

Methods: A retrospective review of 117 consecutive 'all inside' arthroscopic meniscal repairs using a single suture technique from 1993 to 2006 by a single surgeon identified 53 isolated repairs and 64 in combination with ACL reconstruction. All tears were 2 cm or greater. Age averaged 30 years (range: 13-65). Outcomes of age, gender, and medial vs. lateral sidedness were also studied. Meniscal repair failure was defined as recurrence of pain at the repair site.

Results: At an average follow-up of 38 months, there were 9 failures (7.7%). The average time to failure was 24 months (range: 3-108), with 6 requiring surgical intervention. Three failed in the ACL group (4.6%) and 6 in the non ACL group (12.9%), with no statistical difference between the two groups ($p=0.12$). Medial tears were more prevalent than lateral tears, 74% versus 26%. All repair failures were medial. Age greater than 40 was not significant for failure ($p=0.26$). Side and gender were also not statistically significant ($p=0.22$ and $p=0.23$, respectively).

Conclusions: In this study, age, gender, 'sidedness', were not significant factors for meniscal repair failure. The overall rate of successful healing of meniscal repairs was 92%. Lateral meniscal repairs fared better than medial meniscal repairs. Age and concomitant anterior cruciate ligament reconstruction had no impact on outcome.

Bony Fixation of the Torn Meniscus – A New 'All-Inside' Surgical Technique (Preliminary Results) (SS-29). *Henry T. Goitz, MD, Christopher Ninh, MD*

Summary: This paper discusses the bony fixation of anterior horn meniscal tears that allow for an expedited post op rehabilitative course. This technique never before described.

Purpose: Multiple surgical techniques have been described to repair torn meniscus, all of which require soft tissue healing and thereby delay an early post operative return to sport/activity as outlined in most rehabilitative protocols. Herein, we describe an 'all inside' meniscal repair technique that allows immediate bony fixation of the torn meniscus and immediacy of weight bearing, allowing and an 'accelerated' rehabilitation post op.

Methods: One hundred seventeen consecutive patients who underwent 'all inside' meniscal repairs by a single surgeon were retrospectively reviewed. Of these, 7 exhibited unstable anterior horn tears that were arthroscopically repaired using an 'all inside' suture anchor repair technique. Average age of 42 (range: 16-66).

Results: All preoperative meniscal symptoms resolved. One patient with a preoperative knee contracture required a post operative manipulation/arthroscopic de-

bridement; this 'second-look' revealed a completely healed meniscus. All patients were happy with their outcomes and would have this procedure performed again.

Conclusions: This new, arthroscopic repair technique employs suture anchors for anterior horn meniscal tears. All patients are allowed immediate weight bearing and a progressive 'accelerated' rehab program.

Arthroscopic-Assisted Surgery for Tibial Plateau Fractures (SS-30). *Yi-Sheng Chan, MD/Associate Professor, Chung-Hsun Chang, MD, Chih-Hao Chiu, MD, Yang-Pin Lo, MD, Alvin Chao-Yu Chen, MD, Li-Jen Yuan, MD, Kuo-Yao Hsu, MD*

Summary: Arthroscopically assisted surgery for tibial plateau fractures gives better results and it provides the precise diagnosis with adequate treatment at one-stage surgery. Undoubtedly the superior clinical results also depend upon the experienced and skillful arthroscopic technique.

Purpose: The purpose of this study is to evaluate the clinical and radiological outcome of the patients with tibial plateau fractures treated by arthroscopic-assisted surgeries after 2- to 10-year follow-up.

Methods: Fifty-four patients with tibial plateau fractures treated by arthroscopically assisted surgeries were enrolled in the prospective study. According to Schatzker's classification, the fractures types were: 1 type I (2%), 21 type II (39%), 4 type 3 (7%) and 10 type 4 (19%), 8 type 5 (15%), 10 type 6 (19%). Average age at operation was 48 years (range, 12-88 years). Mean follow up period was 87 months (range 28-128 months). The clinical and radiological outcomes were determined according to Rasmussen's system.

Results: Mean postoperative Rasmussen score was 28.4 (range, 19-30). Overall 44 (81%) patients were rated as excellent, 8 (15%) as good, 1 (2%) as fair and 1 (2%) as poor. Secondary osteoarthritis appeared in none of injured knees but 10 (19%) traumatic osteoarthritis were reported. There were no complications directly associated with arthroscopy in any of the 54 patients. There was 89% excellent and good results radiologically (33% excellent and 56% good). All of the 54 fractures were united. Preoperative fracture depression average 13.7 mm (range, 3-80 mm). Fracture depression at the final follow average 2 mm (range, 0 -9 mm).

Conclusions: Arthroscopically assisted surgery for tibial plateau fractures gives better results and it provides the precise diagnosis with adequate treatment at one-stage surgery. Undoubtedly the superior clinical results

also depend upon the experienced and skillful arthroscopic technique.

Tissue Loss at Meniscectomy Correlates with Clinical Symptoms, Function and Activity Levels (SS-31). *William G. Rodkey, DVM, Karen Briggs, MPH, J. Richard Steadman, MD*

Summary: The purpose of this study was to determine, prospectively, the amount of tissue loss at time of partial medial meniscectomy and then correlate extent of meniscus loss with clinical symptoms, function, and activity levels 2 years following the index meniscectomy. There is a significant correlation between the amount of meniscus tissue removed at meniscectomy and symptoms, function, and activity 2 years after surgery. This study confirms the importance of preserving as much meniscus tissue as possible at the time of meniscus repair or meniscectomy as well as the potential positive benefits of regrowing or replacing lost meniscus tissue.

Purpose: Loss of meniscus tissue frequently leads to decreased clinical function and activity levels. However, no report has quantified the amount of meniscus tissue removed at meniscectomy and correlated the meniscus tissue loss with clinical symptoms, function, and activity. The purpose of this study was to determine, prospectively, the amount of tissue loss at time of partial medial meniscectomy and then correlate extent of meniscus loss with clinical symptoms, function, and activity levels 2 years following the index meniscectomy.

Methods: In a randomized controlled investigational device clinical trial (Level of Evidence I), 149 patients 18 to 60 years old underwent partial medial meniscectomy and served as controls. There were 81 acute (no prior meniscus surgery) and 68 chronic (1 to 3 prior partial meniscectomies on the involved meniscus) patients. At index surgery, size of the meniscus defect was measured using specially designed instruments, and percent of meniscus loss was calculated based on actual measurements. Patients were followed clinically for a minimum of 2 years following meniscectomy. At each follow-up, every patient completed questionnaires including Lysholm and Tegner scores to assess function and activity. Amount of meniscus tissue at index surgery was correlated with the individual domains of the Lysholm scale. Tegner index was calculated to determine the amount of lost activity regained 2 years after surgical intervention.

Results: Two-year data were available for 127 patients (85% follow-up). There was a significant correlation between the amount of meniscus tissue remaining following the index meniscectomy and 2-year Lysholm

domains of squatting ($r=0.281$, $p=0.001$), stair-climbing ($r=0.251$, $p=0.004$), and swelling ($r=0.261$, $p=0.003$). In particular, it is noteworthy that patients who had >50% of their meniscus remaining had significantly better function than patients who had 50% meniscus remaining averaged 52% ($p=0.017$); hence, a greater amount of meniscus tissue remaining allowed patients to regain significantly more of their lost activity.

Conclusions: There is a significant correlation between the amount of meniscus tissue removed at meniscectomy and symptoms, function, and activity 2 years after surgery. This study confirms the importance of preserving as much meniscus tissue as possible at the time of meniscus repair or meniscectomy as well as the potential positive benefits of regrowing or replacing lost meniscus tissue in order to minimize clinical symptoms that may be suggestive of early degenerative changes.

Arthroscopic Partial Meniscectomy with Repair of the Peripheral Tear for Symptomatic Discoid Lateral Meniscus in Children: Results of Minimum 2 Years Follow-up (SS-32). *Jin Hwan Ahn, MD, Sang Hak Lee, MD, Jae Chul Yoo, MD, Hae Chan Ha, MD*

Summary: The purpose of this study is to report the clinical results and the technical aspects of arthroscopic partial meniscectomy in conjunction with the repair of the peripheral tear for symptomatic discoid lateral meniscus in children. We retrospectively studied 24 patients (25 knees) had a peripheral tear that underwent partial central meniscectomy in conjunction with suture repair. All patients showed good clinical results with no reoperation after an average follow-up time of 59 months. We believe that the our technical guide in arthroscopic meniscal repair techniques, arthroscopic partial meniscectomy in conjunction with the repair of the peripheral tear can be effective method in patients with a symptomatic discoid lateral meniscus in children.

Purpose: A discoid lateral meniscus causes symptoms mainly in children and adolescents, usually as a result of a tear of the anterior or posterior segments. If the tears of a discoid meniscus at peripheral rim were not treated, the remnant meniscus can be unstable. The purpose of this study is to report the clinical results and the technical aspects of arthroscopic partial meniscectomy in conjunction with the repair of the peripheral tear for symptomatic discoid lateral meniscus in children.

Methods: From March 1997 to July 2004, the senior author performed arthroscopic surgery for patients with a symptomatic discoid lateral meniscus on 70 patients (74 knees) in children. Of these patients, 25 knees were observed a peripheral tear in the vascular zone of a