NEWSLETTER OF THE AMERICAN ORTHOPAEDIC SOCIETY FOR SPORTS MEDICINE

Sports Medicine UPDATE

JULY/AUGUST 2008

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Hall of Fame Inductees

2008 Annual Meeting Recap

ACL INJURIES IN YOUNG ATHLETES

AOSSM

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SPORTS MEDICINE UPDATE is a bimonthly publication of the American Orthopaedic Society for Sports Medicine (AOSSM). AOSSM–a world leader in sports medicine education, research, communication, and fellowship–is a national organization of orthopaedic sports medicine specialists, including national and international sports medicine leaders. AOSSM works closely with many other sports medicine specialists and clinicians, including family physicians, emergency physicians, pediatricians, athletic trainers, and physical therapists, to improve the identification, prevention, treatment, and rehabilitation of sports injuries.

This newsletter is also available on the Society's Web site at www.sportsmed.org.

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IT IS A PRIVILEGE to begin my tenure as AOSSM President on the high note that was established by Bernie Bach, MD, AOSSM Past President, and Brian Cole, MD, Program Chair, during our 2008 Annual Meeting in Orlando.

If our meeting's success was judged on attendance alone, it would have been one of our best ever. However, the meeting also showcased the leading researchers and educators that make sports medicine a constructive force in orthopaedics. The Society is indebted to Drs. Bach and Cole for continuing to set the bar high, and I am honored to have the opportunity to push the profession even further.

Research is one tradition that continues to put AOSSM in the forefront, and this year we are embarking on two particular projects of immediate and long-term interest to our members. The first is a *Post-Joint Injury Osteoarthritis Conference* that will be partially supported by the National Institutes of Health and Industry. Organized by Constance R. Chu, MD, Edward M. Wojtys, MD, and Scott A Rodeo, MD, the conference will bring together leading researchers to examine the most promising areas of osteoarthritis research. The second exciting project is the launch of a focus on ligament and tendon repair and regeneration. Early in 2009, the Society will convene leading researchers to identify a specific area of research and then subsequently fund up to $250,000 in grant(s) during a competitive award process. As with the previous "three-year" research cycles that focused on non-contact ACL injury and articular cartilage repair, we anticipate that these efforts will be a catalyst for additional funding at the national level.

We continue our strong line-up of educational activities, beginning with the *AOSSM & AAOS Review Course for Subspecialty Certification in Sports Medicine.* The course, being held August 1–3, is co-chaired by Mark Miller, MD, and Jim Carpenter, MD. Later in August, we will hold our third hockey meeting with the NHL team physicians. *The Puck Stops Here: Comprehensive Management of Hockey Injuries* is co-chaired by Scott Gillogly, MD, and Ben Shaffer, MD, and will prove to be another winning combination. Finally, we are releasing the new *Self-Assessment and Board Review, Version 4* this summer. Marlene DeMaio, MD, has helped develop another important exam tool that not only creates a new set of questions, but also a new set of features that makes this online version a remarkable educational tool.

The AOSSM Medical Publishing Group also is moving forward with an impressive expansion of activities. *The American Journal of Sports Medicine* now has the second highest impact factor of all of orthopaedic journals, surpassed only by *Osteoarthritis Cartilage.* In addition, thanks to a generous grant from Arthrex, every orthopaedic resident in the United States, in every year of their training, will be receiving each issue of *AJSM,* providing them with a solid foundation for the future. Through the commitment of editor, Bruce Reider, MD, and the contributions of the orthopaedic sports medicine research community, *AJSM* is making important additions to the broader profession.

Finally, I would like to call your attention to the fact that AOSSM and the Arthroscopy Association of North America (AANA) are collaborating to re-institute a Sports Medicine Fellowship Match. Equally significant, 83 programs, representing 205 fellowship positions, have signed letters of intent to participate in the Match. This is a remarkable example of shared commitment, and I can think of no better example for how our profession can overcome significant challenges and achieve success if we persevere and work together. Our profession owes Chris Harner, MD, and Bernie Bach, MD, a huge debt of gratitude for making the Match a reality again.

As I begin my year as president, I invite you to join me in using our recent successes as inspiration to continue the AOSSM tradition of excellence and collaboration.

FREDDIE H. FU, MD

ANTERIOR CRUCIATE LIGAMENT INJURY IN SKELETALLY IMMATURE ATHLETE

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The number of skeletally immature athletes competing in demanding sports is dramatically rising, and these young athletes pursue increasing levels of performance with intense training. As a result, anterior cruciate ligament (ACL) injuries in this population have become more common but are extremely challenging to treat, due to the poor prognosis of non-operative treatment and the risk of growth disturbance following operative treatment. Non-operative treatment has traditionally

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included rehabilitation, bracing, and activity modification that avoids cutting and pivoting sports. Proponents of non-operative treatment maintain that growth plate disturbance is difficult to manage, that surgical techniques avoiding the growth plate are non-anatomic and doomed to fail, and that delaying reconstruction until skeletal maturity is a better alternative. However, the majority of patients treated non-operatively will continue to have episodes of instability that may result in further injury to secondary restraints, meniscal tearing, and chondral injuries. These injuries have major implications in the young athlete's knee health and longevity.[9,14]

The treatment for the young athlete, therefore remains controversial, although recent studies support early operative intervention prior to skeletal maturity. Various factors influence the decision-making and include:

- Degree of skeletal maturity
- Sport-specific demands
- Patient and family expectations
- Surgeon comfort level and skill

In skeletally immature patients, adult reconstruction techniques require drilling across the physes that contribute to the greatest growth to the lower extremities. In addition, further injury to the physes is possible since they are located in the exact positions for traditional graft fixation. New techniques in ACL reconstruction within an open physis are designed to reduce the risk of growth disturbances and minimize the degree of skeletal maturity influences. Management of these injuries requires familiarity with multiple methods to determine maturity, the basic science of physeal injury, and the surgical techniques to minimize risk of growth disturbance.

Presentation

History

The presentation of an ACL injury in a young athlete is similar to that in the adult with non-contact injuries predominating. An audible pop is often heard at the time of injury with an ensuing rapid onset of a hemarthrosis. Forty-seven percent of pre-adolescents and 65 percent of adolescents with a knee effusion have been reported to have an ACL injury.[28] Following the initial injury, some athletes will continue to engage in cutting and pivoting sports with or without seeking medical attention. They will have repeated episodes of instability and unfortunately develop meniscal and chondral injuries and also stretch secondary restraints. Unfortunately, it is not unusual to evaluate a young athlete who reports repeated episodes of instability and then finally presents with inability to extend their knee due to having sustained a bucket-handle meniscal tear.

Obtaining chronologic age, height, family member height, determination of growth spurt initiation, changes in shoe size, and onset of menses for females are important clues of skeletal maturity.

Examination

The examination of a young athlete is more difficult than in an adult. Children in pain are more often anxious and unable to relax. It is important to palpate the physis to exclude the possibility of a physeal injury. The presence of a tense effusion that developed rapidly after the injury strongly suggests an ACL tear. Active and passive ranges of motion are then tested. Varus and valgus laxity is checked in full extension and 30 degrees of flexion. Dynamic tests such as the Lachman and pivot shift tests are then performed and are quite reliable. It is important to identify concomitant injuries, such as meniscal tears, by palpating the joint lines and performing McMurray's maneuver. Physiologic age can be determined on examination by observing pigmented hair in the axillae, legs, and thighs.

Imaging

X-rays of the knee are always obtained to assess the presence and degree of physeal maturation. Furthermore, X-rays are important to rule out tibial eminence fractures or physeal fractures. If examination demonstrates tenderness over the physis and X-rays are negative, then a MRI should be obtained to assess physeal injury. MRI is also indicated to asses for ACL tear, cartilage injury, meniscal tear, or osteochondral fracture. (See Figure 1)

Maturity Assessment

Assessing maturity status is key to evaluating ACL issues in young athletes. On average, skeletal growth is complete for males at age 16 and for females at age 14; however, this can vary widely. The adolescent growth spurt begins at an average age of 12.5 years in boys and 10.5 years in girls, with peak growth velocity one year later. Therefore, chronologic age is important, but not sufficient. Physiologic age is more important and can be classified according to Tanner staging. The appearance of pigmented,

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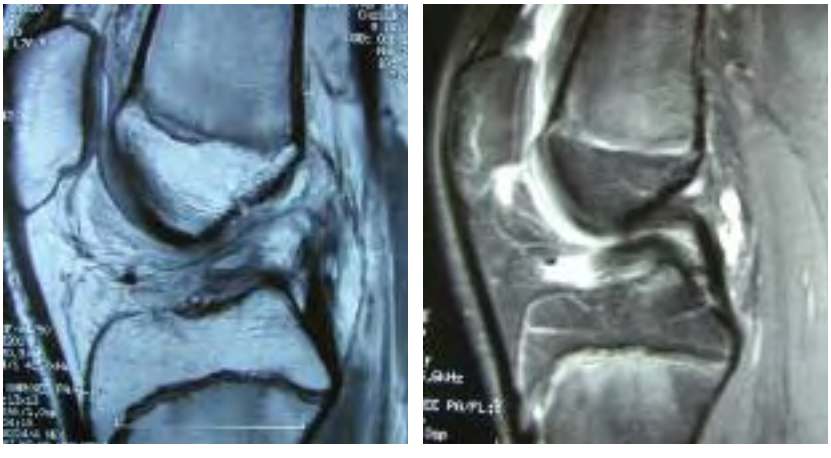

Figure 1. Sagittal view MRI indicating complete ACL tear and also double bundle PCL sign, indicating bucket handle medial meniscus tear in a patient with open physis.

curly hair in the axillae and pubic areas occurs after the adolescent growth spurt. For females, menarche indicates maturity since it is usually preceded by the growth spurt that slows significantly after menarche. This suggests that a girl who has been having regular menses has little growth remaining. In athletic girls, however, menarche may be delayed and so this may not be a good predictor of female maturity. Skeletal maturity is the most important factor. Bone age can be determined with an AP radiograph of the patient's hand and wrist which is compared to the Greulich-Pyle atlas.[10] (See Figure 2)

Figure 2. AP X-ray of wrist and hand for assessment of skeletal bone age.

Natural History of ACL-Deficient Knee

ACL injuries in the young athlete present several unique challenges when compared to adults due to the natural history following the injury. While many reports are compromised by poor study design, small number of patients, mixed ages and genders, and lack of control groups, the natural history following ACL injury is generally considered to be poor.[27] Young athletes are unable to successfully modify their activity levels because of constant exposure to sports, inability to appreciate the long-term consequences of their knee condition, and the significance society and the individual places on athletics. When engaged in high-demand sports with ACL deficiency, the young athlete is at risk of experiencing episodes of instability and incurring progressive damage to the meniscus, articular cartilage, and secondary restraints which may have life-long consequences to the knee and the patient.

In a study of 130 consecutive patients with ACL deficiency who were undergoing ligament reconstruction, patients whose injuries had occurred more than two years prior to the surgery had a six-fold greater cartilage loss and damage compared with those whose injuries had occurred within two months prior to surgery.[22] The group of patients with meniscal loss whose initial ACL injury occurred more than two years before surgery, exhibited 18 times the amount of cartilage loss or damage, as did the group that had no meniscal loss and whose injury occurred less than one month before surgery. Shelbourne et al determined the influence of meniscus and articular cartilage status observed at the time of ACL reconstruction on the knee five to 15 years after surgery.[25] Patients with both menisci present had significantly better KT-1,000 arthrometer scores than did patients with any part of the medial or both menisci removed. Partial or total medial or lateral meniscectomy and damaged articular cartilage significantly lowered their subjective scores. Patients with both menisci present, and normal articular cartilage had a mean subjective total score of 94. Ninety-seven percent had normal or near-normal radiographic ratings on a weight-bearing 45 degree posteroanterior (PA) radiograph. The overall International Knee Documentation Committee (IKDC) rating was normal or nearly normal for 87 percent of patients with both menisci present, 70 percent with partial or total lateral meniscectomies, 63 percent with partial or total medial meniscectomies, and 60 percent with both menisci removed. The authors concluded that the long-term subjective and objective results of an ACL reconstruction are critically affected by the status of the menisci and articular surface.

Risk of Physeal Injury During Surgery[12]

Animal studies suggest that small tunnels drilled across the physis that are filled with soft tissue grafts cause minimal risk of growth disturbance. Campbell et al demonstrated that single large holes drilled through the physis result in maximal growth disturbances in long bone growth and that insertion of cortical bone across the physis caused complete growth arrest.[6] Conversely, a physeal defect of the same diameter without cortical bone graft, resulted in only minor growth disturbance. Similarly, Stadelmaier and co-workers performed ACL reconstructions on skeletally immature dogs, placing fascia lata autograft through the transphyseal tunnels.[26] Physeal bars formed when the tunnels were left empty, but did not form when the tunnels were filled with soft-tissue graft. In addition, no growth abnormalities occurred in these dogs. Janarv et al confirmed that transphyseally placed soft tissue grafts prevent bone bridge formation and may prevent growth disturbance.[13] They also concluded that physeal injuries involving seven to nine percent of the cross-sectional area of the physeal plate are large enough to cause a growth disturbance. A tendon graft placed through the tunnel will prevent the growth disturbance. Another study demonstrated that physeal drilling is safer when performed centrally and perpendicular to the physis.[6] In a dog model, excessive tension (80N) across the physis led to angular deformities.[7] In summary, animal studies support reconstruction techniques that use small diameter, vertical tunnels with soft tissue grafts fixed without excessive tension.

Several clinical reports have documented growth complications related to ACL surgery in skeletally immature patients. Koman and Sanders reported a skeletally immature patient who developed a valgus deformity after ACL reconstruction with the graft fixed on the femur with a cannulated screw that crossed the distal femoral physis.[18] Lipscomb and Anderson reported one case of limb-length discrepancy associ-

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ated with staple fixation of both the tibial and femoral physes.[19] Kocher et al identified 15 cases of growth disturbance through a survey of the Herodicus Society and the ACL Study Group regarding complications involving pediatric ACL reconstructions.[16] There were eight cases of distal femoral valgus deformity that developed in association with a bony bar: three were associated with hardware crossing the distal femoral physis, four with patellar tendon bone plugs crossing the distal femoral physis, and one with over-the-top graft placement. There were two cases of limb-length discrepancy. One case involved 2.5 cm of shortening and valgus deformity of the distal femur associated with a large 12 mm femoral tunnel and a patellar tendon bone plug. The other case involved 3 cm of overgrowth in an 11-year-old girl who underwent transphyseal reconstruction with a hamstring graft placed in 6 mm tunnels. There were three cases of genu recurvatum associated with arrest of the tibial tubercle apophysis from either a staple placed across the physis or suture in the tibial periosteum. In summary, clinical cases of growth disturbance are most associated with bone plugs and/or fixation devices placed across the physes.

Current Surgical Techniques

Physeal Sparing Techniques

Physis sparing techniques[13] have been designed to minimize the risk of growth and/or angular deformity that may occur if standard tunnels are drilled across a wide-open physis. Reconstruction techniques that do not drill across the physes have been either extra-articular or intra-articular. Extra-articular, non-anatomic reconstructions in some studies have yielded poor results.[9,21] Physeal-sparing intra-articular reconstructions have been described with hamstring autografts that remained attached distally and passed anteriorly over the tibia to the over-the-top position on the femur.[5,12,23] These reports described no growth abnormalities, although in one study, the graft deteriorated.[5] Most children returned to their preinjury levels, but the more active children tended to have poorer knee function. Guzzanti et al performed a technique that left the hamstring graft attached to the tibia, used a transepiphyseal tibial tunnel, and looped the graft over a staple placed at the femoral attachment of the ACL.[11] The graft was then brought back through the tibial tunnel and sutured onto itself. Five patients in Tanner stage 1 were followed for four years and there were no cases of growth disturbance. KT-2000 measurements revealed an average side-to-side difference of 1.8mm.

Kocher et al[15] reported encouraging results with a physeal-sparing, combined intra-articular and extra-articular ACL reconstruction technique in prepubescent skeletally immature patients. (See Figure 3) Forty-four Tanner stage 1 or 2 children and adolescents (with a mean chronological age of 10.3 years) were treated with use of an autogenous iliotibial band graft. Two patients underwent a revision reconstruction for graft failure at 4.7 and 8.3 years post-operatively. In the remaining 42 patients, the mean IKDC subjective knee score was 96.7, and the mean Lysholm knee score was 95.7 points. The Lachman was normal for 23 patients, nearly normal for 18 patients, and abnormal for one patient. The pivot-shift was normal for 31 patients and nearly normal for 11 patients. No patients developed an angular deformity or a leg length discrepancy. The authors concluded that physeal sparing, combined with intra- and extra-articular ACL reconstruction in skeletally immature prepubescent children and adolescents, provides excellent functional outcome with a low revision rate and a minimal risk of growth disturbance.

Still, physeal-sparing techniques that deviate from non-anatomic placement of the graft raise concern of eventual failure since many studies in adults have attributed ACL reconstruction failures to non-anatomic positioning. Therefore, some of these procedures may be temporizing measures for extremely young patients. Anderson reported a more anatomic technique used in 12 patients (Tanner stages 1 through 3).[2] The femoral tunnel was drilled within the lateral condyle of the epiphysis using fluoroscopic guidance to avoid injury to the physis, and the tibial tunnel was placed within the tibial epiphysis proximal to the physis. A quadrupled hamstring graft was fixed with an endobutton (Smith-Nephew, Andover, MA) on the femur and over a post-distal to the physis on the tibia. There were no growth abnormalities, limb-length discrepancies, or KT-1000

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Figure 3. Extra-articular plus intra-articular physis sparing reconstruction–Iliotibial band has been harvested in preparation of passing "over the top" of the femur through the intercondylar notch and posterior to the coronary ligament on the tibia.

differences, and the IKDC scores and objective ratings were excellent.

Physeal-Respecting Techniques

The partial transphyseal technique is a hybrid of the physeal-sparing and adult-type reconstructive procedures. In addition, smaller drill holes placed in a more vertical manner are used to minimize growth plate damage from drilling. Soft tissue grafts are used with fixation that does not cross the physes. Lipscomb and Anderson reported their series of ACL reconstructions in 24 skeletally immature patients using a partial transphyseal procedure.[19] The femoral tunnel was placed at the anatomic ACL origin, but the tunnel was drilled 90 degrees to the sagittal plane and exited out the femoral epiphysis on the lateral condyle, thereby avoiding the injury to the physis. After an average follow-up of 35 months, 20 of the 24 patients remained at the same activity level and had side-to-side difference on Lachman testing averaging 1.8mm. One operated leg was 2 cm shorter because of direct stapling of both the femoral and tibial physes during an open procedure. Andrews et al had similar success in partial transphyseal procedure on eight adolescents using a 7 mm fascia lata or Achilles allograft placed centrally across the tibial physis and to an over-the-top position on the femur.[3] At a five-year follow-up, there were no significant limb-length discrepancies. Fuchs et al performed ACL reconstruction using patellar tendon allografts on 10 skeletally immature patients with wide open physes that were followed for 40 months.[8] The bone plugs and interference screws were placed proximal to the distal femoral physis and distal to the proximal tibial physis. Only one of the 10 patients had abnormal function, and there were no growth disturbances.

Complete Transphyseal Technique

Aichroth et al reported on 47 transphyseal ACL reconstructions in 45 immature patients.[1] Hamstring autograft was used, with the graft looped over a stirrup for tibial fixation, as well as a screw anchor on the lateral side of the femur. There was no report of growth disturbance or evidence of physeal arrest. Kocher et al reported a transphyseal reconstruction technique in 61 knees in 59 pubescent, but skeletally immature adolescents with a mean chronological age of 14.7 years (range: 11.6 to 16.9 years).[17] Autogenous quadrupled hamstrings-tendon grafts were used with metaphyseal fixation. Follow-up was 3.6 years. Two patients (three percent) underwent revision ACL reconstruction because of graft failure. For the remaining 59 knees, the mean IKDC subjective knee score was 89.5 and the mean Lysholm knee score was 91.2. The Lachman was normal in 51 knees and nearly normal in eight. The pivot-shift was normal in 56 knees and nearly normal in three knees. No angular deformities or lower-extremity length discrepancies were observed. The authors concluded that transphyseal reconstruction of the ACL with the use of an autogenous quadrupled hamstring-tendon graft and metaphyseal fixation in skeletally immature pubescent adolescents, provides an excellent functional outcome with a low revision rate and a minimal risk of growth disturbance.

Adult Type Reconstructions

Complete transphyseal reconstruction is equivalent to conventional adult-type reconstruction. Traditionally, it has been reserved for skeletally mature adolescents who have completed their growth spurt.[20,24] Recently, some authors have reported complete transphyseal techniques in younger patients with significant growth remaining.[6,8] For patients near skeletal maturity, adult type reconstructions have been advocated. Aronowitz et al reported on 19 skeletally immature patients (ages 11 to 14 years) with midsubstance ACL tears who underwent reconstruction with

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Achilles tendon allograft through drill holes in the distal femoral and proximal tibial physes.[4] All knees were stable, with no leg-length or angular deformities, and with a mean Lysholm knee score of 97. The authors recommended this procedure for patients with a bone age of at least 14 years in whom there is minimal risk of growth abnormality from physeal injury.

Treatment Summary

Based on available knowledge and evidence, the following treatment strategy for young athletes with ACL tears has been generally adopted based on the amount of growth remaining. In prepubescent children with a large amount of growth remaining (Tanner stage 1 or 2), a trial of non-operative treatment consisting of rehabilitation, activity modification, avoidance of cutting and pivoting sports, and close monitoring for episodes of instability is prescribed. If the patient experiences instability episodes, the ACL reconstruction preference is a physeal-sparing combined intra-articular and extra-articular reconstruction with an autogenous iliotibial band to minimize growth disturbance. (See Figure 3) In pubescent adolescents (Tanner stage 3), preference is to perform a physeal-respecting technique with tunnels across both physes, using autologous hamstring graft, and fixation with suspension devices that do not cross the growth plate. (See Figures 4–7) In older adolescents approaching skeletal maturity with minimal growth remaining (Tanner stage 4), adult-type reconstruction of the ACL with any preferred graft choice and fixation method is acceptable. With minimal growth remaining, the consequences of an iatrogenic growth disturbance are minimal.

Conclusions

ACL injury in the young athlete remains challenging to patients, parents, and sports medicine care providers. The risks of developing meniscal and cartilage injuries that greatly impact long-term health of the knee must be weighed against the risk of growth disturbance associated with surgical reconstruction.

Figure 4. Soft tissue graft prepared with suspensory button fixation device.

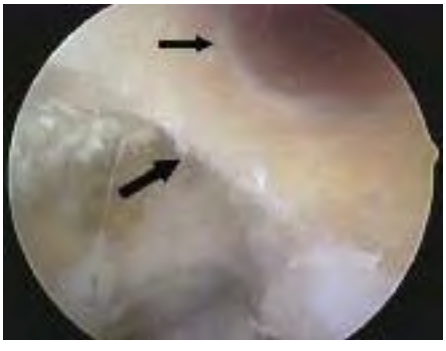

Figure 5. Arthroscopic view of the femoral tunnel drilled with open physis observed.

Figure 6. Arthroscopic view of a completed ACL reconstruction.

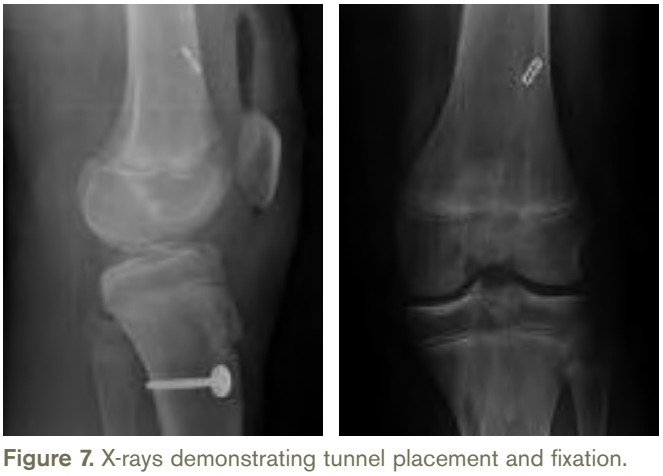

Figure 7. X-rays demonstrating tunnel placement and fixation.

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Orthopaedic Sports Medicine and Arthroscopy Fellowship Match

2009 Match Program for 2010–2011 Appointment Year

At the orthopaedic sports medicine fellowship director's meeting in San Francisco, directors expressed a clear and overwhelming desire to re-initiate a Match so that programs and applicants can have a fair, orderly way of making decisions regarding their training. The leadership of the Arthroscopy Association of North America (AANA) has joined the leadership of AOSSM to form and support a Match for all qualified sports medicine and arthroscopy fellowships. The following questions and answers provides critical information about the 2009 Match for fellowship appointment year 2010–2011.

Who is running the Match?

The Orthopaedic Sports Medicine Fellowship Match is sponsored by AOSSM and AANA and will be administered by the San Francisco Match, a wholly owned subsidiary of the American Academy of Ophthalmology, which has provided matching services for more than 50,000 residents and fellows since 1977. AOSSM is establishing a five person Fellowship Match Committee to administer and police the Match. This committee will be comprised of individuals not currently running a fellowship program.

Who may participate in the orthopaedic sports medicine fellowship Match?

All orthopaedic sports medicine fellowship programs that are accredited by the Accreditation Council for Graduate Medical Education (ACGME) or the Canadian Orthopaedic Association (COA) or who have formally applied to the ACGME for accreditation prior to August 15, 2008, can participate in the Match. In addition, non-accredited programs that are AANA recognized fellowships or those who have applied for recognition by August 15, 2008, can participate in the Match.

Currently, 79 accredited programs with 175 fellowship positions qualify for the Match. There are six, non-accredited AANA recognized fellowships with six positions that also qualify for the Match. Programs that are not accredited will be clearly identified to all Match participants since their fellows will be ineligible for ABOS subspecialty certification in orthopaedic sports medicine.

Can a participating program commit only some of its positions to the Match?

No. Those who want to participate in the Match must fully commit to the Match. Candidates who commit to the Match can only select their position through the

Continued on page 10

Fellowship Match — *continued from page 9*

Match. Exercising other options only undermines participation. The only exceptions are for positions that by definition do not qualify as a fellowship position under the Match agreement: 1) research fellowships that exceed the one year training period, and 2) international positions that are available only to non-US candidates and are so designated upon signing the Match agreement.

Are programs required to participate?

No. Each year, programs will have the option to participate. The AOSSM and AANA boards strongly encourage participation and will provide incentives for those who do participate. **Once committed, however, programs are required to participate in the program for the duration of the one-year term.**

What are the incentives and benefits of participating in the Match?

AOSSM believes participation in the Match is important for a thorough and fair selection of candidates/programs, and wants to ensure its success. AOSSM and AANA are providing the following benefits to encourage a large number of applicants and programs to participate:

- The Match will include a Centralized Application Service (CAS) that will allow candidates to complete one online application and have it distributed to any programs participating in the Match. Non-participating programs and applicants will not be able to use the CAS.
- AOSSM will pay the application fee for **each** fellowship applicant for the first 10 programs they apply to.
- AOSSM and AANA will publicize participating programs' names, contact information, and selected program information on the AOSSM and AANA Web sites, and in advertisements in *AJSM* and *Sports Medicine Update* so that applicants have ready knowledge of the number and quality of programs participating. **This publicity, including listing on the AOSSM and AANA Web sites, will not be available to programs that choose not to participate in the Match.**
- AOSSM will send a mailing to residents and residency directors further promoting the availability of the Match, its benefits, and the programs that are participating.
- AOSSM will limit eligibility for the Young Investigator Grant to participants in the Match.

Other incentives will be considered and provided, as needed.

Does the Match have disincentives?

Yes. Before programs can participate in the Match, they must sign a detailed contract with AOSSM obligating them to select their positions only through the Match. Failure to adhere to the commitment incurs the following penalties:

- A $7,500 fine
- Exclusion from participating in the Match for two Match cycles
- Exclusion from presenting at the AOSSM and AANA Annual Meetings and Specialty Day by program directors for two years and by other program faculty for one year.
- Exclusion from serving on the AOSSM and AANA Board and committees by program directors for two years and by program faculty for one year.

Note: The AOSSM and AANA remain strongly committed to blinding abstracts during the grading process, so "policing" of this provision will not be integrated into the grading process.

Will applicants be penalized if they withdraw from the Match or if they fail to accept a Matched position?

Yes. An applicant who registers with the Match cannot withdraw from the program without violating their commitment to the program. Applicants who do not follow through on their commitment:

- Forfeit their ability to become AOSSM Candidate Members or AANA Associate Members

Continued on page 11

MATCH DAY 09

04.15

- Disqualify themselves from receiving certain AOSSM grants
- Must reimburse AOSSM for each application submitted on their behalf through the CAS

When will the Match occur?

The Match timeframe has been consolidated from previous iterations to focus the interview and selection process and to limit the waiting period for applicants and programs. Following is the timeline that is being established for the Match:

July 15–August 15, 2008	Fellowship programs submit signed contracts to AOSSM
September 1, 2008	Programs complete their profile for the SF Match
October 1, 2008	Advertisements promoting participating programs are placed in *AJSM* and *SMU*
October 1, 2008	Applicants are permitted to sign up for the Match, complete the online application and submit them to programs of interests
January 1, 2009	Interviews begin
March 20, 2009	Rank order lists submitted by: ▪ Fellowship programs ▪ Applicants
April 15, 2009	Match Day

How can I make an informed decision about participating in the Match?

Given the uneven history under the former Match program, AOSSM is taking several steps to ensure the new program is fully developed and program directors are fully informed of how the program works and who intends to participate.

- A detailed program agreement outlines the obligations and responsibilities that program directors must perform before they can participate in the Match. It is based on the Match that was sponsored by the American Orthopaedic Foot and Ankle Society and is comprehensive.
- Prior to July 1, programs were requested to submit a non-binding letter of intent if they planned to participate in the Match. A listing of participating programs expecting to be in the Match, as well as the number of positions offered in the Match was also made available at the Fellowship Directors meeting at the AOSSM Annual Meeting on July 11, 2008.
- On July 15, the Society distributed to all programs the final match agreement, instructions for enrolling, and a listing of the 85 programs and 209 positions available from those institutions having signed "letters of intent."
- At the Fellowship Directors meeting on July 11, 2008, the AOSSM and AANA leadership and Match Committee presented the programs expected to participate and addressed questions or concerns presented by program directors. Participants were provided with information related to the universal orthopaedic sports medicine application, the CAS, the SF Match and other critical information related to implementation of the program.
- On August 15, the programs wanting to participate in the Match will sign the agreement and complete their profile online.

How much will it cost to participate in the Match?

The cost of the Match is minimal. Each program must submit $150 to be enrolled in the program. Applicants must pay $100 to register with the SF Match. AOSSM will pay their fee for the first 10 applications they submit to participating sports medicine fellowship programs. If residents decide to submit more that 10 applications, they will be assessed an additional fee by the SF Match's Centralized Application Service, ranging from $10 to $35 dollars depending on the number of applications they choose to submit.

AOSSM Research Grants Pre-Reviews Improve Funding Chances

In an effort to improve the quality and competitiveness of submissions, the AOSSM Research Committee will pre-review and critique applications for AOSSM Research Grants prior to the final application deadline. This pre-review is **strongly recommended** but not required. It is anticipated that by participating in the pre-review process, the applicant's chances for funding will improve. The pre-review will focus on:

- Significance of proposed research
- Scientific quality
- Statistical methods
- Realistic nature of goals
- Long-term value of results
- Pilot data

Use the online submitter for the pre-review. You must complete an online application by **August 15** in order to receive a pre-review. Visit the Research tab on **www.sportsmed.org** for more information.

SOCIETY NEWS

Help Select Future Instructional Courses

Do you have an idea for a new instructional course? AOSSM is currently accepting proposals for new courses for the 2009 Annual Meeting. You are encouraged to submit topics on team physician issues or other interactive new topics. Please visit **www.sportsmed.org** and click the 2009 Annual Meeting link for the form to submit your idea. **Deadline for submissions is August 31, 2008.**

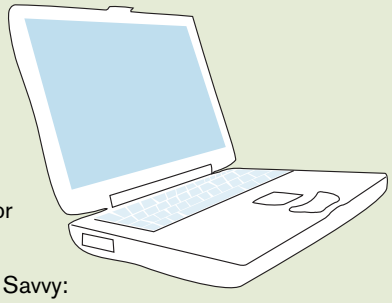
AJSM Requesting Applications for Systematic Review Competition

A $5,000 cash prize and publication in the *American Journal of Sports Medicine's (AJSM)* Current Concept Section will be awarded to the winner of this year's Systematic Review Competition. In order to submit an entry, the following rules apply:

- The systematic review must be pertinent to the field of orthopaedic sports medicine.
- The topic cannot have been published in *AJSM* or any other journal in part or total within the last three years.
- The topic cannot be scheduled for publication in 2008.
- The manuscript cannot be more than 30 double-spaced, typewritten pages, including citations, tables, and illustrations. References should be limited to fewer than 100.
- Authorship should be limited to five individuals, unless exceptional circumstances are present.
- If the manuscript is accepted by *AJSM* for publication, any requested revisions must be performed within 90 days.
- Authors of all entries must agree to publish in *AJSM*, if accepted. Authors of rejected manuscripts will be free to submit elsewhere.

For a list of published and pending topics or to submit your original topic for consideration prior to writing the manuscript, send an e-mail to Timothy Foster, MD, at currentconceptsajsm@msn.com. Due date for submissions is December 31, 2008. Manuscripts must be submitted online at http://ajsm-submit.highwire.org. Choose Current Concepts as the article type.

MEDIA WEBINAR Highlights AOSSM Members



AOSSM and the American Academy of Orthopaedics (AAOS) teamed up in late June for a media webinar entitled, "Sports Savvy: Battling Injuries and Infection in Athletes of All Ages." The webinar attracted 25 media outlets, including *Sports Illustrated,* ESPN, the magazine, *Health,* the Associated Press, *Newsweek, NY Times,* and *USA Today.* The online interactive webinar highlighted concussion prevention, elbow and shoulder injuries in youth, boomers and osteoarthritis, MRSA infections, and youth injury prevention tips. It also allowed journalists to ask questions of top experts in the field after each presentation. Thank you to Robin West, MD, Lyle Cain, MD, Brian Wolf, MD, Gary Dorshimer, MD, FAAP, and Mininder Kocher, MD, MPH, for their excellent presentations and participation.

Self-Assessment and Board Review Version 4 Released This Summer

AOSSM's new self-assessment and board review tool will be released this summer and will help members:

- Prepare for the sub-specialty exam in sports medicine given by the American Board of Orthopaedic Surgery
- Test knowledge in seven critical areas of sports medicine
- Identify strengths and weaknesses in clinical and practice management issues
- Review diagnostic, surgical, and other therapeutic measures and techniques used in sports medicine

Product features include:

- 125 NEW questions, images, and answers
- Citations and references that can be used as a study guide
- Reports that compare your results to peers
- Complete questions at your own pace
- Earn a maximum of 12 *AMA PRA Category 1 Credits*™

For more information and to reserve your copy visit: www.sportsmed.org.

Surgical Skills Course Highlights New Techniques

AOSSM's first multi-site surgical skills course occurred on Saturday, May 17 in four locations: Gulf Breeze, Florida, St. Louis, Missouri, Tucson, Arizona, and San Francisco, California. The new course format featured self-study DVD material and a one-day lab course allowing registrants a choice of location, equipment/instrumentation, and lab partner. Course registrants enjoyed the flexibility of new course design and maximized their lab time to pursue individual interests and educational objectives. AOSSM has received excellent feedback, including 90 percent of attendees saying they would attend a course like this in the future.

Attendees in Tucson, San Francisco, and St. Louis test their surgical skills.

MRI Course Helps Improve Orthopaedic Case Management

In early May, AOSSM members and radiologists from around the country travelled to San Antonio, Texas to attend the MRI Arthroscopy Correlation course co-chaired by Drs. Mark D. Miller and Marc R. Safran. This exciting case-based, predictive model course provided attendees with a unique perspective for nurturing better communication between radiologists and orthopaedists, while improving orthopaedic case management. Attendees utilized the Audience Response System to facilitate learning and evaluate audience diagnoses. Pre-test and post-test analyses of the course demonstrated that important concepts were learned.

ARE YOU MISSING THE AOSSM E-NEWS?

Did you know that you could be missing out on important updates and deadline information from AOSSM? Our new monthly e-newsletter may be skipping your inbox and going into the trash due to the spam filters involved in detecting good e-mail from broadcast e-mail.

To ensure you receive AOSSM messages, make sure that the sportsmed.org and aossm.org domains are on your e-mail systems' whitelist. A whitelist includes e-mail addresses and domains that are deemed acceptable senders, ensuring that important messages are not intercepted by filters or redirected to a junk mail or trash folder.

Directions for adding AOSSM to your whitelist are shown to the right. If you have another e-mail provider such as AOL, Yahoo, or Earthlink, the process is very similar. If you have questions or issues, be sure to contact your institution's technology department.

How to whitelist

- Open Outlook
- Click on "Actions" in the File Menu
- Select "Junk Mail" then "Junk Mail Options"
- Select the "Safe Senders" tab
- Click the "Add" button
- In the textbox type @aossm.org
- Click OK
- Click Apply
- Click OK

Bottoni Helps Qatar Hospital Perform Double Bundle Arthroscopic PCL

Dr. Craig Bottoni performed Qatar's first double bundle arthroscopic posterior cruciate ligament (PCL) surgery at the Aspetar Orthopaedic and Sports Medicine Hospital (AOSMH) in late April 2008. Dr. Bottoni, who is chief of surgery at the hospital, has used the technique in more than 100 operations prior to this use at AOSMH.

Sheinkop Trains Chinese Surgeons in Large Joint Replacement

Dr. Mitchell Sheinkop, AOSSM member and director of joint replacement at The Neurologic and Orthopaedic Hospital of Chicago (NOHC), was invited by the Chinese orthopedic community to travel to Beijing and Shanghai, to train their orthopedic surgeons in large joint replacements, including hip and knee. Dr. Sheinkop has performed more than 20,000 knee and hip reconstruction surgeries, including more than 300 of the new hip resurfacing procedures. From June 6–12, 2008, Dr. Sheinkop performed live surgeries and a series of lectures at hospitals in Shanghai and Beijing. In addition, he brought physical therapists to train and educate participants on the importance of post-operative physical therapy as part of the overall recovery process.

Olaf Lorbach, MD, Receives Herodicus Award

Dr. Olaf Lorbach received the prestigious Herodicus Award sponsored by the Herodicus Society at AOSSM's Annual Meeting in Orlando, Florida. The award for Dr. Lorbach's paper "Cyclic Loading of Rotator Cuff Reconstructions: Single-row Repair with Modified Suture Configurations Versus Double-row Repair" is given to the best paper submitted by a resident.

Why isn't your name listed here? We love to list members' accomplishments, achievements and awards! Don't be shy! Send your "Names in the News" items to AOSSM Director of Communications, Lisa Weisenberger at lisa@aossm.org, or fax them to 847/292-4905, or call the Society office. Please send a photo with your submission, if possible. This is your space to let your colleagues know that you've been up to!

2008 AOSSM/APOSSM Traveling Fellowship

This year AOSSM hosted the Traveling Fellows from the Pacific Rim. The fellows included Bavornrit Chuckpaiwong, MD (Thailand), Ho-Joong Jung, MD (Korea), and Egemen Turhan, MD (Turkey). The fellows were led by their godfather Prof. Hsiao-Li Ma, MD (Taiwan).

The fellows visited seven cities before ending the tour at the AOSSM Annual Meeting in Orlando, Florida. The fellows were hosted by:

Matthew Provencher, MD
Daniel Solomon, MD
Dana Covey, MD
Naval Medical Center in San Diego

Joseph Guettler, MD
Kyle Anderson, MD
Ken Jurist, MD
William Beaumont Hospital

James Carpenter, MD
Jon Sekiya, MD
Bruce Miller, MD
University of Michigan

W. Ben Kibler, MD
Lexington Clinic

Darren Johnson, MD
University of Kentucky

Thomas Clanton, MD
UT Medical School

Walter Lowe, MD
Baylor College of Medicine

Frederick Azar, MD
University of Tennessee–Campbell Clinic

Richard Hawkins, MD
Steven Singleton, MD
Steadman Hawkins Clinic of the Carolinas

H. Ma

B. Chuckpaiwong

H. Jung

E. Turhan

The traveling fellowship committee would like to thank all the AOSSM members that applied to host the fellows. Although not all applicants can be chosen, we encourage you to continue your support of the traveling fellowship program.

The AOSSM would also like to thank DJO Inc. for their continuing support of the traveling fellowship program.

2008 AOSSM ANNUAL MEETING

ORLANDO, FLORIDA JULY 10–13, 2008

Within minutes of entering the JW Marriott Grande Lakes Resort in Orlando, AOSSM members were transported into an experience that was much more than just a visit to Mickey's hometown. With the backdrop of palm trees and sunny skies, members took full advantage of all of the educational and leisure activities the area had to offer, from the nearby outlet malls, to SeaWorld® and Universal Studios®, to intense learning experiences on the latest in athletic knee, elbow, and shoulder repair.

The meeting kicked off on Wednesday with a free, pre-conference workshop regarding how to set-up a practice to participate in clinical trials and was led by Scott Rodeo, MD, from the Hospital for Special Surgery. At the workshop, attended by more than 120 individuals, opportunities and challenges associated with multi-center clinical studies were discussed.

AOSSM also partnered with the Sports Physical Therapy Society (SPTS) on Wednesday for a complimentary program on how surgeons and therapists can work together to manage shoulder and knee pathologies.

The meeting began in earnest on Thursday, with welcoming comments from President Bernard Bach, MD, and Program Chair, Brian Cole, MD, MBA. Topics during the sessions ranged from Achilles tendinopathy to concussion recovery rate differences between men and women to ACL allografts reconstructions. Kathleen M. Weber, MD, from Midwest Orthopaedics at Rush, gave the AMSSM Exchange Lecture on the current status of MRSA infections in the athlete. The O'Donoghue Sports Injury Research Award was given to Daniel Herman, MD, and his co-authors for their paper on "The Effects of Augmented Feedback With and Without Strength Training on Lower Extremity Biomechanics." AOSSM's new logo was also approved during business meetings.

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From Top Left – 2008 incoming president, Freddie Fu, MD, receives the presidential medal and "800 pound gorilla" from outgoing president Bernard Bach, MD. Ronald E. Losee, MD, receives a lifetime achievement award from Dr. Bach. Past AOSSM presidents discuss history and where AOSSM needs to be in the future at the sunrise summit. Excellence in Research award accepted by Geoffrey Bernas, MD, from Scott Rodeo, MD. Dr. Bach presents George D. Mauerman, MD, with a special achievement award for his dedication to the Family Olympics Program.

Attendees and their families faced off for an afternoon of competition and laughter during the annual Family Olympics, held near the resort's magnificent pool. Sponsored by Breg, Inc., participants received T-shirts, light refreshments, and memories they won't soon forget. The day's events ended with a Welcome Reception on the resort's outdoor patio (also sponsored by Breg, Inc.). As usual, the food and wine were superb and the children had their own special treats with a table for cookie doodling and drawing.

Friday, it was back to learning and accolades for the winners of the Hughston Award and Systematic Review Award. Hughston Award winner, Francesco Franceschi, MD, presented his paper on arthroscopic single-row and double-row suture anchor repair in rotator cuff tears. The award for the best systematic review paper on the outcomes of single-bundle versus double bundle reconstruction of the ACL was presented to James H. Lubowitz, MD. The Cabaud Award was given to Michael Lavagnino, PhD, for his paper on patellar tendon strains.

The four new inductees into the AOSSM Hall of Fame were also presented with their plaques of appreciation. This year's inductees include John Albright, MD, Frank Noyes, MD, Russell Warren, MD, and Paolo Aglietti, MD.

A complete listing of award recipients appears on Page 20.

As the day's sessions were winding down, President Bernie Bach, MD, highlighted how important all the people of our families are, including our blood and professional families. He also noted where the Society currently stands and future directions.

Drs. Marc Safran and Lee Kaplan moderated an interesting session on the biologic adjuncts to tendon healing which was followed by an interesting review of issues facing adolescents with elbow injuries, moderated by David W. Altchek, MD, and L. Pearce McCarty III, MD.

Following the Friday sessions, members headed over to the Ritz-Carlton Golf Club for the annual tournament to benefit

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AOSSM research and education. Sponsored by DJO Incorporated, attendees were clamoring for spots to play, but Mother Nature had other ideas — midway through, lightning caused us to cancel the tournament, but members still had fun taking in the pristine surroundings through the windows in the club house.

As sessions began on Saturday, Tandy Freeman accepted on behalf of Dr. J. Pat Evans the Thomas A. Brady Award for dedication to community service. Angela Pedroza, from Columbus, Ohio, accepted the award for best poster for "Activity Level and Graft Type as Risk Factors for ACL Graft Failure: A Case-Control Study of the MOON Cohort."

Later in the morning, Dr. Mark P. Bouchard presented the ACSM Exchange Lecture on agents used to treat tendinopathy. Other topics covered during the Saturday sessions included meniscus repair techniques and the increase in Tommy John surgeries in young athletes, presented by Lyle Cain, MD. A keynote speech by Dr. Neil H. Baum addressed marketing and promoting your medical practice. Dr. Baum discussed the four pillars of success, including the strategies and tactics for retaining and attracting patients, motivating clinical staff, increasing referrals, and optimizing the Internet. Dr. Baum also participated in the intensive, Young Sports Medicine Specialists' Workshop, on Saturday afternoon. Supported by Stryker, the small-group workshop discussed the nuts and bolts of managing and growing a clinical practice.

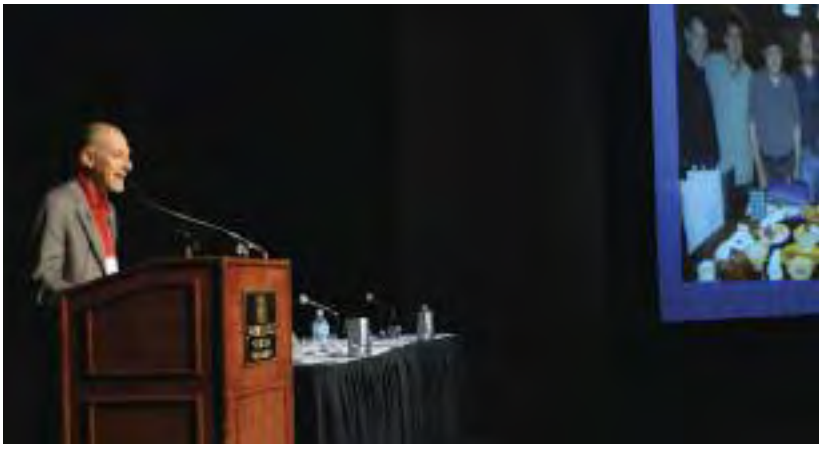
Following Dr. Baum's lecture, Ronald E. Losee, MD, received a lifetime achievement award for his contributions and innovations in sports medicine, as a physician, teacher, mentor, author, and researcher. George D. Mauerman, MD, also received a special achievement award for his dedication and service to the AOSSM Family Olympics Program for more than 30 years. The Robert E. Leach, MD, Mr. Sports Medicine Award was presented to William Clancy, MD. Dr. Freddie Fu also was installed as AOSSM's 37th President.

Saturday night during the AOSSM Annual Meeting always means a good time for both attendees and their families. This year was no different with a party, sponsored by Smith and Nephew, celebrating Key West and all things tropical. Everyone entering the Palazzo ballroom was greeted by giant stilt walkers, tiki statues, leis, and flowers for their hair. Volcano Joe and the Hot Lava Band wowed the audience with games, drinks for the kids, and some great tunes to keep everyone dancing and having fun.

Sunday's session featured the presentation of the Herodicus Award to Olaf Lorbach, MD, and his colleagues from Luxembourg and Germany for the paper entitled, "Cyclic Loading of Different Rotator Cuff Repair Techniques: Single-Row Repair with Modified Suture Techniques Versus Double-Row Repair."

Continued on page 19

Photos from the Annual Meeting are available for viewing at **www.hkphotogroup.com.** Just click on "client gallery" and use AOSSM as the client I.D. with password 2008. Many photos of the scientific sessions, award presentations, and family fun are there for your enjoyment. You can also order photos online.



From Top Left – Little girl takes in the scene from above the Ossur sponsored rock climbing wall. Bruce Reider, MD, discusses his experience with the travelling fellowship program. Boy stretches his legs to climb up the rock wall. Leigh Ann Curl, MD, accepts an appreciation plaque from Dr. Bach for her service as chair of the membership committee. Members and their families dance the night away during Saturday's Key West themed party. Medical Board of Trustees (MBOT) President, David Sisk, MD, presents outgoing MBOT member, Robert Johnson, MD, with service appreciation award.

A new feature at this year's meeting was "Forgive the Disruption," allowing two members to debate a hot sports medicine topic. George McCluskey III, MD, and Christopher S. Ahmad, MD, debated double-row versus single-row rotator cuff repair followed by Jack Farr II, MD, and Anthony A. Schepsis, MD, discussing patellofemoral instability and pain. Special thanks to Stephen Burkhart, MD, and Andrew J. Cosagrea, MD, for moderating such fast-paced, interactive, and exciting sessions.

Aircast Awards for clinical science and basic science were presented respectively to John J. Christoforeeti II, MD, and Adam Fosnaugh, MD. The George D. Rovere Award was also given to *AJSM* editor, Bruce Reider, MD, for his significant contribution to orthopaedic sports medicine education.

The conference wound down with the NATA Exchange Lecture, given by Tricia Hubbard, PhD, ATC, on the mechanical contributions to chronic ankle instability.

AOSSM would like to thank all of our sponsors and exhibitors for their ongoing Annual Meeting support. The next AOSSM Annual Meeting will be in the beautiful Rocky Mountains of Colorado at the Keystone Convention Center from July 9–12, 2009. Come join us to climb to new heights in sports medicine.

The Society strives to provide you with the best educational experience possible. You should have received an e-mail from the Society asking for your comments on the meeting and how we can improve for next year. Please be sure to take a few minutes to fill this out, so we can continue to make our meetings the best in sports medicine. Thank you!

Annual Meeting AWARDS 2008

2008 Robert E. Leach, MD, Mr. Sports Medicine Award

This award includes a $5,000 contribution to the recipient's charity of choice. This year's recipient was:

William G. Clancy, Jr., MD

Thomas A. Brady, MD Community Service Award

This annual award is given to an individual who has dedicated himself or herself to community service. This year's recipient was:

J. Pat Evans, MD

George D. Rovere Award

This annual award is presented to members who have made a significant contribution to orthopaedic sports medicine education. This year's recipient was:

Bruce Reider, MD

Lifetime Achievement Award

This special award was given to Ronald E. Losee, MD, for his contributions and innovations in sports medicine, as a physician, teacher, mentor, author, and researcher.

Special Recognition Award

This award was given to George D. Mauerman, MD, for his dedication and service to the AOSSM Family Olympics Program for more than 30 years.

Award Winning Papers

Aircast Award for Basic Science

Repair of Osteochondral Defect with Biphasic Cartilage-Tricalcium Phosphate Implantation in a Porcine Allograft Model

Adam Fosnaugh, MD, Jinsong Huang, MD, PhD, HonkSik Cho, PhD, Yongxing Liu, PhD, Yunzhi Yang, PhD, Karen A. Hasty, PhD, Frederick M. Azar, MD

Aircast Award for Clinical Science

The Thrower's Hip: Femoracetabular Impingement Testing Results and Prevalence of Femoral Head Asphericity in Asymptomatic Professional Baseball Pitchers

John J. Christoforetti II, MD, Todd A. Michener, MD, James W. Hardin, PhD, Thomas J. Noonan, MD, Marc J. Philippon, MD, Steven B Singleton, MD, FACS, Richard J. Hawkins, MD, FRCSC

Cabaud Memorial Award

This award is given to the best paper concerning hard or soft tissue biology, in vitro research, laboratory or "bench-type" research, or in vivo animal research.

Patellar Tendon Strain is Increased at the Site of the Jumper's Knee Lesion During Knee Flexion and Tendon Loading: Results and Testing of a Computational Model

Michael Lavagnino, PhD, Steven P. Arnoczky, DVM, Niell Elvin, PhD, Julie Dodds, MD

Excellence in Research Award

This award is presented annually to the best paper submitted in any category with a primary author under the age of 40.

Defining Safe Rehabilitation for Ulnar Collateral Ligament Reconstruction of the Elbow: A Biomechanical Study

Geoffrey A. Bernas, MD, Ramon A. Ruberte Thiele, MS, Karen A. Kinnaman, BS, Richard E. Hughes, PhD, Bruce S. Miller, MD, James E. Carpenter, MD

Hughston Award

This award is presented annually for the most outstanding paper published in *The American Journal of Sports Medicine* in the previous year.

Equivalent Clinical Results of Arthroscopic Single-Row and Double-Row Suture Anchor Repair for Rotator Cuff Tears: A Randomized Controlled Trial

Francesco Franceschi, MD, Laura Ruzzini, MD, Umile Giuseppe Longo, MD, Francesca Maria Martina, MD, Bruno Beomonte Zobel, MD, Nicola Maffulli, MD, MS, PhD, FRCS, Vincenzo Denaro, MD

AJSM Systematic Review Award

This award was presented for the best Systematic Review paper chosen in 2007 by the *American Journal of Sports Medicine*.

Outcome of Single-Bundle Versus Double-Bundle Reconstruction of the Anterior Cruciate Ligament: A Meta-Analysis

Richard Meredick, MD, Kennan Vance, DO, David Appleby, MPH, James H. Lubowitz, MD

O'Donoghue Sports Injury Research Award

This award is given to the best overall paper based on clinical research or human in vivo research:

The Effects of Augmented Feedback with and Without Strength Training on Lower Extremity Biomechanics

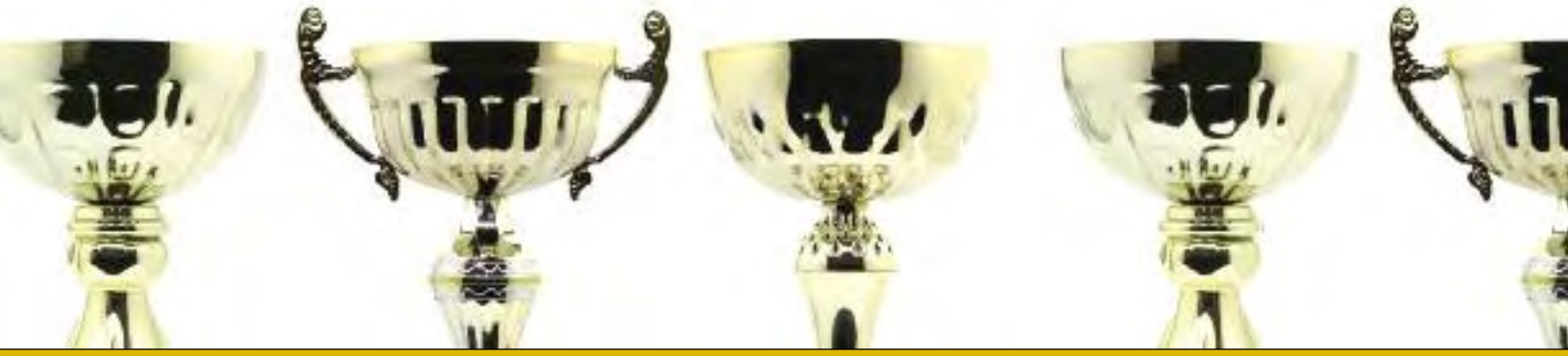
Daniel Herman, PhD, MD, James Onate, ATC, PhD, Paul Weinhold, PhD, Kevin Guskiewicz, ATC, PhD, William E. Garrett, Jr., MD, PhD, Bing Yu, PhD, Darin Padua, ATC, PhD

AOSSM Poster Award

This award is given to the best poster accepted for display at the Annual Meeting.

Activity Level and Graft Type as Risk Factors for ACL Graft Failure: A Case-Control Study of the MOON Cohort

James R. Borchers, MD, Angela Pedroza, BS, Christopher C. Kaeding, MD (Columbus, OH)



2008 AOSSM Hall of Fame Members Inducted

In 2001, AOSSM established the Hall of Fame to honor members of the orthopaedic sports medicine community who have contributed significantly to the specialty. This is the Society's highest accolade, reserved for only a select few individuals who are outstanding leaders in sports medicine. Nominations are submitted by AOSSM members and reviewed by and selected by the Hall of Fame Subcommittee. In November 2007, the AOSSM Board of Directors approved the addition of the following deserving sports medicine professionals into the AOSSM Hall of Fame:

North American Inductees

John P. Albright, MD
1941–

It was Dr. Albright's desire to incorporate the skills of physicians and athletic training staff, that helped establish the University of Iowa Hospitals and Clinics (UIHC) Sports Medicine Center in 1980. Essential to this system of care was the development of the Sports Injury Monitoring System (S.I.M.S.). The program monitored patient progress, produced weekly injury updates, and also served as the basis for many epidemiologic studies which continue to be produced at the University of Iowa, as well as throughout the Big 10 Conference. Dr. Albright has authored more than 150 publications and abstracts; given almost 250 presentations worldwide; held a U.S. patent for an arthroscopic double-barrel meniscus suturing device; developed the Iowa knee brace; developed a hamstring proprioception-based pivot-shift control program for the ACL deficient knee; and developed two innovative surgical techniques.

Frank Noyes, MD
1939–

Dr. Noyes, in collaboration with orthopaedic pioneer, Edward Grood, MD, conducted ground-breaking knee research investigating the biomechanical properties of knee ligaments in humans and primates, including strain rate effects, age related properties, immobilization, and exercise. Dr. Noyes joined the University of Cincinnati, Department of Orthopaedics in 1975 as director of the Sports Medicine Institute and director of orthopaedic research. Together with Dr. Edward Grood, they established one of the nation's first biomechanical laboratories.

Russell F. Warren, MD
1939–

Since 1990, sports medicine and shoulder specialist, Russell F. Warren, MD, has directed the soft tissue research laboratory at the Hospital for Special Surgery (HSS) in New York City. Discoveries from the laboratory have advanced progress toward better treatments that reduce pain and restore mobility for patients with soft tissue injuries of the shoulder and knee. In 2005, HSS established the Russell F. Warren Research Chair in soft tissue research to ensure this area of study continues in perpetuity. He has published more than 300 papers on a variety of orthopaedic topics related to disease and injury of the shoulder and knee.

International Inductee

Paolo Aglietti, MD
Italy, 1942–

One of Dr. Aglietti's greatest professional accomplishments is serving as the professor and chairman of the First Orthopaedic Clinic at the University of Florence. He was also a founding member of the Italian Society of Knee Surgery and the Italian Society of Arthroscopy (ISA), serving as ISA's president in 1982 and 1989. He has published more than 120 articles in journals around the world and was a co-editor of the book, *Surgery of the Knee.* He is currently serving as the president of the International Society of Knee Surgery and Arthroscopy.

THE BOARD OF DIRECTORS THANKS THESE COMMITTEE MEMBERS FOR THEIR CONTRIBUTIONS TO THE SOCIETY'S GOALS AND MISSION. THEIR TERMS OF SERVICE EXPIRED IN JULY 2008.

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UPCOMING MEETINGS AND COURSES

Upcoming Courses

AOSSM & AAOS Review Course for Subspecialty Certification in Orthopaedic Sports Medicine
August 1–3, 2008
Chicago Marriott Downtown Magnificent Mile
Chicago, Illinois

The Puck Stops Here: Comprehensive Management of Hockey Injuries
August 22–24, 2008
The Westin Michigan Avenue
Chicago, Illinois

Advanced Team Physician Course
December 11–14, 2008
Hilton Austin, Austin, Texas
(Administered by American College of Sports Medicine)
Visit www.acsm.org for more information and registration.

The Puck Stops Here

Schedule a quality time-out and come to Chicago this summer for The Puck Stops Here: Comprehensive Management of Hockey Injuries. Being held August 22–24, 2008 at The Westin Chicago, the course offers physicians and allied health professionals an excellent opportunity to address medical issues and orthopaedic injuries specifically related to hockey, including injury prevention strategies and the psychological impact of athletic injuries. Co-chaired by AOSSM members Drs. Scott D. Gillogly and Benjamin S. Shaffer, this 2.5-day course focuses on treating the hockey athlete at diverse levels of play and offers plenty of practical advice to wield on and off the ice. Preliminary programs are available on the AOSSM Web site. Online registration will be available through August 1, 2008. Onsite registration will also be available.

For more information on upcoming meetings and courses, or to view preliminary programs, please visit our Web site at www.sportsmed.org (click on Education), or call 847/292-4900 or 877/321-3500 (toll free).

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