

2nd Annual Emerging Techniques in Orthopedics Meeting—Las Vegas



Arthroscopic Tibial Eminence Fractures Update

The key to diagnosing tibial eminence is a high index of suspicion, according to Carl W. Nissen, MD, Elite Sports Medicine, Connecticut Children's Medical Center. "If you don't think about it, you will probably not see it in many instances."

While these fractures are uncommon, accounting for less than 2% of fractures, when appropriately diagnosed and treated early, tibial eminence fractures do very well, he explained. Considerations when dealing with these fractures include that intrasubstance injury can occur with bony injury and secondary injuries need to be diagnosed early, Nissen added.

Diagnosis of tibial eminence fractures includes lateral x-ray, computed tomography (CT) scans, and magnetic resonance imaging (MRI). "For me, MRIs in these instances are very important, because you can see problems that go along with eminence fractures that are important to be able to treat, and know about them ahead of time, before you go into the operating room," Nissen explained.

Classification system for these fractures include Type I (< 3 mm displacement), Type 2 (intact posterior hinge), and Type 3 (avulsed fragment). However, Nissen determines whether a patient should be treated using a more simplified classification system, where Type A fractures are fractures that you can live with and the patient will do fine, while Type B fractures, are bad, and have to be fixed. "Although the McKeever classifications I, II, and III, are something that you need to know about, I will tell you that almost all of these eminence fractures that have any displacement, end up

in the operating room," Nissen stated.

Two surgical options for the treatment of tibial eminence fractures include sutures and open reduction internal fixation (ORIF). Some of the advantages associated with sutures are the strength of fixation and purchase on small fragments, however, they also require drilling across physis, involve a more complex procedure, and can lead to physeal tethering. ORIF is simple, works well for large fragments, and provides strength of fixation. Some of its disadvantages include potential hardware removal, purchase on fragment, and physis violation

"Using sutures is the method I have turned to almost exclusively," Nissen explains. "I feel much more comfortable as an arthroscopic surgeon, being able to place sutures appropriately at the base of the ACL, drilling 2 tunnels, then tying it down, and holding the fragment down. With the high strength sutures that are available to us, we can really get some fantastic tension on the ACL as well as complete reduction of the fracture fragment." ■

Daily Highlights

Thursday, December 6th, 2012

It was an exciting time on day 1 of Emerging Techniques in Orthopedics. Our first day was knee day. We tried to put together a faculty that was both from here, the United States, and Internationally. We invited some members from Austria and we found that they do things just a little bit different than us.

I found that inviting former presidents of various organizations, whether it'd be American Orthopaedic Society for Sports Medicine, Arthroscopy Association of North America, or the American Academy of Orthopedic Surgeons, brought together a faculty that really started to debate pro and con on many issues that you face in your operating room and in the office.

One of the highlights of the day was to learn new procedures specifically medial patellar femoral ligament reconstruction arthroscopically from an international point of view. And we had a special section this year on pediatric and adolescent anterior cruciate ligament (ACL) reconstruction where we brought together all the top names to figure out how really do we help our young patients who are ACL deficient.

On day 1 of knee, we were also honored that Russell Warren, MD, back. He was one of our honored faculty in conjunction with John Bergfeld, MD. The two of them sat down and helped us really sort what we are doing with our patients from many procedures of the knee and how do we really help our patients.

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Conference Chair

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What Is the Key to Success in RCR Failures?

While rotator cuff repair (RCR) failure have many causes, proper indications are the key to successful revision surgery, Larry D. Field, MD, Mississippi Sports Medicine, Orthopedic Centers, Jackson, at the 2nd Annual ETO meeting. “The failed rotator cuff repair patient is challenging to treat,” he stated. “Whether it is your own patient who failed, or the patient has been referred to you.”

Field emphasizes the importance of defining failure and finding ways to best treat the patient. Diagnostic and technical errors, as well as surgical complications, failure to heal, and traumatic failure, are some of the different types of rotator cuff failure. “The reality is that RCR failure is often multifactorial,” he added.

Taking a closer look at diagnostic errors, Field explained that an incorrect diagnosis (eg, cervical radiculopathy, adhesive capsulitis) will decrease the success of operative outcome, while recognizing the right patient and the right diagnosis will improve these outcomes. In addition, identifying the presence of other conditions such as radiculopathy or adhesive capsulitis will help prevent an incomplete diagnosis.

Technical errors also contribute to RCR failures, including inadequate rotator cuff immobilization, high tension repair, and poor fixation. Surgical complications include infection, deltoid detachment, stiffness, and neurological injury. Failure to heal is another consideration for rotator cuff repair, with factors including poor vascularity, advanced age, and larger tears, have been associated with decreased healing rate, he noted.

“With that said, successful revision of previously failed rotator cuff repairs is possible,” Fields stated. “The indications really are the key to helping us carry out these operations successfully, and a thorough evaluation is necessary both with a very extensive history and physical review of pertinent medical records, advanced imaging are very important in these situations, and while arthroscopy can be challenging, it does offer us an unparalleled opportunity to evaluate and assess these tears.”



Daily Highlights

Friday, December 7th, 2012

Day 2 of ETO was shoulder day. We had invited Gilles Walch, MD, Department of Shoulder Surgery, Orthopédique Santy, Hospital Privé Jean Mermoz, Lyon, France to help us, as well as James Esch, MD, Assistant Clinical Professor, Department of Orthopaedics, University of California, San Diego School of Medicine. It was a spectacular day where we argued back-and-forth in a debate format what exactly are we doing, is it helping our patients, and what procedure can we do to help them to get better to use their shoulder. We were excited on day 2 to have the return of Richard Hawkins, MD, he was able to moderate and to help us really sort out how do we treat the biceps, how do we treat how many specific shoulder issues.

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Five tips and tricks Field shared, included correcting motion loss, thorough debridement of the shoulder, mobilizing the rotator cuff extensively, to not forget about the subscapularis, and to address concomitant pathology.

In correcting motion loss, capsular release is an important component; it can improve rotator cuff release and lower the humeral head, Field stated. For debridement, adequate visualization is needed as well as removal of sutures and adhesions. Aggressive mobilization can be achieved by maximizing footprint coverage, increasing fixation security, and medialize the rotator cuff on footprint as necessary.

“Don’t forget about the subscapularitis,” Field emphasized. “I think that subscapularis tears are either underappreciated or underrecognized, or potentially ignored, in primary indexed rotator cuff surgery, but they do contribute to failure.” Repairing subscapularis tears improves symptoms and increase healing of supra/infra tears. It is also important to address concomitant pathology, Field concluded. Bicep pathology is common in rotator cuff tears and the AC joint is often overlooked or ignored. ■



Tips for Rim Trimming & Labral Fixation

There are no definitive studies, clinical or basic science indicating that labral tears lead to arthritis, only observational data, according to Victor M. Ilizaliturri Jr, MD, Mexico City. “Labral damage may compromise the labral biomechanics of the joints and may lead to joint failure,” Ilizaliturri noted, adding that labral tears may be secondary to other pathology, including femoroacetabular impingement and trauma.

There is no intrinsic blood supply in labral tears, he continued, and most of the blood to the acetabular rim comes from the capsule and synovium. “The highest vascularity grade of the labrum is on its capsular side at the bony attachment,” Ilizaliturri explained.

He continued his discussion by citing the first study done evaluating labral repair, which was conducted in 2007 by Philippon and colleagues. The study was done in an ovine model, using single suture anchor repair and loop technique;

all of the tears healed at 12 weeks. The researchers observed incomplete healing, fibrovascular scar from the capsule, new bone formed at the rim, and there was cleft at the repair site. “We understand that labral repairs seem to normalize forces going across the joint and may restore biomechanics,” Ilizaliturri stated.

Technique he mentioned included labral take-down technique as well as over-the-



Highlights

Saturday, December 8th, 2012

Saturday was open shoulder day for Emerging Techniques. We learned from Gilles Walch, MD, and his experience in dealing with the reverse total shoulder. His 17-year history was summarized in 20 minutes and really will guide most of us on how and when we use the reverse total shoulder.

Saturday was also an exciting time for us to learn about practice management, the do's and don'ts in this challenging time of healthcare crisis.

One of the newest features of Saturday afternoon in Emerging Techniques in Orthopedics was the labs. We sent our participants to 5 different laboratory locations to learn knee, shoulder—whether I'd be arthroscopic, open total shoulder or reverse shoulder, all-inside ACL, all-inside PCL, arthroscopic repairs of the rotator cuff and even endoscopic cubital tunnel releases.

It's a great thanks to all the exhibitors and vendors that made this possible.

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top pincer remodeling. The labral take-down technique was introduced by Philippon and involves giving access to the rim by detaching the labrum, rim trimming, and reattachment of the labrum, he explained.

“Labral take-down has good results and it provides excellent visualization of the rim through the separation of the labrum,” Ilizaliturri concluded. “But it is possible to elevate the capsule from the rim above the capsular side of the labrum. It is possible to expose and remodel a pincer deformity without separating the labrum.” ■

