AOAO 2017 Postgraduate Seminar Needs Assessment

Theme: New Technologies and Procedures for 2017 and Beyond

Friday, April 28, 2017

Spine Session, Moderated by Juan S. Dinkins, DO

Orthopedic Spine Surgeons are constantly being challenged by current and new developments from the cervical to the lumbar spine/sacrum. This section will cover multiple topics for the cervical spine, lumbar spine, sacrum, biologics and evolving technology with navigation and robotics.

The first lecture will examine whether Anterior Surgery or Posterior MIS foramonotomy is more effective and/or less invasive for Cervical HNP with radiculopathy.

Observational studies have compared cervical total disc arthroplasty/replacement (CTDR) and anterior interbody fusion and its effective pain reduction. However, will the initial higher cost of CTDR be offset by its less lost productivity and early return to work.

The next lecture will examine whether or not intraoperative neuromonitoring should be used for all anterior cervical discectomy and fusion cases, regardless of how straightforward the case appears to be?

Dysphagia is a common perioperative complication following anterior cervical surgery. Should patients receive intravenous steroids immediately prior to incision, during or after procedure to reduce this complication? Patient outcomes will be compared and recommendations provided.

Compared to autograft bone, which is considered the gold standard graft material for spine fusion. This lecture will examine other bone matrix in multiple forms with comparable fusion rates and less pain when used for posterolateral lumbar fusion. Bone grafting options for lumbar spine surgery: a review examining clinical efficacy and complications, eth Vaz, BS,* Kushagra Verma, MS, Themistocles Protopsaltis, MD, Frank Schwab, MD, Baron Lonner, MD, and Thomas Errico, MD, International Journal of Spine Surgery, SAS J. 2010; 4(3): 75–86. Published online 2010 Sep 1. doi: 10.1016/j.esas.2010.01.004

The next two lectures applications of navigation and robotics will be explored. Potential benefits of Navigation and Robotics include reduce radiation and improved safety. Drawbacks may include an increased operating time and economic investment. These lectures will cover these most pressing questions on automated assistance systems for spinal surgery.

Pressure from patients and healthcare system at large for shorter hospitalization, quicker return to function and reduced overall expense demand that spine surgeon's expertise in anatomy-conserving surgical techniques. This lecture will examine several alternatives for L4/5 spondylisthesis with stenosis.

Studies continue to compare the results of surgical patients with sacroiliac (SI) arthritis or joint disruption to that of nonsurgical management alone. Usage of minimally invasive sacroiliac fusion using a titanium triangular implant vs medical optimization and outpatient physical therapy will be examined.

Repeat fusion may negatively affect the pelvic incidence-lumbar lordosis which can lead to adjacent segment disease requiring revision surgery. This lecture will evaluate whether the effect of pelvic incidence lumbar lordosis mismatch increases the chances of developing adjacent segment disease requiring revision surgery.

Minimally invasive surgery adoption has been poor because of poor visualization and learning curve are steep. If the surgeon can perform these procedures outpatient and reduce hospitalization and readmission, they will lower the total cost of care. In this lecture MIS anterior and lateral benefits and complications will be examined.

In conclusion as outcomes and value based medicine continue to evolve, the above session topics and current literature will help surgeons to improve outcomes based on current evidence based literature.

AOA Core Competencies:

- ✓ Medical Knowledge
- ✓ Patient Care

General Session 1, Moderated by Robert F. Jackson, II, DO, FACOS, FAOAO

This general session will have a variety of topics which will be explored. New innovations, techniques as well as in depth basic science, anatomy and literature review will be addressed in the session.

Basic principles of ultrasound for the evaluation of rotator cuff tears is still quite vague to many orthopedic surgeons. Usage of this technology to better assess post-operative healing is even less understood. Discussion of pertinent anatomy with recognition of normal, abnormal and healed tissue will be covered in this topic. In addition, systems based practice will be learned.

The literature is sparse in description of arthroscopic treatment of the difficult partial thickness subscapularis tear. Learning an advanced technique applicable for the surgeon to utilize enhances patient care and a review of clinical results validates the procedure. Thus, understanding the technique, complications and expected outcomes is imperative.

Superior ligament augmentation for chronic rotator cuff deficiency versus reverse shoulder replacement arthroplasty is gaining popularity. An in-depth review of the literature and surgical technique will be the focus in a controversial topic. Patient selection, complications and outcomes are necessary to determine the efficacy of this technique.

Knee instability following joint replacement is a rare but debilitating complication. The morbidity to the patient and frustration for the physician make this topic relevant. A discussion and understanding of the causes and restorative treatment will be reviewed. Practice based learning and improvement are goals of this lecture.

Wound care has advanced exponentially over the last 10-15 years, yet many orthopedic surgeons have not advanced their treatment of wounds, ulcers and abscesses beyond wet to dry betadine dressing changes. This lack of knowledge and poor understanding of wound treatment often causes as much harm as good. Innovations in wound treatment with clinical outcomes and review of modern literature improving patient care is the focus of this talk.

The stromal vascular fraction of mesenchymal stem cells has been used in clinical practice in the U.S. since 2010. (Berman et al., The Stem Cell Revolution. AuthorHouse, 2015.) The procurement of these unspecialized cells and deployment via the stromal vascular fragment making them “bio-available for disease mitigation in a safe and cost effective method continues to expand. Adult stem cell derived from fat have been documented to form every type tissue in the human body except placental tissue.

A technique and understanding of regenerative medicine to restore form and function have always been at the core of Osteopathic Medicine.

The economics of medicine are ever being invaded by regulations and reimbursement issues. An understanding of office based best practices are pertinent not only for the private practitioner but also the employed physician. Payment bundling and CJR are being infused into our practices, thus an understanding of the new payments are vital.

AOA Core Competencies:

- ✓ Medical Knowledge
- ✓ Patient Care
- ✓ Practice Based Learning and Improvement
- ✓ Systems Based Practice

Trauma Sawbones Workshop, moderated by Anthony Infante, DO; Benjamin Maxson, DO

As many orthopedic surgeons are required to take trauma call as part of hospital privileges, they will inevitably come in contact with distal femur fractures. Open reduction internal fixation, external fixation and intramedullary fixation are some of the options available to surgeons to treat these fractures. The Trauma section has listened to the suggestions from membership requesting indirect reduction techniques. Whether you use antegrate or retrograde nails, blocking screws are a tool that can help anatomically reduction the fractures maintaining a more stable fixation. Current Orthopedic Practice, January/February 2015 Volume 26 issue 1 pages 56-63 suggest that blocking screws are an excellent percutaneous option to improve alignment and strength of fixation. Strategies Trauma Limb Reconstruction, November 2016, 11(3), 199-205 suggest Poller screws/Blocking screws are an excellent way to help with deformity correction. Surgeons should at least be aware of its uses and be exposed to the technique as it applies to distal femur fractures.

AOA Core Competencies:

- ✓ Medical Knowledge
- ✓ Patient Care

Trauma Session, Moderated by Steven A. Chandler, DO, FAOAO

There is an increased incidence of hip fractures, with an increase in the aging population along with an increase in the incidence of falls there is a rise in these fractures. There are controversies in treating certain types of femoral neck fractures. In certain populations treating femoral neck fractures is relatively simple. But in the 40-60 year-old population there are different treatment options like open reduction internal fixation versus total hip or hemi arthroplasties. When dealing with proximal humerus fractures there are similar controversies, i.e., should they be fixed or should they be replaced? We will discuss the pros and cons of both sides on both of these topics to better understand the treatment possibilities to improve patient care.

Treating many fractures is very straightforward, but distal humerus fractures can be very challenging. Adding to this difficulty is knowing when to do it an olecranon osteotomy or not. Many surgeons have struggled making the determination, how should I dissect down to the fracture and what are the best fixation options for dealing with these fractures? Often times, at first glance, an ankle fracture may seem simple but when in the operating room it turns out to be more complicated. For both of these fractures, I want to inform participants of up-to-date treatment recommendations for

these fractures, personal advice to avoid pitfalls from experienced surgeons, and things to look for during preoperative planning to avoid getting into trouble.

Lastly, Intertrochanteric hip fractures are very common hip fractures that most all orthopedic surgeons treat. We plan to address nuances in treatment options for the average orthopedic surgeon, as well as complex fractures patterns options for the traumatologist. Intertrochanteric Hip Fractures, Updated: Aug 30, 2016, Medscape, Author: James F Kellam, MD, FRCSC, FACS, FRCS(Ire); Chief Editor: William L Jaffe, MD

Shoulder and Elbow Session, Moderated by Nathaniel K. Long, DO

The shoulder and elbow agenda will be broken up in to two sections. The first session will be rotator cuff repair and instability. The second session will be arthroplasty. We will be focusing on new technologies and techniques. The faculty will consist of prominent shoulder and elbow specialists from around the country. Each section will end with an interactive session that involves difficult cases submitted by faculty and audience members. This is a new format designed to initiate discussion about common issues and decisions surgeons face with shoulder and elbow surgery. We are encouraging faculty members to submit challenging cases that have been referred to them and cases that perhaps they wish they had handled differently. We are also encouraging audience members to submit difficult cases to be put before the panel for discussion. The cases will be reviewed by the co-moderators and selected for presentation. This format of learning will provide participants with an opportunity to discuss better treatment options.

The second half of the session will begin with the latest technologies and techniques for rotator cuff repair. The purpose of this topic is to inform the audience of "outside the box" approaches to rotator cuff repair. It will also include techniques for massive tears that are not repairable. The audience will learn the newest techniques for superior capsule reconstruction and grafting techniques for anterior instability. We will then continue the instability theme with a talk about arthroscopic Latarjet. Participants will also learn about latest techniques outcomes associated with this procedure. The audience will hear about compartment pressures during shoulder arthroscopy. The purpose of the last lecture is to inform the listener of the latest indications and techniques for biceps tendon management. These topics provide the audience with new and different ways of treating these conditions.

We will then have an interactive session with case presentations submitted by faculty and audience members. The purpose of this section is to give the audience an opportunity to have difficult cases reviewed by the expert panel members.

Biomechanical Role of Capsular Continuity in Superior Capsule Reconstruction for Irreparable Tears of the Supraspinatus Tendon.
Mihata T, McGarry MH, Kahn T, Goldberg I, Neo M, Lee TQ.
Am J Sports Med. 2016 Jun;44(6):1423-30. doi: 10.1177/0363546516631751.

Tenotomy, Tenodesis, Transfer: A Review of Treatment Options for Biceps-Labrum Complex Disease.
Gausden EB, Taylor SA, Ramkumar P, Nwachukwu BU, Corpus K, Rebolledo BJ, White A, O'Brien SJ.
Am J Orthop (Belle Mead NJ). 2016 Nov/Dec;45(7):E503-E511.

AOA Core Competencies addressed during this session:

- ✓ Medical Knowledge
- ✓ Patient Care

Saturday, April 29, 2017

General Session II, Moderated by Marc A. Tressler, DO

The General Orthopedic practice is constantly faced with changing technology and regulations. In this section, we will focus on a wide breadth of topics intended to increase awareness of New Technologies and Procedures for 2017 and Beyond. This will include policy and preparation for board certification/recertification. The topics will cover practice management, public health policy, prosthetics and orthotics, shoulder arthroplasty, orthopedic oncology, and musculoskeletal radiology.

At the conclusion of the session, we will use interactive audience participation to allow for positive reinforcement of selected information presented in the session.

Comparison of percutaneous vertebroplasty with and without interventional tumor removal for spinal metastatic tumor without epidural involvement, Journal of Bone Oncology, Volume 6, March 2017, Pages 1–7.

AOA Core Competencies addressed:

- ✓ Medical Knowledge
- ✓ Patient Care
- ✓ Practice Based Learning and Improvement

Sports Medicine, Moderated by Amanda Martin, DO

Orthopedic surgeons that practice within the specialty of sports medicine are expected to have not only a surgical command of a multitude of operative conditions, but also a working knowledge of issues affecting the overall health of athletes they treat.

At the conclusion of the meeting a sports medicine trained physician will better be able to approach complex decision and treatment paradigms in the knee, hip, and shoulder. They will better integrate surgical, biologic, combined, and rehabilitation modalities in the treatment of complex athletic injuries from cartilage disorders to complex ligament injuries.

Clinicians will be able to prioritize patients requiring Superior Capsular Reconstruction Versus reverse arthroplasty versus rotator cuff repair in massive tears, as well as tackle instability through arthroscopic bony approach.

The shoulder has evolved significantly in recent years from a simple rotator cuff repair or shoulder replacement. Technology is allowing fine tuned decisions regarding both stability and arthroscopic treatments for the rotator cuff that can prolong the native shoulder lifespan.

1. Kim S.J., Kim S.H., Lee S.K., Seo J.W., Chun Y.M. Arthroscopic repair of massive contracted rotator cuff tears: Aggressive release with anterior and posterior interval slides do not improve cuff healing and integrity. J Bone Joint Surg Am. 2013;95:1482–1488. [PubMed]
2. Ciampi P., Scotti C., Nonis A. The benefit of synthetic versus biological patch augmentation in the repair of posterosuperior massive rotator cuff tears: A 3-year follow-up study. Am J Sports Med. 2014;42:1169–1175. [PubMed]

3. Gupta A.K., Hug K., Boggess B., Gavigan M., Toth A.P. Massive or 2-tendon rotator cuff tears in active patients with minimal glenohumeral arthritis: Clinical and radiographic outcomes of reconstruction using dermal tissue matrix xenograft. Am J Sports Med. 2013;41:872–879. [PubMed]

Surgeons will gain knowledge of new and innovative approaches to identify and treat intra and extraarticular disorders of the hip in athletes participating at the highest level. Surgeons often lack clarity on what approaches should be reserved for highly active populations and what activity level can be returned.

Byrd JW, Jones KS. Prospective analysis of hip arthroscopy with 2-year follow-up. Arthroscopy. 2000;16:578–587. doi: 10.1053/jars.2000.7683. [PubMed] [Cross Ref]

Byrd JW, Jones KS. Arthroscopic management of femoroacetabular impingement in athletes. Am J Sports Med. 2011;39(Suppl):7S–13S. doi: 10.1177/0363546511404144. [PubMed] [Cross Ref]

Alradwan H, Philippon MJ, Farrokhyar F, Chu R, Whelan D, Bhandari M, Ayeni OR. Return to preinjury activity levels after surgical management of femoroacetabular impingement in athletes. Arthroscopy. 2012;28:1567–1576. doi: 10.1016/j.arthro.2012.03.016. [PubMed] [Cross Ref]

Sports medicine providers are expected to have a baseline knowledge of athletic safety and injury prevention whether a primary care or orthopaedic provider. We strive to integrate novel techniques and information for injury prevention through periodization to allow providers to better counsel parents and athletes.

1. Lorenz DS Reiman MP Walker JC. Periodization: Current review and suggested implementation for athletic rehabilitation. Sports Health. 2010;2(6):509-518. [PMC free article] [PubMed]
2. Anderson T Kearney JT. Effects of three resistance training programs on muscular strength and absolute and relative endurance. Res Q. 1982;53:1-7. [PubMed]

3. Baker D: A series of studies on the training of high-intensity muscle power and rugby league football player. J Strength Conditioning Res. 2001;15:198-209. [PubMed]

4. Baker D Wilson G Carolyn R. Periodization: The effect on strength of manipulating volume and intensity. J Strength Cond Res. 1994; 8: 235-242.

Orthobiologics are playing an increasingly large role in the treatment of musculoskeletal conditions. Many clinicians lack the knowledge and basic science understanding of what and when to apply these treatment modalities. This section will inform the orthopedic sports surgeon not only of applications of PRP, bone marrow derivatives in the knee, but also human dermal patches and their applications in rotator cuff pathology.

American Orthopaedic Society for Sports Medicine (AOSSM). Biologic Treatments for Sports Injuries II Think Tank. https://www.sportsmed.org/AOSSMIMIS/Members/Members/Research/Biologics_Think_Tank_II.aspx. Accessed January 14, 2016.
2. Andia I, Sanchez M, Maffulli N. Tendon healing and platelet-rich plasma therapies. Expert Opin Biol Ther. 2010;10:1415–1426. [PubMed]

3. Andia I, Sanchez M, Maffulli N. Platelet rich plasma therapies for sports muscle injuries: any evidence behind clinical practice? Expert Opin Biol Ther. 2011;11:509–518. [PubMed]

4. Angeline ME, Rodeo SA. Biologics in the management of rotator cuff surgery. Clin Sports Med. 2012;31:645–663. [PubMed]

5. Antuna S, Barco R, Martinez Diez JM, Sanchez Marquez JM. Platelet-rich fibrin in arthroscopic repair of massive rotator cuff tears: a prospective randomized pilot clinical trial. Acta Orthop Belg. 2013;79:25–30. [PubMed]

6. Apostolakos J, Durant TJ, Dwyer CR, et al. The enthesis: a review of the tendon-to-bone insertion. Muscles Ligaments Tendons J. 2014;4:333–342. [PMC free article] [PubMed]

7. Audenaert E, Van Nuffel J, Schepens A, Verhelst M, Verdonk R. Reconstruction of massive rotator cuff lesions with a synthetic interposition graft: a prospective study of 41 patients. Knee Surg Sports Traumatol Arthrosc. 2006;14:360–364. [PubMed]

Case discussions will allow clinicians to better understand and initiate higher level approaches to complications and return to play of high level athletes in the treatment of strains and sprains, cartilage disorders, and hip pathology.

The sports section will target subspecialized orthopedic surgeons in the treatment of complex injuries that require a skilled clinician and surgeon in the field of sports medicine.

We will also address the AOA Core competencies and seek to identify key team members and intersystem practice to include treatment of the whole patient from other referred pain, psychological factors related to outcome, and the use of the entire treating team from surgeon, trainer, therapist, and coach.

AOA Core Competencies addressed:

- ✓ Medical Knowledge
- ✓ Patient Care
- ✓ Practice Based Learning and Improvement
- ✓ Osteopathic Philosophy Manipulative Medicine

Pediatric Session, Moderated by Alison L. Gattuso, DO

Most general orthopedic surgeons, as well as pediatric subspecialists, will be responsible for the care of the pediatric patient at some point in their career. Many of these cases will be trauma-related, however often times, the general orthopedist may be the first line in orthopedic care for a host of pediatric diagnoses and disorders. This requires a fundamental knowledge base and exposure to the latest treatment and technologies associated with childhood musculoskeletal issues. The goal of the Pediatric Section is to provide the generalist, as well as the pediatric sub-specialist, with the latest information and techniques that will assist them in the management of pediatric patients in 2017 and beyond.

The first section will focus on broad topics such as pediatric tumors and infection, as well as early-onset and adolescent idiopathic scoliosis and hip preservation in the young patient. An update on pediatric bone tumors is essential because although these lesions appear with low frequency, approximately 40% of them are misdiagnosed (van de Berg et al. Results of Diagnostic Review in Pediatric Bone Tumors and Tumor like Lesions. J Pediatr Orthop. 2008 Jul/Aug) leading to delays in treatment. Osteoarticular infections, as well as our knowledge of it, continues to evolve. There has been a significant increase in pediatric musculoskeletal infections in the past 20 years. While *Staphylococcus Aureus* remains the predominate pathogen, other pathogens are becoming more frequent, such as *Kingella Kingae*. (Montgomery, N and Rosenfeld, S. Pediatric Osteoarticular Infection Update. J Pediatr Orthop. 2015 Jan). Clinicians will receive up-to-date information on

bacteriology, clinical presentation, comorbidity, diagnostic and treatment algorithms, as well as complications and outcomes.

The theme of the meeting will further be applied during the discussion of management of early-onset and adolescent idiopathic scoliosis. Approximately 3% of the general population has scoliosis and many of them present at an age when the majority of musculoskeletal growth has yet to occur. Because of this, these patients with early-onset scoliosis provide a significant challenge in management. Fortunately, there have been some significant advances with magnetized growing rods and growth modulation through spinal tethering (Wessell, N. et. Al. What's New in Pediatric Spine Growth Modulation and Implant Technology for Early-Onset Scoliosis? J Pediatr Orthop. 2016 Jan). These innovative techniques and indication for use will be discussed here. There are many etiologies for hip pathology in the young patient including, but not limited to, developmental hip dysplasia, sequelae from infection, Legg-Calve-Perthes disease, slipped capital femoral epiphysis, and trauma. We will spend time discussing the morbidity associated with these, as well as surgical techniques to treat it such as surgical hip dislocation.

The second section will focus on the management and treatment of neuromuscular disorders, such as cerebral palsy. CP is one of the most common childhood disorders with a prevalence of approximately 38/10,000, and orthopedic care is paramount in the treatment of these patients throughout their lives. Discussion will focus on classification, gait analysis, and patient-specific, inventive surgical procedures to maximize functionality. Lower limb abnormalities can stem from a variety of issues including genetics, syndromes, trauma, and infection, leading to asymmetrical, abnormal growth. This is one of the most exciting and technically demanding area within pediatric orthopedics because of the need to balance state-of-the-art surgical techniques and implants with expected growth of the child. Case presentations and panel discussion will review current concepts in upper and lower extremity trauma management of pediatric patients. This review session will highlight established guidelines for treatment of certain fractures, while opening up the discussion to treatment options and pearls when treating entities that are not so straight forward. The discussion period will allow the audience an opportunity to ask specific, practice-centered questions and to provide options for those who will manage and treat pediatric orthopedic patients.

Van de Berg, H. et al. Results of Diagnostic Review in Pediatric Bone Tumors and Tumor Like Lesions. *J Pediatr Orthop*, 2008, 28:561-564

Sarkissian, EJ et al. Community-Acquired Methicillin-resistant Staphylococcus aureus Musculoskeletal Infections: Emerging Trends Over the Past Decade. *J Pediatr Orthop*, 2016:36, 323-327

Riddersbusch, K. et al. Preliminary Results of Magnetically Controlled Growing Rods for Early Onset Scoliosis. *J Pediatr Orthop*, 2016:00, 1-6

Tibor, L and Sink, E. Pros and Cons of Surgical Hip Dislocation for the Treatment of Femoroacetabular Impingement. *J Pediatr Orthop*, 2013:33, S131-S134

Chambers, H. Update on Neuromuscular Disorders in Pediatric Orthopedics: Duchenne Muscular Dystrophy, Myelomeningocele, and Cerebral Palsy. *J Pediatr Orthop*, 2014:34, S44-S47

AOA Core Competencies addressed during this session:

-Medical Knowledge

-Patient Care

-Practiced Based Learning and Improvement

-Systems Based Practice

Hand Session, Moderator: John A. Pasquella, DO, FAOAO

Hand surgery is one of the oldest surgical subspecialties of medicine. In fact, there were dedicated hand surgeons before orthopedics was recognized as specialty itself. Despite the long history, there are still many complex issues the Hand surgeon encounters. For decades, researchers have been exploring different ways of managing these difficult conditions. Understanding these issues entails reviewing the past, as well as, the current trends in treatment.

Even though hand surgery has evolved into an area of subspecialty training, many general orthopedists or orthopedists of other disciplines encounter hand problems in their practice. Having a strong foundation of hand anatomy and current treatment recommendations has become imperative for those individuals treating conditions of the upper extremity.

In the first session, the focus will be on anatomy of the phalanx and various conditions. For example, Sagittal band injuries are a rare occurrence but pose a challenging problem for the patient and the surgeon. These injuries can occur from direct traumatic blunt force or spontaneously rupture as a result of rheumatologic disease. Watson et al (JHS May 1997 Volume 22, Issue 3, Pages 452-456) looked at one of the largest series of patients with ruptured sagittal bands and described a reconstruction technique to restore its function. This lecture will review this technique and many others to help guide the treating physician.

As discussed by Alla et al (Hand 2014 Jun; 9(2): 138-144), the optimal treatment for mallet finger injuries remains controversial. These are very common injuries seen mostly in young and middle aged males. These injuries are very common yet the incidence is unknown. The lecture will address the best course of action when a patient with this injury walks into the office.

The remainder of the first session will cover topics pertaining to the central slip and phalangeal joint collateral ligament injuries. Both are common injuries that need to be reviewed and discussed to ensure the physician is up to date on the most common treatment recommendations. The lectures will also cover how to identify these injuries considering they are easily missed by the examining physician.

The second session will delve into more complex topics such as nerve grafting and tendon transfer surgery. These are topics that any trained hand surgeon should have basic familiarity. These lectures will review the current trends and recommendations. Lastly, the session will include two very important elbow topics: elbow contractures and distal bicep ruptures. Both topics are very important to understand by the upper extremity surgeon. The clinical approach and treatment will be addressed during the lecture discussions. Elbow contractures are a significant problem that can arise in patients post injury or post trauma (Streubel et al JAAOS June 2015, Vol 23, Issue 6: pg 328-338). Treatment options including arthroscopic and open release will be addressed during this session.

In conclusion, there will be a variety of topics discussed during the Hand Session ranging from common injuries to more complex conditions. The goal of the session will be to provide an understanding of the anatomy associated with the hand and to address the historical perspective of those hand conditions. In addition, gaining a perspective on new learning tools and treatments is instrumental to becoming a proficient hand and upper extremity surgeon.

Sunday, April 30, 2017

Adult Session, moderated by Stephen Rossman, DO

Joint arthroplasty has come a long way since the early days of Sir John Charnley. With the number of primary to revision surgeries on the rise, and growing every year, it is worthwhile to take a closer look at current technologies available in the year 2017 as well as what the future will bring to total joint replacement.

We will start our session with a review on how to diagnose Periprosthetic Joint Infection (PJI). We will also discuss the Musculoskeletal Infection Society Criteria (MSIS) as well as newer synovial biomarker tests such as alpha defensin. This will provide a good segue into the next topic in which we discuss new strategies for antibiotic use for resistant organisms in PJI.

The next part of the first session will discuss new technologies in how we perform and care for out total joint patients. We will discuss outpatient joint replacement and take a closer look at robotics, patients specific implants, navigation, and computer assisted software.

The second half will start with a discussion on osteonecrosis. This talk will focus on the diagnosis, classification, and treatment of osteonecrosis of the femoral head as well as present head-preserving (non-arthroplasty) treatment options and their reported efficacy based on the current literature. The second talk will focus on the ignored epidemic of malnutrition. The goal is to increase the awareness of published literature demonstrating the consequences of malnutrition in surgical patients and present the current evidence for optimizing patients' nutritional status prior to surgery. The final talk for the session will present a problem on the horizon; total hip stability in patients' with a previous spinal fusion.

AOA Core Competencies addressed during this session:

- ✓ Medical Knowledge
- ✓ Patient Care
- ✓ Practice-Based Learning and Improvement

1. Kurtz SM et al. Future Clinical and economic impact of revision total hip and knee arthroplasty. JBJS. 2007;89(suppl 3):144-151

2. Parvizi J et al. New definition for periprosthetic joint infection. Clin Orthop Relat Res. 2011;469:2992-2994.

3. Deirmengian C et al. Combine Measurement of Synovial Fluid alpha-defensin and C-Reactive Protein Levels: Highly Accurate for Diagnosis Periprosthetic Joint Infection. JBJS Am 2014;96:1439-45.

4. Fulkerson E, Valle CJ, Wise B, Walsh M, Preston C, Di Cesare PE. Antibiotic susceptibility of bacteria infecting total joint arthroplasty sites. J Bone Joint Surg Am. 2006;88:1231–7.