negative imaging study does not exclude important intraarticular pathology that can be identified and treated arthroscopically.

DATA

Objective: In this study, we compared indirect magnetic resonance arthrography results with hip arthroscopy findings to assess the diagnostic correlation this imaging technique in evaluation acetabular labral tears and cartilage lesion of the hip.

Materials and Methods: One hundred thirty consecutive patients (131 hips) with a clinical diagnosis of acetabular labral tear were assessed using indirect magnetic resonance arthrography and had hip arthroscopy after failing to improve with nonoperative treatment. Indirect magnetic resonance arthrography was performed on a 3.0-T magnet. Patients received IV gadolinium contrast material and exercised for 15 minutes. All arthroscopic procedures were performed by one orthopedic surgeon (MSP) who specialized in treating hip disorder.

Results: Indirect magnetic resonance arthrography detected 110 of 131 (95%) acetabular labral tears with 13 false positive studies (9.9%). Articular cartilage findings diagnosed by indirect magnetic resonance arthrography were confirmed by arthroscopy in 56 hips (62.7%). With respect to labral pathology, indirect magnetic resonance arthrography showed a sensitivity of 96%, specificity of 42%, positive predictive value of 89%, and negative predictive value 37%. With respect to articular cartilage pathology, indirect magnetic resonance arthrography had a sensitivity of 26%, specificity of 93%, positive predictive value 75%, and negative predictive value 63%.

Conclusion: Although indirect magnetic resonance arthrography is an effective mean of hip evaluation for labral tears, it has limited sensitivity to evaluate articular cartilage lesion. A negative imaging study does not exclude important intraarticular pathology that can be identified and treated arthroscopically.

Paper 13: Cartilage Injury Caused By Hip Scope

Victor Manuel Ilizaliturri Jr., MD, Mexico, Presenting Author
Javier Camacho-Galindo, MD, Mexico
Humberto Gonzalez Ugalde, Mexico
Alberto N. Evia Ramirez, MD, Mexico · Instituto Nacional de Rehabilitación Mexico
Mexico City, DF, Mexico

SUMMARY

100 patients followed for 2 years. Instrument produced articular injury in hip arthroscopy was studied. 68 had partial thickness cartilage injury more common at the lateral femoral head. This seems to have no impact in results.

DATA

Introduction: Cartilage injury produced by instruments during hip arthroscopy is mentioned as a concern in the literature. The incidence and significance of this situation is unknown.

The purpose of this study is to identify the frequency of instrument produced intraarticular injury in the hip joint documenting the size, shape and location of the lesions and evaluating their clinical significance.

Methods: A consecutive series of patients that underwent hip arthroscopy between January 2007 and December 2008 was followed for 2 years after the procedure prospectively. Preoperative and last follow-up WOMAC scores and standard radiographs were used. No trauma cases or cases with existing full thickness cartilage lesions were included. No patients with previous surgery in the same hip or with bilateral hip pathology were included. After hip arthroscopy was completed a full diagnostic round was performed and instrument produced articular lesions were documented looking at their shape size and location using the geographic zone method. Lesions to the labrum were also recorded as piercing or not during entry.

Results: 51 female and 49 male patients were included in the study, average age was 31.4 (SD 5.4 range 16-41). Diagnosis: 66 Mixed femoroacetabular impingement (FAI), 18 cam FAI, 9 Pincer FAI, 6 Internal snapping hip, 1 synovitis.

Two different types of instrument produced lesions were identified and described as lines (needle marks) or troughs (cannula marks). Overall; 68 presented cartilage lesions, on the acetabulum there were 14 stripe lesions and no troughs (7 zone 3, 2 zone 6, 1 zone 4). On the head there were 54 stripes (19 zone 3, 18 zone 2, 3 zone 4) and 14 troughs (13 zone 3, 1 zone 2). Only one labrum was pierced at entry and no full thickness cartilage lesions were observed.

95% of the patients in the series were available for follow-up at 2 years. Overall and within groups there was significant improvement in WOMAC scale at 2 yr-follow-up ($p<0.001$) using the Wilcoxon T test. When we stratified analysis between type of lesion and WOMAC at last follow-up, we did not find significant differences ($p=0.08$).

Discussion: Our results indicate that partial thickness instrument produced cartilage injury is very common in hip arthroscopy. However this does not seem to have an impact in the results at short term follow-up.

100 patients followed for 2 years. Instrument produced articular injury in hip arthroscopy was studied. 68 had

partial thickness cartilage injury more common at the lateral femoral head. This seems to have no impact in results.

Paper 14: Duration Of Fluoroscopic Exposure In Hip Arthroscopy *Farshad Adib, MD, USA, Presenting Author*

Andrew Wolff, MD, USA
Skye Donovan, PT, PhD, USA
Derek Hidehiko Ochiai, MD, USA · Nirschl Orthopedic Center
Arlington, VA, USA

SUMMARY

Education about the different risks of radiation exposure during fluoroscopy is a crucial step in the training of hip arthroscopy.

DATA

Introduction: Fluoroscopy is an important tool to facilitate hip arthroscopy, from initial joint access to real time assessment of bony decompression. Surgeons typically underestimate the amount of radiation exposure during fluoroscopic-guided hip arthroscopy.

Methods: 100 patients were enrolled. The two senior surgeons both average greater than 150 hip arthroscopic procedures per year. Fluoroscopic time was obtained from the fluoroscope as the measurement of radiation exposure. We also described how to use fluoroscope in the following steps:

1. Bony anatomy: AP view for Pincer and CAM. Lat. View for the CAM
2. Amount of traction for appropriate hip distraction
3. Antero-lateral portal placement
4. Head- neck offset recreation: CAM correction
5. Pincer correction(absence of crossover sign)
6. Correct placement of bur
7. Dynamic assessment of the impingement
8. Anchor placement(as needed)
9. Peri-trochantric arthroscopy.

Results: The mean total fluoroscopy time was 57.19 ±11.3 seconds/hip arthroscopy. The mean of fluoroscopic image shots in each procedure was 66.1± 12.0.

Conclusion: Understanding the amount of fluoroscopy used in hip arthroscopy will allow hip arthroscopists to better limit the amount of radiation exposure to themselves, the OR staff and to patients. This study supports that the fluoroscopic time for experienced hip arthroscopist was less than the reportable time (between epidural injection and kyphoplasty). Considering the learning curve of hip arthroscopy in the inexperienced surgeon the time of the procedure and the amount of fluoroscopy used may be increased thereby increasing their exposure particularly in unprotected areas such as eyes and hands. Therefore education about the risks of radiation is an important step in training hip arthroscopists.

Summary Understanding the amount of fluoroscopy used in hip arthroscopy will allow hip arthroscopists to better limit the amount of radiation exposure. This study supports that the fluoroscopic time for experienced hip arthroscopist was less than the reportable time (between epidural injection and kyphoplasty). Considering the learning curve of hip arthroscopy, with inexperienced surgeon the time of the procedure and the amount of fluoroscopy used may be increased thereby increasing their exposure particularly in unprotected areas such as eyes and hands. Therefore education about the risks of radiation is an important step in training hip arthroscopists.

Paper 15: Risk of Sciatic Nerve Traction Injury During Hip Arthroscopy – Is it the Amount or Duration? An Intra-Operative Nerve Monitoring Study. *James M. Glick, MD, USA, Presenting Author*

Jessica J. M. Telleria, BS, USA
John N. Gardi, PhD, D. ABNM, F. ASNM, USA
Marc R. Safran, MD, USA · Stanford
Redwood City, CA, USA

SUMMARY

Maximum traction weight was significantly associated with risk of sciatic nerve traction-related dysfunction in patients undergoing hip arthroscopy with intra-operative peripheral nerve monitoring; total traction time, age and gender were not risk factors.

DATA

Introduction: The reported incidence of nerve injury during hip arthroscopy ranges from 0 to 27.3% and may be under-reported. We prospectively studied nerve injury using intra-operative nerve monitoring to identify the incidence, pattern and pre-disposing factors for nerve injury during hip arthroscopy.

Methods: During 1998–2001, motor (MEP) and/or somatosensory (SSEP) evoked potentials were recorded in 76 patients undergoing hip arthroscopy in the lateral position. Changes in the posterior tibial and common peroneal nerves were evaluated to assess the effects of traction amount and duration on nerve dysfunction. Sixteen subjects were excluded due to incomplete data. Nerve dysfunction was defined as a 50% reduction in amplitude of SSEPs or MEPs or a 10% increase in