experience in the arthroscopic management of femoroacetabular impingement with two year follow up.

Methods: All patients undergoing hip arthroscopy are prospectively assessed with a modified Harris hip score at 3, 12, 24, 60 and 120 months. 752 patients have undergone arthroscopic correction of FAI. This report consists of a cohort of the first 100 such patients with two-year follow up.

Results: There was 100% follow up at two years. The average age was 34 years (range 13-76 years) with 67 males and 33 females. There were 63 cam, 18 pincer and 19 combined lesions. Among cam types, the average age was 33 years with a male/female ratio of 2.8:1 and

among pincer types, the average age was 38 years with a male/female ratio of 1.2:1. There were 97 acetabular articular lesions (53 Grade IV, 39 Grade III, 5 Grade I), 23 femoral lesions (11 Grade IV, 11 Grade III, 1 Grade II) and 92 labral tears. The median improvement was 20 points (preop 65; postop 85) with 79 good and excellent results. Those with associated femoral lesions did at least as well with median 23-point improvement. Eighteen patients underwent microfracture with a median improvement of 21 points (preop 64; postop 85). None required conversion to total hip arthroplasty, but six underwent a subsequent arthroscopic procedure. There were three complications with a transient neuropraxia of the pudendal nerve and the lateral femoral cutaneous nerve, each of which resolved uneventfully, and one mild case of heterotopic ossification.

Conclusion: Arthroscopic management of femoroacetabular impingement appears to be an appropriate option for many cases. These results are at least comparable to published reports of open methods with the advantages of a less invasive approach.

Open Surgical Dislocation vs. Arthroscopic Approach to Femoroacetabular Impingement: A Prospective Comparison (SS-31) *Benjamin G. Domb, M.D., Itamar Boster, M.D., Thomas W. Smith, B.S.*

Introduction: Surgical treatment of femoroacetabular impingement (FAI) of the hip has been pioneered over the last decade, initially using an open surgical dislocation approach. In recent years, there has been an accelerating transition toward arthroscopic treatment, which may offer shorter recovery time and less post-operative pain. Advocates of the open approach have suggested that superior access and precision of bone work may still offer improved long-term results over the arthroscopic approach. To our knowledge, no study has prospectively compared the results of open and arthroscopic treatment. The purpose of this study was to prospectively compare surgical outcomes for open surgical dislocation vs. arthroscopic approaches to FAI.

Methods: All surgical dislocations performed for FAI over a six month period (group I) were compared to a matched control group of hip arthroscopies (group 2). All procedures were performed for labral tear in the setting of FAI, and all included labral refixation, as well as either osteoplasty, acetabuloplasty, or both. All procedures, both open and arthroscopic, were performed by a single surgeon. All patients were asked to complete four subjective questionnaires preoperatively, and at three, six, and 12 months post-operatively.