

# Limb Lengthening and Reconstruction Society: ASAMI–North America

## Virtual Meeting

July 30, 2020 – January 29, 2021

### Course Chairs

Austin T. Fragomen, MD

Raymond W. Liu, MD

L. Reid Nichols, MD

David Podeszwa, MD

8:00–8:04 p.m. Welcome, Introduction

### Live Presentations of Scientific Papers

#### **Session 1: Radiograph Derived**

8:05–8:12 p.m. Comparison of Lower Extremity Segment Length Prediction Accuracy of the Sanders Multiplier, Paley Multiplier, and White–Menelaus Formulae  
*Marina R. Makarov, MD*

8:13–8:19 p.m. Treatment for Ankle Valgus in Multiple Hereditary Exostoses  
*David S. Feldman, MD*

8:20–8:28 p.m. Discussion

#### **Session 2: Limb Salvage – Amputation**

8:29–8:36 p.m. Quality of Life and Satisfaction Assessment After Successful Bone Transport in Patients with Segmental Tibial Deficit – *Gonzalo F. Bastias MD*

8:37–8:44 p.m. Outcomes, Safety and Cost–effectiveness of Single–Stage Intramedullary Nails for Fracture Related Infections and Infected Nonunions – *Olivia M. Rice, MD*

8:45–8:52 p.m. Patient Reported Outcomes Assessment of 267 Children and Adolescents with Lower Limb Deficiency: A Multi–Center Study – *Sarah Nossov, MD*

8:53–9:04 p.m. Discussion

#### **Session 3: Pearls & Pitfalls**

9:05–9:12 p.m. Complications Requiring Readmission Following Limb Lengthening: A 10 Year U.S. Database Study – *Ashish Mittal*

9:13–9:20 p.m. Anesthesia Choice affects Length of Stay for Pediatric Acute Correction Patients  
*Philip K. McClure, MD*

9:21–9:28 p.m. Intramedullary Nailing with Supplemental Plate and Screw Fixation of Long Bones of Patients with Osteogenesis Imperfecta: Short-term Follow-up  
*Jeanne M. Franzone, MD*

9:29–9:40 p.m. Discussion

#### **Session 4: Intramedullary Implants**

9:41–9:48 p.m. Weight-bearing Internal Lengthening Nail: Results on 57 Consecutive Stature Lengthening Patients – *Craig Robbins, MD*

9:49–9:56 p.m. Extramedullary Implantable Limb Lengthening (EMILL) for Congenital Limb Length Discrepancy – *Claire E. Shannon, MD*

9:57–10:04 p.m. Discussion

10:05–10:10 p.m. Closing Statements

#### Pre-Recorded Special Presentations

##### **Traveling Fellowship 2019 Report (15 minutes)**

*James Blair, MD*  
*Paul Matuszewski, MD*  
*Claire E. Shannon, MD*  
*Megan Young, MD*

##### **Clinician Scholar Career Development Program Presentation (10 minutes)**

*Joshua Speirs, MD*

#### Pre-Recorded Scientific Papers

##### **Session 1: Biomechanics & Metabolic (6 minutes each)**

Rigidity of Hip-Spanning External Fixation as Affected by Pelvic Pin Location, Angulation, and Number of Pins – *David Podeszwa, MD*

Effect of Dynamization Modules on Bone Segment Vertical and Lateral Displacements  
*Erin Honcharuk, MD*

Does Vitamin D Insufficiency affect Healing during Distraction Osteogenesis?  
*Jessica C. Rivera, MD, PhD*

Comparing Clinical and Radiological Outcomes in two Paediatric Cohorts undergoing Tibial Deformity Correction – *Juergen Messner*

##### **Session 2: Trauma, Limb Salvage & Amputation Reconstruction (6 minutes each)**

Union with Retained Cement Spacers – Deferment of Second Stage Grafting in the Masquelet Technique  
*Stephen J. Wallace, MD*

Amputation Outcomes following Military Gustilo and Anderson 3C Lower Extremity Fractures

*Jessica C. Rivera, MD, PhD*

Can We Predict When Exchange Nailing for Long Bone Nonunion Will Fail? – *Brandon Collofello*

Mid-term Results of Utilizing a Nail for Intercalary Allograft Reconstruction After Tumor Resection

*Lee M. Zuckerman, MD*

Complications of Regional and Local Anesthesia in the Operative Treatment of Tibia Fractures: Safety for the Patient and Staff – *Olivia M. Rice, MD*

Early Experience with Bone Anchored Osseointegration Prostheses – *Taylor J. Reif*

Evaluation of Fracture and Osteotomy Union in the Setting of Osteogenesis Imperfecta: Multicenter Reliability of the Modified Radiographic Union Score for Tibial Fractures (RUST)

*Jeanne M. Franzone, MD*

Vascularized Fibula Transfer with External Fixation for the Treatment of Bone Defects and Nonunions in Children – *Melissa Esparza, MD*

### **Session 3: Foot & Ankle** (6 minutes each)

Hexapod-assisted Arthroscopic Ankle Arthrodesis for Severe Rigid Post Traumatic Equinus Deformity

*Gonzalo F. Bastias MD*

Functional Implications of the Flat-Topped Talus Following Treatment of Idiopathic Clubfoot Deformity

*Anthony Riccio*

Do We Really Need to Worry about Calcaneocuboid Subluxation during Lateral Column Lengthening for Planovalgus Foot Deformity? – *Anthony Riccio*

The Effect of Lateral Column Lengthening on Subtalar Motion: Are We Trading Deformity for Stiffness?

*Jacob Zide*

Subtalar Joint Deformity Correction and Arthrodesis – *Douglas N. Beaman, MD*

### **Session 4: Limb Deformity** (6 minutes each)

Comparison and Validation of Pre-operative Planning Techniques for Distal Femoral Osteotomies and Proximal Tibial Osteotomies – *David T. Zhang*

Pin Site Care – Updates on an International Multicentre Pin Site Infection Study – *Anthony Cooper*

The Effect of Silver-Plated Dressing on Pin Site Complication in Patients Undergoing Limb Lengthening and Deformity Correction using a Circular Frame – *Elaine Tran, MD*

Integrated Limb Lengthening is Superior to Classical Limb Lengthening: A Systematic Review and Meta-analysis of the Literature – *Gerard A. Sheridan*

Correction of Tetratorisional Malalignment Improves Patient Reported Outcomes – *Taylor J. Reif*

Epidural Anesthesia May Increase Opioid Consumption in Adult Gradual Correction Patients

*John E. Herzenberg, MD*

Accuracy and Safety of Distal Valgus Correction: Comparison of Three Techniques

*Christopher A. Iobst, MD*

**Session 5: Internal Lengthening Nail** (6 minutes each)

Humerus Lengthening: A Comparison of the Internal Lengthening Nail to External Fixation

*Sherif Hassan*

Nails for Femur Lengthening – *Sherif Hassan*

Magnetically Driven Intramedullary Limb Lengthening in Patients with Pre-Existing Implanted Programmable Devices: A Case Series – *Christopher A. Iobst, MD*

Cost Comparison of Tibial Distraction Osteogenesis with External Lengthening and Then Nailing (LATN) Versus Internal Magnetic Lengthening Nail (MLN) – *Aleksey Dvorzhinskiy*

Evaluating the Utility of the Pixel Value Ratio in the Determination of Time to Full Weight Bearing in Patients Undergoing Limb Lengthening Using an Intramedullary Device – *Christopher A. Iobst, MD*

Paediatric Femoral Lengthening Using Intramedullary Versus External Fixator Devices: A Single Surgeon Matched Cohort Series – *Laura Tillotson*

**Session 6: Pediatric Limb Deformity** (6 minutes each)

Does an Osteotomy Performed in Congenital Pseudarthrosis of the Tibia Heal? - *Nickolas J. Nahm*

Proximal Femoral Guided Growth for Dysplastic Hips in Children with Cerebral Palsy

*Jacob R. Carl, MD*

Modernization of Bone Age Assessment: Comparing the Accuracy and Reliability of an Artificial Intelligence Algorithm and Short-Hand Bone Age to Greulich and Pyle – *Mina Gerges*

What Matters Most to Children with Lower Limb Deformities – An International Qualitative Study Informing the Development of a New Patient Reported Outcome Instrument – LIMB-Q Kids

*Harpreet Chhina*

Estimating Skeletal Maturity using Knee Radiographs during Pre-adolescence – The Epiphyseal: Metaphyseal Ratio – *Alex Benedick*

Skeletal Maturity using Knee X-rays: Understanding the Resilience of Eight Radiographic Parameters to Rotational Position – *Julio Cesar Castillo Tafur*

Core Psychosocial Issues for Children and Adolescents in the Context of Limb Lengthening and Reconstruction Surgery Treatment – *Amber Hamilton*

Limb Lengthening in Russell–Silver Syndrome: An Update Confirming Safe and Speedy Healing  
*Christine M. Goodbody*

Meta-analysis of Limb Lengthening and Related Complications in Osteogenesis Imperfecta  
*David S. Feldman, MD*

Treatment Based Classification of Arthrogyrotic Hips and Knees – *David S. Feldman, MD*

Single Stage Surgery for Arthrogyrotic Hip and Knee Flexion Contractures – *David S. Feldman, MD*

Depression of the Medial Tibial Plateau in Infantile Blount Disease – Can Pathologic Bony Changes be Reversed with Guided Growth Treatment? – *Melinda S. Sharkey, MD*

#### Poster Presentations

Femoral Monofocal Sequential Compression–distraction Osteosynthesis Following Closing Wedge Osteotomy using a Magnetically–controlled Intramedullary Nail: A Case Report – *John A. Scolaro*

Distraction Osteogenesis Using Dual Magnetically Expandable Intramedullary Nails for Large Diaphyseal Femur Defects in the Sarcoma Patient – *Steven Magister*

Humeral Lengthening with Intramedullary Retrograde Nailing – A Surgical Technique and a Review of Three Cases – *Ulrik Kähler Olesen*

Redefining the Juvenile Bunion – *Anthony Riccio*

Eliminating the Pain Generator may be More Important than the Deformity Correction in Calcaneus Fracture  
*Ainsley Katherine Bloomer*

Tandem Use of a Single Magnetic Internal Lengthening Nail for Compound Femoral Lengthening  
*Harold J.P. van Bosse, MD*

Regional Nerve Block Decreases Length of Stay in Pediatric Gradual Correction Patients  
*Philip K. McClure, MD*

Nonvascularised Fibular Autograft for Reconstruction of Paediatric Bone Defects: An Analysis of 10 Cases  
*Gerard A. Sheridan*

Trends and Practices in Limb Lengthening Over 10 Years – A U.S. Database Study – *Ashish Mittal*

Hexapod Education in Developing Nations – *Richard Gellman, MD*

Tiered Team Research: A Novel Concept for Increasing Research Productivity in the Academic Setting  
*Vignesh K. Alamanda*

Does Anesthesia Choice affect in Hospital Outcomes for Adult Acute Deformity Correction Patients?  
*John E. Herzenberg, MD*

Prevalence of Vitamin D Deficiency in Adult Limb Lengthening and Deformity Correction Patients

*John E. Herzenberg, MD*

Accuracy of Virtual Surgical Planning and Custom 3D-printed Osteotomy and Reduction Guides for Acute Correction of Antebrachial Deformities in Dogs – *Christina Carolyn De Armond*

Clinical Observership Opportunities in North America for International Orthopaedic Surgeons

*Sanjeev Sabharwal, MD*