



POSNA 2009 ANNUAL MEETING

Scientific Program

Thursday, April 30, 2009

7:50 – 7:55 AM

Welcome and Announcements

B. Steven Richards, MD, President

Mininder S. Kocher, MD, Local Host

James R. Kasser, MD, Local Co-Host

HIP

Presider: Young-Jo Kim, MD

Moderator: Chad Price, MD

- 7:56 AM – 01 **Hip Arthroplasty following Slipped Capital Femoral Epiphysis**
8:00 AM *A. Noelle Larson, MD; Amy L. Mc Intosh, MD; Robert T. Trousdale, MD;*
Page 68 *David G. Lewallen, MD;*
Mayo Clinic, Rochester, Minnesota
- 8:01 AM – 02 **Symptomatic Femoroacetabular Impingement Following Mild**
8:05 AM **Slipped Capital Femoral Epiphysis After Pinning In-Situ**
Page 69 *Harish S. Hosalkar, MD; Timo Schmid, MD; Lorenz Buchler, MD;*
Moritz Tannast, MD; Klaus Siebenrock, MD;
Department of Orthopaedic Surgery, Inselspital,
University of Bern, Switzerland
- 8:06 AM – 03 **Acute, Severe, Unstable SCFE: Results of a Delayed Cuneiform**
8:10 AM **Neck Osteotomy Without Surgical Dislocation of the Hip**
Page 70 *Simond Jagermath, MBBS; Karl J. Logan, FRCS;*
Deborah M. Eastwood, FRCS; Aresh Hashemi-Nejad, FRCS;
The Royal National Orthopaedic Hospital, London, United Kingdom
- 8:11 AM – 04 **Multi-center Evaluation of Early Complications Following Surgical**
8:15 AM **Hip Dislocation in Adolescents**
Page 71 *Ernest L. Sink, MD; Daniel Sucato, MD; Young-Jo Kim, MD;*
Michael Dayton, MD, John Clohisy, MD; Ira Zaltz, MD;
The Children's Hospital, The University of Colorado, Denver,
Denver, Colorado
- 8:29 AM – 05 **Reoperations Following the Ganz Periacetabular Osteotomy for**
8:33 AM **Adolescent Hip Dysplasia**
Page 72 *Dinesh Thawrani, MD; Daniel J. Sucato, MD, MS; Adriana Hernandez, BS;*
David Podeszwa MD;
Texas Scottish Rite Hospital for Children, Dallas, Texas

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†LOE - Level of Evidence - Please see page 6 for details.

Thursday, April 30, 2009, continued

- 8:34 AM – 06 **Bernese Periacetabular Osteotomy (PAO) in Patients with Dysplasia of the Hip ≤ 19 Years of Age**
8:38 AM
Page 73
Perry L. Schoenecker, MD; Murat Pekmezci, MD; J. Eric Gordon, MD; Eliana D. Delgado, MD; John C. Clohisy, MD; St. Louis Shriners Hospital for Children, St. Louis, Missouri
- 8:39 AM – 07 **Effect of Innominate and Varus-Derotation Osteotomy on Acetabular Development In Developmental Dysplasia of the Hip**
8:43 AM
Page 74
Andreas Roposch, MS, MSc, FRCS; Gavin Spence, MD, FRCS; Richard Hocking, MBBS, FRACS; John H. Wedge, MD, FRCSC; Great Ormond Street Hospital for Children, London, England
- 8:44 AM – 08 **Analysis of Avascular Necrosis following Pemberton Acetabuloplasty in Developmental Dysplasia of Hip**
8:48 AM
Page 75
Kuan-Wen Wu, MD; Ting-Ming Wang, MD; Shier-Chieh Huang, MD; Ken N. Kuo, MD, FACS; Department of Orthopaedic Surgery, National Taiwan University Hospital, Taipei, Taiwan
- 9:02 AM – 09 **The Utility of Computed Tomography in Assessing Reduction of Developmentally Dislocated Hips**
9:06 AM
Page 76
Lauren A. Allen, MD, FRCSC; Daniel J. Sucato, MD, MS; Adriana Hernandez, BS; Royal University Hospital, Saskatoon, SK
- 9:07 AM – 10 **Predictors for Secondary Procedures following Open Reduction of Hip in Walking Children with Developmental Dysplasia of Hip (DDH)**
9:11 AM
Page 77
Purushottam A. Gholve, MD; Young-Jo Kim, MD; Matthew Garner; Michael B. Millis, MD; John (Jack) M. Flynn, MD; Children's Hospital Boston, Boston, Massachusetts
- 9:12 AM – 11 **Early Ultrasound Findings that Predict Late Failure of Treatment of Developmental Dysplasia of the Hip With the Pavlik Harness**
9:16 AM
Page 78
Pablo Castañeda, MD; Francisco Alvarez, MD; Shriners Hospital for Children, Mexico City, Mexico
- 9:17 AM – 12 **Breech Presentation at Delivery versus in Utero Breech Positioning with Vertex Delivery as a Risk Factor for Developmental Hip Dysplasia**
9:21 AM
Page 79
Nathan C. Hammel, MD; Anthony I. Riccio, MD; Naval Medical Center San Diego, San Diego, California
- 9:22 AM – Discussion
9:34 AM

CONGENITAL

Presider: Young-Jo Kim, MD

Moderator: Chad Price, MD

- 9:35 AM – 13 **Limb Length Discrepancy in Proximal Femoral Focal Deficiency**
9:39 AM *Eugene Farnig, MD; Matt Longacre, MD; Richard Bowen, MD;*
Page 80 *Anthony Scaduto, MD;*
University of California, Los Angeles, California
- 9:40 AM – 14 **◆ Superhip Procedure for Reconstruction of the Hip in Congenital**
9:44 AM **Femoral Deficiency**
Page 81 *Dror Paley, MD, FRCSC; Catharina Chiari, MD;*
Monica P. Nogueira, MD; Geoffrey A. Crandall, BA;
John E. Herzenberg, MD, FRCSC; Shawn C. Standard, MD;
Sinai Hospital of Baltimore, Rubin Institute for Advanced Orthopaedics,
Baltimore, Maryland
- 9:45 AM – 15 **Operative Treatment of Congenital Muscular Torticollis in**
9:49 AM **Children**
Page 82 *Jong Sup Shim, MD; Hee-Pyo Jang, MD; Sung-Wook Seo, MD;*
Samsung Medical Center, Sungkyunkwan University School of Medicine,
Seoul, Korea
- 9:50 AM – Discussion
9:59 AM
- 10:00 AM – **Arthur H. Huene Award &**
10:10 AM **St Giles Young Investigator Award**
- 10:11 AM – **Distinguished Achievement Award**
10:26 AM *Vernon Tolo, MD*
- 10:27 AM – Break
10:47 AM

**STATE OF PEDIATRIC ORTHOPAEDICS -
NOW and INTO THE FUTURE**

Moderator: B. Stephen Richards, MD

- 10:48 AM – **Significant Practice Changes in Pediatric Orthopaedics in 10 Years**
10:54 AM *W. Timothy Ward, MD*
Page 83 *Childrens Hospital of Pittsburgh, Pittsburgh, Pennsylvania*
- 10:55 AM – Discussion
11:00 AM

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Thursday, April 30, 2009, continued

11:01 AM – **Pediatric Orthopaedic Trauma... Now and the Future**
11:07 AM *James Beaty, MD*
Page 84 *Campbell Foundation, Memphis, Tennessee*

11:08 AM – Discussion
11:13 AM

11:14 AM – **Fellowship Training in Pediatric Orthopaedics**
11:20 AM *Peter Waters, MD*
Page 86 *Children's Hospital Boston, Boston, Massachusetts*

11:21 AM – Discussion
11:29 AM

SPORTS

Presider: Theodore Ganley, MD

Moderator: Baxter Willis, MD

11:30 AM – 16 **Degeneration of the Knee Joint in Skeletally Immature Patients**
11:34 AM **with a Diagnosis of an Anterior Cruciate Ligament Tear: Is There**
Page 87 **Harm in Delay of Treatment?**
J. Todd R. Lawrence, MD, PhD; Nina Agrawal, BA; Theodore J. Ganley, MD;
Children's Hospital of Philadelphia, Philadelphia, Pennsylvania

11:35 AM – 17 **Relationship Between Pain and Pitching Torques at the Elbow**
11:39 AM **and Shoulder Joints of Youth Baseball Pitchers**
Page 88 *Cynthia LaBella, MD; Elisa Lawler, MS; Nick Gryfakis, MS;*
Children's Memorial Hospital, Chicago, Illinois

11:40 AM – 18 **ACL Injuries in the Pediatric Population: A Report of our**
11:44 AM **Center's Experience**
Page 89 *Jennifer Goebel, BA; Kathy Abel, RN, MSN, CRNP, ONC;*
Theodore J. Ganley, MD; Lawrence Wells, MD; Jennifer J. Winell, MD;
Children's Hospital of Philadelphia, Philadelphia, Pennsylvania

11:45 AM – 19 **MRI Findings in Tibial Spine Injuries: A Look at Bone**
11:49 PM **Contusion Patterns**
Page 90 *Nathan L. Grimm, BS; Kevin G. Shea, MD; Tal Laor, MD;*
Ronald P. Pfeiffer, EdD; Eric Wall, MD;
Intermountain Orthopaedics, Boise, Idaho

FOOT

Presider: Theodore Ganley, MD

Moderator: Baxter Willis, MD

12:03 PM – 20 **Outcome of Patients Older than 12 Months with Clubfoot**
12:07 PM **Deformity Treated with the Ponseti Method**
Page 91 *Almairis Castillo Rivera, MD; Gilberto Rios, MD; Nelson Cassis, MD;*
Shriners Hospital for Children, Mexico City, Mexico

12:08 PM – 21 **Talonavicular Fusion for Dorsal Rotatory Subluxation of the**
12:12 PM **Navicular in Resistant Clubfoot**
Page 92 *Vineeta T. Swaroop, MD; Dennis R. Wenger, MD; Scott J. Mubarak, MD;*
Rady Children's Hospital San Diego, San Diego, California

12:13 PM – 12:17 PM Page 93	22	Prenatally Diagnosed Clubfeet: Comparing Ultrasonographic Severity with Clinical Outcomes <i>Michael P. Glotzbecker, MD; Judy A. Estroff, MD; Susan T. Mahan, MD, MPH; Justin C. Bosley; Richard B. Parad, MD, MPH; Samantha A. Spencer, MD; James R. Kasser, MD;</i> <i>Children’s Hospital Boston, Boston, Massachusetts</i>
12:18 PM – 12:22 PM Page 94	23	Prenatal Diagnosis of Idiopathic Clubfoot <i>Christof Radler, MD; Abigail Myers, BS; Rolf D. Burghardt, MD;</i> John E. Herzenberg, MD, FRCSC; Franz Grill, MD; <i>Rubin Institute for Advanced Orthopedics, Sinai Hospital of Baltimore, Baltimore, Maryland</i>
12:23 PM – 12:35 PM		Discussion
12:36 PM – 12:37 PM		Adjourn - Direction to Symposium
1:00 PM – 4:20 PM		SYMPOSIUM Breakout Sessions
1:00 PM – 2:30 PM		Spine Symposium Foot Symposium Practice Management Symposium CP/Gait Symposium
2:45 PM – 5:30 PM		Children’s Hospital Boston Tour
2:50 PM – 4:20 PM		Hip Symposium Trauma NP/PA Symposium COUR Symposium

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Friday, May 1, 2009

7:45 – 7:47 AM **Welcome and Announcements**
Daniel J. Sucato, MD

CLINICAL AWARDS

Presider: James McCarthy, MD

Moderator: Vern Tolo, MD

- 7:48 AM – 24 **Cost Comparison of Initial and Subsequent Surgeries Between**
7:52 AM **Patients with and without Pre-Operative Gait Analysis**
Page 95 *Tishya A. L. Wren, PhD; Michael Kalisvaart, MD; Christine Ghatan, BS;*
Susan A. Rethlefsen, BS; Reiko Hara, MA; Minya Sheng, MS;
Linda S. Chan, PhD; Robert M. Kay, MD;
Childrens Hospital Los Angeles, Los Angeles, California
- 7:52 AM – 25 **Is Ultrasound Screening for DDH in Breech Babies Enough?**
7:57 AM *Meghan N. Imrie, MD; Philip H. Stearns, CPNP; Vanessa Scott, BA;*
Page 97 *Scott J. Mubarak, MD;*
Rady Children’s Hospital San Diego, San Diego, California
- 7:58 AM – 26 **Gait Analysis After Initial Nonoperative Treatment for Clubfeet:**
8:02 AM **Intermediate Follow-up at Age 5 Years**
Page 98 *Lori A. Karol, MD; Kelly A. Jeans, MS; Ron El-Hawary, MD;*
Texas Scottish Rite Hospital for Children, Dallas, Texas
- 8:03 AM – 27 **Early Results for a Computer Randomized Prospective Study**
8:07 AM **Comparing Thoracic Screws versus Thoracic Hooks for Fixation**
Page 100 **in Adolescent Scoliosis**
Lawrence L. Haber, MD; Joshua D. Hughes BA; Erika D. Womack, BS;
University of Mississippi Medical Center, Jackson, Mississippi
- 8:08 AM – Discussion
8:20 AM
- 8:21 AM – 28 **Limb Salvage Reconstruction or Amputation for Severe Fibular**
8:25 AM **Deficiency: A Two-Center Comparison of Psychosocial Adjustment,**
Page 102 **Quality of Life, Patient Satisfaction and Physical Function**
John G. Birch, MD; Dror Paley, MD; Anne A. Morton, PhD (Project
Coordinator, TSRH); Stacey Specht, MPA (Project Coordinator, RIAO)
Texas Scottish Rite Hospital for Children, Dallas, Texas
- 8:26 AM – 29 **A Biomechanical Comparison of the Fastball and Curveball in**
8:30 AM **Adolescent Baseball Pitchers**
Page 104 *Carl W. Nissen, MD; Sylvia Ounpuu, MSc; Melany Westwall, PT;*
Kristan A. Pierz, MD; Janet P. Tate, MPH; Matthew J. Solomito, BS;
Connecticut Children’s Medical Center, Hartford, Connecticut
- 8:31 AM – 30 **Is Routine Bone Aspiration Necessary in the Initial Assessment/**
8:35 AM **Management of Acute Hematogenous Osteomyelitis?**
Page 105 *Joseph A. Janicki, MD; Paul A. Jellicoe; Mathew Woodsford, (MBChB);*
Unni G. Narayanan, MBBS, MSc, FRCSC;
The Hospital for Sick Children, University of Toronto,
Toronto, Ontario, Canada

8:36 AM – 31 **Operative versus Nonoperative Treatment of Midshaft Clavicle Fractures in Adolescents**
8:40 AM
Page 106
Kelly L. Vanderhave, MD; Michelle S. Caird MD; Frances A. Farley, MD; Aaron Perdue, MD; University of Michigan, Ann Arbor, Michigan

8:41 AM – Discussion
8:53 AM

BASIC SCIENCE AWARDS

President: James McCarthy, MD

Moderator: Vern Tolo, MD

8:54 AM – 32 **Chondrogenic Growth Factor Releasing Scaffolds for Regeneration of Growth Plates**
8:58 AM
Page 107
Nirmal Ravi, MS; Sharath Kumar C. Sundararaj, BS, Todd A. Milbrandt, MD; David A. Puleo, PhD; Shriners Hospital for Children, University of Kentucky, Lexington, Kentucky

8:59 AM – 33 **Radiofrequency Application to the Growth Plate in the Rabbit: A New Potential Approach to Epiphysiodesis**
9:03 AM
Page 108
Ismat Ghanem, MD; Samer El Hage, MD; Michel Diab, MD; Elie Saliba, MD; Aline Khazzaka, PhD; Georges Aftimos, MD; Fernand Dagher, MD; Khalil Kharrat, MD; Saint-Joseph University, Beirut, Lebanon

9:04 AM – 34 **Epiphyseal Cartilage Plays an Important Role in Revascularization of the Femoral Head Following Ischemic Osteonecrosis**
9:08 AM
Page 109
Haikuo Bian, MD; James Aya-ay, MS; Amanda Garces; Elise F. Morgan, PhD; Shawn R. Gilbert, MD; Harry K.W. Kim, MD, FRCSC; Shriners Hospitals for Children, Tampa, Florida

9:09 AM – 35 **Comparison of Modular and Rigid Hemiepiphyseal Stapling in the Ovine Tibia**
9:13 AM
Page 110
Kenneth J. Noonan, MD; Ellen Leifermann, DVM; Norm Wilsman, DVM, PhD; James McCarthy, MD; Yvonne Shao, PhD; R. Tracy Ballock, MD; University of Wisconsin Hospital and Clinics, Department of Orthopedics and Rehabilitation, Madison, Wisconsin

9:14 AM – Discussion
9:26 AM

9:27 AM – **Presidential Speaker**
9:52 AM
"Who Are We?"
J. Anthony Herring, MD

9:53 AM – Break
10:18 AM

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Friday, May 1, 2009, continued

Concurrent Session

Room 1

SPINE

Presider: Daniel Hedequist, MD

Moderator: Charles Johnston, MD

- 10:19 AM – 36 **Is Definitive Spinal Fusion, or VEPTR Removal, Needed After VEPTR**
10:23 AM **Expansions Are Over? An Analysis of the 39 “VEPTR Graduates”**
Page 112 **John (Jack) M. Flynn, MD; Tricia St. Hilaire, BS; John B. Emans, MD;**
Randal R. Betz, MD, Robert M. Campbell, Jr., MD;
Danielle B. Cameron, BA; the Chest Wall and Spine Deformity Study Group;
Children’s Hospital of Philadelphia, Philadelphia, Pennsylvania
- 10:24 AM – 37 **Complications in Growing Spine Surgery Vary by Type of Implant**
10:28 AM **(We Found More Complications than Study Groups Report!)**
Page 114 **Wudbhav N. Sankar, MD; Daniel C. Acevedo, MD; David L. Skaggs, MD,**
Children’s Hospital Los Angeles, Los Angeles, California
- 10:29 AM – 38 **The Effect of A New Modification of the Growing Rod Technique**
10:33 AM **on the Success Rate: Distal and Proximal Pedicle Screw Fixation,**
Page 115 **Dual Rod Application and Routine Lengthening Every Six Months**
Houman Ahmadiadli, MD; Zeynep Deniz Olgun, MD;
Muharrem Yazici, MD;
Hacettepe University Department of Orthopedics and Traumatology,
Ankara, Turkey
- 10:34 AM – Discussion
10:43 AM
- 10:44 AM – 39 **Low Profile Pelvic Fixation: Anatomic Parameters for Sacral**
10:48 AM **Alar-Iliac Fixation versus Traditional Iliac Fixation**
Page 116 **Tai-Li Chang, MD; Paul D. Sponseller, MD; Khaled M. Kebaish, MD;**
Johns Hopkins Hospital, Baltimore, Maryland
- 10:49 AM – 40 **Is It Necessary to Operate All Split Cord Malformations Before**
10:53 AM **Long Segment Corrective Surgery in Patients with Congenital**
Page 117 **Spinal Deformities?**
Mehmet Ayoaz, MD; Muharrem Yazici, MD; Nejat Akalan, MD;
Ahmet Alanay; Rifat Emre Acaroglu;
Hacettepe University Department of Orthopedics and Traumatology,
Ankara, Turkey
- 10:54 AM – 41 **Three Rod Technique Facilitates Posterior Only Hemivertebra**
10:58 AM **Excision in Children**
Page 118 **Daniel Hedequist, MD; John B. Emans, MD; Mark Proctor, MD;**
Childrens Hospital/Harvard Medical School, Boston, Massachusetts
- 10:59 AM – Discussion
11:08 AM

- 11:09 AM – 42 **Loss in Spinal Motion from Inclusion of a Single Mid-Lumbar Level in Posterior Fusion for Adolescent Idiopathic Scoliosis**
 11:13 AM *Mark C. Lee, MD; Brian G. Smith, MD; Jeffrey D. Thomson, MD; Sylvia Öunpuu, MSc; Matthew Solomito, BS; Center for Motion Analysis, Connecticut Children’s Medical Center, Hartford, Connecticut*
 Page 119
- 11:14 AM – 43 **Saving Lumbar Motion Segments in Posterior Instrumentation of Thoracolumbar and Lumbar AIS**
 11:18 AM *Mark A. Barry, MD; University of Nevada, Las Vegas, Nevada*
 Page 121
- 11:19 AM – 44 **Risk Factors for Distal Adding-On Identified: What to Watch Out For**
 11:23 AM *John A. Schlechter, DO; Peter O. Newton, MD; Vidyadhar V. Upasani, MD; Burt Yaszay, MD; Lawrence G. Lenke, MD; Randal R. Betz, MD; Thomas Lowe, MD; Harms Study Group; Rady Children’s Hospital San Diego, San Diego, California*
 Page 122
- 11:24 AM – Discussion
 11:33 AM
- 11:34 AM – 45 **Is Extended Preoperative Halo Traction Safe and Effective for Severe Pediatric Spinal Deformity? Critical Review of 62 Pediatric Patients**
 11:38 AM *Timothy R. Kuklo, MD; Kathryn A. Keeler, MD; Laura A. Meyer; Scott J. Luhmann, MD; Keith H. Bridwell, MD; Lawrence G. Lenke, MD; Washington University School of Medicine, St. Louis, Missouri*
 Page 124
- 11:39 AM – 46 **The Use of Preoperative Halo-Gravity Traction in Severe Pediatric Spinal Deformity**
 11:43 AM *Kristina S. Walick, MD; Daniel J. Sucato, MD; Anna McClung, RN; Charles E. Johnston, II, MD; Texas Scottish Rite Hospital for Children, Dallas, Texas*
 Page 125
- 11:44 AM – 47 **Factors Predictive of Curve Progression and Timing of Definitive Fusion in Early Onset Scoliosis (EOS) Treated by Growing Rod (GR) Construct**
 11:48 AM *Ujjwal K. Debnath, FRCS; Nanjundappa S. Harshavardhana, MS; Hossein S.M. Mehdian, FRCS (Tr & Orth); Michael P. Grevitt, FRCS (Tr & Orth); Geoffrey R. Burwell, FRCS (Tr & Orth); John K. Webb, FRCS (Tr & Orth); Centre for Spinal Studies & Surgery, Queen’s Medical Centre, Nottingham, United Kingdom*
 Page 126
- 11:49 AM – Discussion
 11:58 AM

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- 11:59 AM – 48 **High Circulating Levels of Osteopontin Is Associated with Idiopathic Scoliosis Onset and Spinal Deformity Progression**
12:03 PM
Page 128
Bouziane Azeddine, MSc; Anita Franco, MSc; Pierre H. Rompré, MSc; Marie-Hélène Roy-Gagnon, PhD; Isabelle Turgeon, BSc; Mamadou Samba Boiro BSc; Sacha Blain, BSc; Hugo Boulanger, BSc; Da Shen Wang, MD, PhD; Keith M. Bagnall, PhD; Benoît Poitras, MD; Hubert H.L. Labelle, MD; Charles-Hilaire Rivard, MD; Guy Grimard, MD; Jean Ouellet, MD; Stefan Parent MD, PhD; Alain Moreau, PhD; Sainte-Justine University Hospital, University of Montreal, Montreal, Canada
- 12:04 PM – 49 **Metal Ion Release In Paediatric Scoliosis Instrumentation**
12:08 PM
Page 129
Thomas P. Cundy; Matthew D. Rackham; Chris L. Delaney, BMBS; Leanne M. Sutherland, PhD; Andrew P. Oakley, MBChB, FRACS; Peter J. Cundy, MBBS, FRACS; Women's and Children's Hospital, Adelaide, Australia
- 12:09 PM – 50 **Pedicle Screws Adjacent to the Aorta: Is Prone CT Scan Helpful?**
12:13 PM
Page 131
Beverly Thornhill, MD; M. Gambassi; Adam L. Wollowick, MD; Alok D. Sharan, MD; Terry D. Amaral, MD; Vishal Sarwahi; Leonard Seimon, MD; Montefiore Medical Center, Bronx, New York
- 12:14 PM – Discussion
12:23 PM
- 12:24 PM – Adjourn Announcements – Local Host
12:26 PM

Concurrent Session

Room 2

SPECIAL TOPICS

Presider: Donald Bae, MD

Moderator: Kenneth Noonan, MD

- 10:19 AM – 51 **Incidence of Lyme Arthritis in Children Presenting with Lower Extremity Joint Effusions**
10:23 AM
Page 133
Matthew D. Milewski, MD; Aristides I. Cruz, Jr., MD; Brian G. Smith, MD; Yale-New Haven Children's Hospital, New Haven, Connecticut
- 10:24 AM – 52 **A New, Real-time PCR for Diagnosis of Invasive Infections Caused by *Kingella Kingae*: A Prospective Series of 31 Acute Arthritis in Children**
10:28 AM
Page 134
Brice Ilharreborde, MD; Mathie Lorrot; Edouard Bingen; Stiphane Bonacorsi; Keyvan Mazda, MD; Robert Debré Hospital, Paris, France
- 10:29 AM – 53 **An Evaluation of the Value of Repeat MRI Following Diagnosis of Acute Hematogenous Osteomyelitis**
10:33 AM
Page 135
P. Maxwell Courtney, BS, BA; David A. Spiegel, MD; B. David Horn, MD; John (Jack) M. Flynn, MD; Diego Jaramillo, MD; Rebecca Gaugler, BS; Children's Hospital of Philadelphia, Philadelphia, Pennsylvania
- 10:34 AM – Discussion
10:43 AM

- 10:44 AM – 54 **Practice Management: Are Physician Assistants' Cost Effective**
 10:48 AM **Assisting During Surgery in a Pediatric Orthopaedic Practice**
 Page 136 *William L. Hennrikus, Jr. MD; Matthew F. Halsey MD; Cheryl Kennedy CPA; UCSF Fresno Medical Education Program, Fresno, California*
- 10:49 AM – 55 **Increase in Child Abuse Volume and Mortality at a Pediatric**
 10:53 AM **Level 1 Trauma Center Following a Natural Disaster**
 Page 137 *Chad M. Hanson, MD; Joseph Sabella, PhD; David A. Podeszwa, MD; Children's Medical Center, Dallas, Texas*
- 10:54 AM – 56 **Unplanned Return to the Emergency Room Following Treatment**
 10:58 AM **in a Busy Fracture Clinic**
 Page 138 *Jeffrey R. Sawyer, MD; Conrad Ivie, MD; Jason Schroeder, PhD; James H. Beaty, MD; Derek Kelly, MD; William C. Warner, Jr., MD; S. Terry Canale, MD (n-none); University of Tennessee-Campbell Clinic, Memphis, Tennessee*
- 10:59 AM – Discussion
 11:08 AM

Concurrent Session

Room 2

UPPER EXTREMITY

Presider: Donald Bae, MD

Moderator: Peter Waters, MD

- 11:09 AM – 57 **Outcome Following Distal Spinocapular Nerve Transfer in**
 11:13 AM **Infants with Brachial Plexus Birth Injuries**
 Page 140 *David E. Ruchelsman, MD; Lorna E. Ramos, MA, OTR/L; Herbert Valencia, RNFA; Andrew E. Price, MD; Agatha Grossman; John A. I. Grossman, MD, FACS; Department of Orthopedic Surgery, New York University, Hospital for Joint Diseases, New York, New York*
- 11:14 AM – 58 **Combined Scapular Neck Osteotomy and Soft Tissue Rebalancing**
 11:18 AM **for Severe Glenohumeral Dysplasia Secondary to Brachial Plexus**
 Page 142 **Birth Palsy: Early Results of a New Approach**
Paul A. Jellicoe, MBBS, FRCS; Maulin Shah, MBBS, MS, DNB; Alison Anthony, BScPT; Christine Curtis, BScPT, MSc; Howard Clarke, MD, PhD, FRCSC, FAAP, FACS; Sevan Hopyan, MD, PhD, FRCSC; Divisions of Orthopaedic and Plastic Surgery, The Hospital for Sick Children, Toronto, Ontario, Canada

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11:19 AM – 59 **Novel Arthroscopic Partial Subscapularis Release for Internal
11:23 AM Rotation Contracture in Brachial Plexus Birth Palsy Preserves
Page 144 Internal Rotation Function**
Roger Cornwall, MD; Samara Friedman, MD
The Children's Hospital of Philadelphia, University of Pennsylvania
School of Medicine, Philadelphia, Pennsylvania

11:24 AM – Discussion
11:33 AM

**Concurrent Session
Room 2**

BASIC SCIENCE

Presider: Donald Bae, MD

Moderator: Benjamin Alman, MD, FRCSC

11:34 AM – 60 **Hindlimb Suspension in Young Mice as Model for Pediatric
11:38 AM Disuse Osteopenia**
Page 145
Michelle S. Caird, MD; John Foo; Shihan N. Khan; Benjamin P. Sinder, BS;
Jaclynn Kreider; Kenneth M. Kozloff, PhD;
University of Michigan, Ann Arbor, Michigan

11:39 AM – 61 **◆ Bisphosphonates Suppress the Initial Inflammatory Response
11:43 AM After Fracture in a Mouse Model of Osteogenesis Imperfecta (OI)**
Page 147
Arabella I. Leet, MD; Ying Ni, MS; Alka Jain, PhD; Tamara Kazarian, MS;
Neal S. Fedarko, PhD;
Johns Hopkins Hospital, Baltimore, Maryland

11:44 AM – 62 **Histological Changes of Dorsal Nerve Roots and Ganglia Induced
11:48 AM by Spinal Fusion in Immature Rabbit Model**
Page 148
Federico Canavese, MD; Alain Dimeglio, MD;
Donatella Volpatti, VMD; Bartolomeo Canavese, VMD;
CHRU Lapeyronie Montpellier, France

11:49 AM – 63 **Cell and Tissue Mechanisms of Limb Budding**
11:53 AM
Page 149
Laurie A. Wyngaarden, BSc; Sevan Hopyan, MD, PhD, FRCSC;
Program in Developmental and Stem Cell Biology
and Division of Orthopaedic Surgery, The Hospital for Sick Children,
Toronto, Ontario, Canada

11:54 AM – Discussion
12:06 PM

12:07 PM – 64 **Effect of Shock Wave Lithotripsy on Osteochondritis Dissecans
12:11 PM of the Knee in an Immature Rabbit Model**
Page 150
Roger M. Lyon, MD; Xue Cheng Liu, MD, PhD; Martin Kubin, MD;
Vladimir Osipov, MD; Joseph Schwab, MD;
Children's Hospital of Wisconsin, Medical College of Wisconsin,
Milwaukee, Wisconsin

12:12 PM – 12:16 PM Page 151	65	Guided Growth of the Proximal Femur <i>James McCarthy, MD; Brett Nemke, BS; Kenneth J. Noonan, MD</i> <i>University of Wisconsin, Department of Orthopaedics and Rehabilitation,</i> <i>American Family Children’s Hospital, Madison, Wisconsin</i>
12:17 PM – 12:21 PM Page 152	66	A Comparison of Three-Dimensional Shape Changes and Histomorphometry in Osteonecrosis <i>Vishwas R. Talwalkar, MD; JoAnne Resig, MS; David Pienkowski, PhD;</i> <i>Marie-Claude Faugere, MD; Christin Minter, PhD; Chester M. Tylkowski, MD;</i> <i>Harry Kim, MD;</i> <i>Shriners Hospital for Children, Lexington, Kentucky</i>
12:22 PM – 12:31 PM		Discussion
12:32 PM – 12:34 PM		Adjourn Announcements – Local Host

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Saturday, May 2, 2009

7:45 – 7:47 AM **Welcome and Announcements**
Steven L. Frick, MD

SPINE

Presider: Christopher Iobst, MD

Moderator: John Emans, MD

7:48 AM – 67 **Hybrid/Hook versus Pedicle Screw Instrumentation for Lenke**
7:52 AM **1,2 Type Adolescent Idiopathic Scoliosis: What Happens When**
Page 153 **Judges are Blinded to the Instrumentation?**

*Vincent Arlet, MD; Jean A. Ouellet, MD; Kirkam B. Wood, MD;
Francis H. Shen, MD; Donald P.K. Chan, MD; Jeffrey Shilt, MD;
Ernesto Bersusky, MD; Amit Singla, MD; John Hicks, MD;
Vasantha Reddi, PhD;
University of Virginia, Department of Orthopaedic Surgery,
Charlottesville, Virginia*

7:53 AM – 68 **Selective Thoracic Fusion in Adolescent Idiopathic Scoliosis:**
7:57 AM **Fuse to One Below Stable Vertebra for the Best Result**
Page 155 *Jun Takahashi, MD; Peter O. Newton, MD; Valerie L. Ugrinow, BA;
Tracey P. Bastrom, MA; Harms Study Group;
Rady Children’s Hospital San Diego, San Diego, California*

7:58 AM – 69 **Accelerated Disc Degeneration Below Posterior Spinal Fusion for**
8:02 AM **Adolescent Idiopathic Scoliosis: A Long Term MRI and Clinical**
Page 156 **Follow-Up Study**
*Thomas W. Lawhorne, III, MD; Daniel W. Green, MS, MD;
Roger F. Widmann, MD; Douglas N. Mintz, MD; Bernard A. Rawlins, MD;
Stephen W. Burke, MD; Caitlin Ahern, BS; Oheneba Boachie-Adjei, MD;
Hospital for Special Surgery, New York, New York*

8:03 AM – Discussion
8:12 AM

8:13 AM – 70 **What is the ‘Best’ Surgical Approach for a Lenke 1 Main Thoracic**
8:17 AM **Curve? Results of a Prospective, Multi-Center Study**
Page 157 *Peter O. Newton, MD; Michelle Marks, PT, MA; Randal R. Betz, MD;
Baron Lonner, MD; Harry L. Shufflebarger, MD; Michael O’Brien, MD;
Harms Study Group;
Rady Children’s Hospital San Diego, San Diego, California*

8:18 AM – 71 **A 22-Year Perspective of Electrophysiologic Monitoring for**
8:22 AM **Pediatric Spinal Deformity Surgery: Is There Value to Monitoring**
Page 159 **ALL Pediatric Spine Cases?**
*Earl D. Thuet, BS; Jacquelyn C. Winscher, BS; Anne M. Padberg, MS;
Keith H. Bridwell, MD; Lawrence G. Lenke, MD; Timothy R. Kuklo, MD;
Matthew B. Dobbs, MD; Mario Schootman, PhD; Scott J. Luhmann, MD;
Washington University, St. Louis, Missouri*

- 8:23 AM – 72 **Intraoperative AIS Neuromonitoring: Factors Associated with Good Baseline Data and Critical Changes**
8:27 AM
Page 161
Daniel J. Sucato, MD; Timothy R. Kuklo, MD; Mohammad Diab, MD; B. Stephens Richards, III, MD; Charles E. Johnston, II, MD; Lawrence G. Lenke, MD; Spinal Deformity Study Group; Texas Scottish Rite Hospital for Children, Dallas, Texas
- 8:28 AM – Discussion
8:37 AM
- 8:38 AM – 73 **Patient Self-Assessment of Appearance is Improved More by All Pedicle Screw than by Hybrid Constructs in Surgical Treatment of Adolescent Idiopathic Scoliosis**
8:42 AM
Page 162
Mia Smucny, BA; James O. Sanders, MD; Sigurd H. Berven, MD; John P. Lubicky, MD; Timothy R. Kuklo, MD; Daniel J. Sucato, MD; Mohammad Diab, MD; University of California, San Francisco, California
- 8:43 AM – 74 **Subjective versus Objective Outcomes in Posterior Spinal Fusion in Adolescent Idiopathic Scoliosis**
8:47 AM
Page 163
Sandra E. Donaldson, BA; Andrew W. Howard, MD, MSc; Derek Stephens, MSc; James G. Wright, MD, MPH; The Hospital for Sick Children, Toronto, Ontario, Canada
- 8:48 AM – 75 **Two Decade Results in Surgical Management of Congenital Scoliosis (CS)**
8:52 AM
Page 164
Nanjundappa S. Harshavardhana, MS; Ujjwal K. Debnath, MS, FRCS; Michael P. Grevitt, FRCS (Tr & Orth); Hossein S.M. Mehdian, FRCS (T & Orth); Brian J.C. Freeman, FRCS (Tr & Orth); Satya Thambiraj, FRCS; John K. Webb, FRCS (Tr & Orth) Centre for Spinal Studies & Surgery, Queen's Medical Centre, Nottingham, United Kingdom
- 8:53 AM – Discussion
9:02 AM

LOWER EXTREMITY

Presider: Michael Vitale, MD

Moderator: John Birch, MD

- 9:03 AM – 76 **Comparison of Two Different Fixation Methods for Guided Growth around the Knee**
9:07 AM
Page 165
Todd A. Milbrandt, MD, MS; Asher Smith, MD; Justin Kunes, MD; Jayesh Patel, MD; Vishwas R. Talwalkar, MD; Henry J. Iwinski, Jr., MD; Janet Walker, MD; University of Kentucky, Shriners Hospital for Children, Lexington, Kentucky

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Saturday, May 2, 2009, continued

- 9:08 AM – 77 **Treatment of Infantile Blount Disease with Lateral Tension Band Plating**
9:12 AM
Page 166
Allison C. Scott, MD;
Shriners Hospital for Children, Houston, Texas
- 9:13 AM – 78 **Mechanical Failures of Eight-Plate Guided Growth System for Temporary Hemiepiphyseodesis: A Multi-Center Survey**
9:17 AM
Page 167
Rolf D. Burghardt, MD; John E. Herzenberg, MD, FRCSC;
Rubin Institute for Advanced Orthopedics, Sinai Hospital of Baltimore, Baltimore, Maryland
- 9:18 AM – 79 **◆ Growth Harnessing by Eight Plate Compared to Percutaneous Epiphyseodesis Using Transphyseal Screw**
9:22 AM
Page 168
Shawn R. Gilbert, MD; Kennieth C. McCollough, MD;
Joseph G. Khoury, MD;
The Children’s Hospital of Alabama, Birmingham, Alabama
- 9:23 AM – Discussion
9:35 AM
- 9:36 AM – 80 **The Efficiency of Medial Femoral Tension Band Plating in Genu Valgum**
9:40 AM
Page 169
Humberto Guzman, MD; Burt Yaszay, MD; Vanessa Scott, BA;
Tracey Bastrom MA; Peter O. Newton, MD;
Rady Children’s Hospital San Diego, San Diego, California
- 9:41 AM – 81 **Complications of Medial Malleolar Screw Hemiepiphyseodesis for Ankle Valgus**
9:45 AM
Page 170
Paul M. Caskey, MD; Glen O. Baird, MD; Bryan J. Tompkins, MD;
Mark L. McMulkin, PhD; Ivan J. Antosh, MD;
Shriners Hospital for Children Spokane, Spokane, Washington
- 9:46 AM – 82 **◆ Role of Flexible Intramedullary Nails in Reducing the Period of External Fixation in Limb Lengthening in Children**
9:50 AM
Page 171
Dimitri A. Popkov, MD; Pierre F. Lascombes, Prof; Pierre Journeau, Prof;
Thierry Haumont; Arnold Popkov, Prof;
Hopital d’Enfants, CHU de Nancy, Vandoeuvre les Nancy, France
- 9:51 AM – Discussion
10:00 AM
- 10:01 AM – **Presidential Transfer**
10:11 AM
- 10:12 AM – Break
10:37 AM
- TRAUMA**
Presider: Todd Milbrandt, MD
Moderator: Steven Frick, MD
- 10:38 AM – 83 **The Operative Management of Medial Humeral Epicondyle Fractures: Treatment Delay and Extended Immobilization Lead to Poorer Functional Outcomes**
10:42 AM
Page 172
Jorge Gómez Chavarria, MD; Matthew R. Garner, BS;
John (Jack) M. Flynn, MD;
Children’s Hospital of Philadelphia, Philadelphia, Pennsylvania

- 10:43 AM – 84 **Return to Competitive Sports Following Medial Epicondyle Fracture in Adolescent Athletes: A Comparison of Operative versus Non-Operative Treatment**
 10:47 AM *J. Todd Lawrence, MD, PhD; Jonathan Macknin, MD;*
 Page 173 *John (Jack) M. Flynn, MD; Nina Agrawal; Theodore J. Ganley, MD;*
Children’s Hospital of Philadelphia, Philadelphia, Pennsylvania
- 10:48 AM – Discussion
 10:54 AM
- 10:55 AM – 85 **Treatment of Femoral Shaft Fractures in Young Children: Spica Cast or Flexible Rods**
 10:59 AM *Joseph P. Davey, MD; Mac E. Moore, MD; James L. Wood, BS;*
 Page 174 *University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*
- 11:00 AM – 86 **A “Walking Spica” Cast is Better than a Traditional Spica Cast for Low-Energy Femur Fractures: Results of a Prospective Cohort Trial**
 11:04 AM *John (Jack) M. Flynn, MD; Matthew R. Garner, BS; Kristofer J. Jones, MD;*
 Page 175 *Hayley C. Wolfgruber, BA; Joann D’Italia, MSN, CWOCN, CRNP;*
Richard S. Davidson, MD; Theodore J. Ganley, MD; David B. Horn, MD;
David Spiegel, MD; Lawrence G. Wells, MD
Children’s Hospital of Philadelphia, Philadelphia, Pennsylvania
- 11:05 AM – 87 **Pediatric Diaphyseal Femur Fractures: A Comparison of Outcomes Between Flexible Intramedullary Nailing versus Rigid Intramedullary Nailing**
 11:09 AM *Daniel J. Cuttica, DO; Kevin E. Klingele, MD;*
 Page 176 *Nationwide Children’s Hospital, Columbus, Ohio*
- 11:10 AM – Discussion
 11:19 AM
- 11:20 AM – 88 **Results of Single Bone Fixation of Unstable Diaphyseal Forearm Fractures**
 11:24 AM *Donald S. Bae, MD; Jeffrey F. Dietz, MD; David Zurakowski, PhD;*
 Page 177 *Peter M. Waters MD;*
Children’s Hospital Boston, Boston, Massachusetts
- 11:25 AM – 89 **Pediatric Clavicular Shaft Fractures Treated Nonoperatively: Assessment of Treatment Results, Fracture Patterns, Modes of Injury, and Patient Demographics**
 11:29 AM *Jeffrey I. Kessler, MD; Imani Gardner, MD; Julia Corral, MD;*
 Page 178 *Kaiser Sunset Hospital, Department of Orthopedics, Los Angeles, California*
- 11:30 AM – 90 **Pediatric Distal Tibia Fractures: Premature Physeal Closure in High Risk Fracture Patterns**
 11:34 AM *Jeffrey T. Leary, MD; J. Andrew Bowe, MD;*
 Page 179 *Pediatric Orthopedic Associates, East Brunswick, New Jersey*
- 11:35 AM – Discussion
 11:44 AM

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Saturday, May 2, 2009, continued

NEUROMUSCULAR

Presider: Todd Milbrandt, MD

Moderator: Michael Aiona, MD

- 11:45 AM – 11:49 AM
Page 180
- 91 **Reconstruction of Severe Hip Dysplasia in Ambulatory Cerebral Palsy by Ganz Periacetabular Osteotomy With or Without Proximal Femoral Valgus Osteotomy**
Daniel J. Sucato, MD, MS; Dinesh Thawrani, MD; Adriana Hernandez, BS; David A. Podeszwa, MD;
Texas Scottish Rite Hospital for Children, Dallas, Texas
- 11:50 AM – 11:54 AM
Page 181
- 92 **Is Percutaneous Adductor Tenotomy as Effective and Safe as the Open Procedure?**
Samer El Hage, MD; Ismat Ghanem, MD; Rami Rachkidi, MD; Fernand Dagher, MD; Khalil Kharrat, MD;
Department of Orthopaedic Surgery, Saint-Joseph University, Beirut, Lebanon
- 11:55 AM – 11:59 AM
Page 182
- 93 **Survivorship Analysis of Adductor Surgery to Prevent Hip Displacement in Children with Cerebral Palsy**
Benjamin J. Shore, MD, FRCSC; Xavier Yu, MBBS; Sameer Desai, MD; Jonathan Robin, MBBS; Rory Wolfe, BSc; Paulo R.B. Selber, MD, FRACS; H. Kerr Graham, MD, FRACS;
Department of Orthopaedics and Hugh Williamson Gait Laboratory, Royal Children's Hospital, Parkville, Victoria, Australia
- 12:00 PM – 12:09 PM
- Discussion
- 12:10 PM – 12:14 PM
Page 183
- 94 **Effect of Distal Hamstring Lengthening on Hamstring Length and Pelvic Tilt in Patients with Spastic Diplegia**
Moon Seok Park, MD; Chin Youb Chung, MD; Sang Hyeong Lee, MD; In Ho Choi, MD; Tae-Joon Cho, MD; Won Joon Yoo, MD; Kyoung Min Lee, MD;
Seoul National University Children's Hospital, Seoul, Korea
- 12:15 PM – 12:19 PM
Page 185
- 95 **◆ Epidural Baclofen for the Control of Post-Operative Spasm in Children With Cerebral Palsy**
Blaise A. Nemeth, MD, MS; Robert J. Montero, MD; Kenneth J. Noonan, MD; James J. McCarthy, MD; Teresa Guiliani, MSSW, David C. Mann, MD;
University of Wisconsin, Madison, Wisconsin
- 12:20 PM – 12:24 PM
Page 186
- 96 **◆ Steroid (Deflazacort) Treatment Prevents the Development of Lower Extremity Contracture in Duchenne Muscular Dystrophy**
Benjamin A. Alman, MD, FRCSC; Doug Biggar, MD;
The Hospital for Sick Children and Bloorview Kids Rehab., Toronto, Ontario, Canada
- 12:25 PM – 12:34 PM
- Discussion
- 12:35 PM – 12:37 PM
- Best Paper/Poster Award**



Symposia

Spine Symposium

1:00 PM – 2:30 PM

1:00 PM

Introduction

Co- Chairs: *Suken A. Shah, MD* and *Michael G. Vitale, MD, MPH*

1:00 – 1:30 PM

EARLY ONSET SCOLIOSIS

Moderator: *Michael G. Vitale, MD, MPH*

“Growing” Constructs: Minimizing “Obstacles”

Michael G. Vitale, MD, MPH

Casting: How, When and Why?

James O. Sanders, MD

Case Presentations: Complications in EOS (PANEL)

*James O. Sanders, MD; Scott J. Luhmann, MD;
Jonathan Phillips, MD; Paul D. Sponseller, MD*

1:30 – 2:00 PM

NEUROMUSCULAR SCOLIOSIS

Moderator: *Suken A. Shah, MD*

DEBATE: All Screw Constructs versus Traditional LG / Unit Rod Constructs for Neuromuscular Scoliosis

Screws: *Scott J. Luhmann, MD*

Vs.

LG / Unit Rod: *John Lonstein, MD*

Discussion, Q & A

2:00 – 2:25 PM

INFECTIONS IN SPINE SURGERY

Moderator: *Suken A. Shah, MD*

Lecture Overview on Treatment of Infection: I&D, VAC, Abx, Labs, etc.
Kirk Dabney, MD

Panel Discussion with Presentation of Instructive Complications

B. Stephens Richards, MD;

David L. Skaggs, MD;

Kirk Dabney, MD

2:25 – 2:45 PM

SPINE FREE PAPERS SESSION

The Magic Of Nitinol: Could It Work In Scoliosis?

*Peter O. Newton, MD; Christine L. Farnsworth, MS; Vidyadhar V. Upasani, MD;
Reid C. Chambers, BA; Seung Hwan Yoon, MD, PhD; Paul Firkins, MEng, PhD*

Does Obesity Hide Adolescent Idiopathic Scoliosis?

*Brandon Bruce, MD; Henry J. Iwinski, Jr., MD, Vishwas R. Tatwalkar, MD;
Janet Walker, MD; Todd A. Milbrandt, MD*

Shortening of Growing Rods can Reverse Cardiac Failure and Neurologic Injury

David L. Skaggs, MD; Pooria Salari, MD; Behrooz Akbarnia, MD

Discussion, Q & A

Foot Symposium

1:00 PM – 2:30 PM

Moderators: *Matthew Dobbs, MD* and *Lori A. Karol, MD*

PRESENTATIONS

1. **Foot Biomechanics**
Vincent S. Mosca, MD
2. **Flatfoot**
Perry L. Schoenecker, MD
Discussion
3. **Cavovarus Foot Reconstruction in Charcot-Marie-Tooth Disease: Deformity Correction and Tendon Transfers**
Vincent S. Mosca, MD
Discussion
4. **Tarsal Coalition**
Scott J. Mubarak, MD
Discussion
5. **Congenital Vertical Talus**
Matthew Dobbs, MD
Discussion

CASE PRESENTATIONS

There will be case presentations to amplify points of the talks.

There will not be free papers in this symposium.

Practice Management Symposium

1:00 PM – 2:30 PM

Games Insurance Companies Play - Contracting 101

Co-Chairs: *Howard R. Epps, MD* and *Jeffrey R. Warman, MD*

1:00 – 1:05 PM **Introduction**

Howard R. Epps, MD

1:05 – 1:18 PM **Constructive Alliances for Leverage in the Pay for Performance Era**

James R. Kasser, MD

1:18 – 1:28 PM Discussion

1:28 – 1:41 PM **Contracting Issues and Pitfalls**

Robert C. Durkin, MD

1:41 – 1:54 PM **Reimbursement Challenges and Obstacles**

Howard R. Epps, MD

1:54 – 2:04 PM Discussion

2:04 – 2:12 PM **Firing the Insurance Company – How to Terminate a Contract**

Jeffrey R. Warman, MD

2:12 – 2:25 PM **What is the Pediatric Orthopaedist Worth in 2009?**

J. Michael Wattenbarger, MD

2:25 – 2:30 PM Discussion

CP/Gait Symposium

1:00 PM – 2:30 PM

Co-Chairs: *Unni G. Narayanan, MD* and *Robert M. Kay, MD*

1:00 – 1:05 PM **Welcome and Introduction**

1:05 – 1:50 PM **Hip Instability in Cerebral Palsy**

Tentative Speakers/Panel Members:

Mark Abel, MD; Robert Kay, MD; James McCarthy, MD; Kenneth Noonan, MD

Moderator: *Unni G. Narayanan, MD*

Case Discussions to Highlight the following:

1. Defining the hip at risk: Who is at risk and when?
2. Why does this matter?
 - a. Consequences of hip instability in ambulatory CP
 - b. Consequences of hip instability in non-ambulatory CP
3. Surveillance for hip instability: when to start and how to do it?
4. What is the role for non-operative interventions?
5. Reconstructive Surgery: When and what to do?
6. Salvage surgery: When and what to do?

1:50 – 2:30 PM **The Lower Extremities in Cerebral Palsy**

Tentative Speakers/Panel Members:

Mark Abel, MD; Unni Narayanan, MD; James McCarthy, MD; Kenneth Noonan, MD

Moderator: *Robert M. Kay, MD*

1. Introductory Talk regarding “Pearls” in the Management of Children with Lower Extremity Problems:
 - a. Toe walking -- causes and common mistakes.
 - b. Varus feet – anterior versus posterior tibialis.
 - c. Intoeing -- causes in unilaterally versus bilaterally involved children.
 - d. Lever arm dysfunction -- why does it matter?

Case Discussions to Highlight the following:

1. The timing of surgery.
2. Surgical decision-making
 - a. Rectus transfers – indications and contraindications.
 - b. Varus feet
 - i. Anterior vs. posterior tibialis surgery(ies)
 - ii. When is bone surgery needed?
 - c. Intoeing
 - i. How to identify causes of intoeing
 - ii. Indications for osteotomies
3. Technical tips
 - a. Osteotomies
 - i. How much do you correct?
 - ii. Levels and fixation (e.g. proximal vs. distal femoral rotational osteotomies; plates vs. pins, etc.)
 - iii. Tendon transfers
 - a. Preferred sites and techniques

CP/Gait Symposium, continued

4. Post-operative care
 - a. Immobilization – techniques and duration
 - b. Weight-bearing
 - c. Intensity and duration of rehab

Hip Symposium

2:50 PM – 4:20 PM

SCFE

Moderator: *Ira Zaltz, MD*

2:50 – 2:57 PM **Natural History of SCFE Pinned in situ**

Randall T. Loder, MD

2:58 – 3:05 PM **In-Situ Pinning: Current Practices and Indication for Bilateral Pinning**

Richard S. Davidson, MD

3:06 – 3:14 PM **Approaches to the Severe Stable SCFE**

Michael B. Millis, MD

3:15 – 3:22 PM **Displaced Unstable SCFE Treatment Options**

Young-Jo Kim, MD

- a. In situ pinning
- b. Closed reduction
- c. Open reduction
- d. Modified Dunn procedure

3:23 – 3:29 PM **Complications Following SCFE: Current Management**

Ira Zaltz, MD

3:30 – 3:40 PM **Cases**

Ira Zaltz, MD and Young-Jo Kim, MD

LEGG-CALVE-PERTHES

Moderator: *Young-Jo Kim, MD*

3:41 – 3:48 PM **Current Understanding of Biology and Pathomechanics**

Harry KW Kim, MD

3:49 – 3:56 PM **Natural History of Untreated Perthes and Rationale for Treatment**

David A. Podeszwa, MD

3:57 – 4:04 PM **Containment: Who, When, How**

Dennis R. Wenger, MD

4:05 – 4:12 PM **Non-surgical Approaches to Treating LCP**

Perry L. Schoenecker, MD

4:13 – 4:21 PM **Total Hip Replacement in Very Young Patients**

John Clohisy, MD

4:22 – 4:32 PM **Cases: Management of PPP (Problem Perthes Patients)**

Ira Zaltz, MD and Young-Jo Kim, MD

Trauma Symposium: Nonaccidental Trauma in the Pediatric Patient – An Update and Overview

2:50 PM – 4:20 PM

2:50 – 3:00 PM **Introduction and “The Epidemiology of Nonaccidental Trauma”**
Joshua E. Hyman, MD

3:00 – 3:20 PM **“Imaging in Child Abuse: Current Concepts and Controversies”**
Paul Kleinman, MD

3:20 – 3:35 PM **“The Orthopaedic Surgeons Role in Non-Accidental Trauma”**
Ernest L. Sink, MD

3:35 – 3:50 PM **“The Medico-Legal Aspects of Nonaccidental Trauma:
What the Orthopaedist Should Know”**
Travis Matheny, MD

3:50 – 4:20 PM **Questions followed by Case Presentations**
Moderator: *Jennifer Weiss, MD*
Panel: *Paul Kleinman; Ernest L. Sink, MD; Joshua E. Hyman, MD;*
Travis Matheny, MD

NP/PA Symposium

2:50 PM – 4:20 PM

Moderators: *Kristan McKinney, APNP* and *Colleen Vitztum, RN, MSN, CCNS, RNFA*

Trauma for the Provider not Taking the Patient to the OR Fractures of the Proximal Humerus/Clavicle

Blaise A. Nemeth, MD

Fractures of the Elbow

Matthew Halanski, MD

Fractures of the Wrist and Forearm

James McCarthy, MD

Case Studies on the Upper Extremity

Fractures of the Knee

William L. Hennrikus, Jr., MD

Fractures of the Femur

Brad Olney, MD

Case Studies on the Lower Extremity

COUR Symposium

2:50 PM – 4:20 PM

Neglected Trauma with Limited Resources: Lessons Learned

Introduction

Sanjeev Sabharwal, MD

Case Presentations by COUR Scholars and Committee Members with Discussion

Moderators: *Richard M. Schwend, MD* and *Sanjeev Sabharwal, MD*

“Population” Based Surgery in Developing Countries

David A. Spiegel, MD

Global Outreach: EPOS Perspective

Bjarne Moeller-Madsen, MD

How can POSNA Members Get Involved?

Richard M. Schwend, MD



POSNA 2009 ANNUAL MEETING

Paper Poster Program

Paper Poster #1 (Page 188)

Melatonin Inhibits Chondrocyte Proliferation Through MT2 Receptor – A New Finding
*Weijun Wang, Mphil; Hiu-Yan Yeung, PhD; Chi-Wai Man, BSc; Kwong-man Lee, PhD;
Kin-Wah Ng, FRCSEd; Tzi Bun Ng, PhD; Yong Qiu, MD; Jack Chun Yiu Cheng, MD, FRCSEd;
The Chinese University of Hong Kong, Hong Kong, China*

Paper Poster #2 (Page 189)

The Effect of Wire Transfixation Through Physeal Plate: Does Size and Number of Attempts Matter?

*Abdul Razak Sulaiman, MD; Azura Mansor, MD; Elsmail Munajat, MD;
Eng Hin Lee, MD, FRCSC; James Hoi Po Hui, FRCSC;
National University Health System, National University of Singapore*

Paper Poster #3 (Page 190)

CT Reconstructions Invaluable for Detecting, Classifying, and Improving the Care of Talocalcaneal Coalitions of the Feet

*Alison Rozansky, MD; Molly Moor, BA; Dennis R. Wenger, MD; Scott J. Mubarak, MD,
Rady Children's Hospital San Diego, San Diego, California*

Paper Poster #4 (Page 191)

Does the Pistol-Grip Deformity Lead to Osteoarthritis?

*Sean R. Waldron, MD; Daniel R. Cooperman, MD;
Rainbow Babies and Children's Hospital, Case Western Reserve University, Cleveland, Ohio*

Paper Poster #5 (Page 192)

Shelf Acetabuloplasty for Perthes' Hips with Reducible Subluxation: Prognostic Factors Related to Hip Remodeling

*Won Joon Yoo, MD; In Ho Choi, MD; Tae-Joon Cho, MD; Chin Youb Chung, MD; Moon Seok Park;
Sung Jin Shin, MD
Seoul National University Children's Hospital, Seoul, Korea*

Paper Poster #6 (Page 193)

Unstable SCFE: A Systematic Review of Treatment and Results

*Ira Zaltz, MD; Sajan Raju, BS; Amanda Schutz, PhD; John Clohisy, MD;
William Beaumont Hospital, Royal Oak, Michigan*

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Poster Program, continued

Paper Poster #7 (Page 194)

Distal Femoral Extension Osteotomies as Treatment of Knee Flexion Contracture in Patients with Cerebral Palsy

Jason T. Rhodes, MD, MS; Robin Dorociak, BS; Molly Verschuyl, MPT; Ari Perstein, BA; Michael D. Aiona, MD;

Shriners Hospital for Children, Portland, Oregon

Paper Poster #8 (Page 196)

Pediatric Vitamin D Deficiency in a Southwestern Luminous Climate

Elizabeth A. Szalay, MD; Jeffrey J. Yaste, MD; Elyce B. Tryon, BA; Sandra Whisler, MD; University of New Mexico Hospital, Albuquerque, New Mexico;

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A Clinical Analysis of Shoulder and Hip Infections in Children

Mohan V. Belthur, MD; Jacob Weinberg, MD; Debra L. Palazzi, MD; Jerry A. Miller, MS, PhD; William A. Phillips, MD;

Texas Children's Hospital, Houston, Texas

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A Comparison of TLSO and SPINECOR Treatment of Adolescent Idiopathic Scoliosis Patients Using the SRS Standardized Criteria

Winston Chan, BS; Steven R. Gammon, MD; Charles T. Mehlman, DO, MPH; Eric J. Wall, MD; Cincinnati Children's Hospital, Cincinnati, Ohio

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Delayed Surgical Site Infections in Pediatric Spinal Deformity Surgery

Daniel Hedequist, MD; Timothy T. Hresko, MD; Anne Haugen, BS; John B. Emans, MD; Childrens Hospital/Harvard Medical School, Boston, Massachusetts

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The Effect of Spinal Fusion on Quality of Life for Patients with Severe Neuromuscular Scoliosis

Stuart V. Braun, MD; Jennifer Green, MD; Michael J. Goldberg, MD; Tufts Medical Center, Boston, Massachusetts

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Investigation of Femoral Strength Reduction in Anterior Cruciate Ligament Reconstruction

Shital N. Parikh, MD; Ron C. Merkel, MS; Eric J. Wall, MD; Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio

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Lawrence Wells, MD; Julie A. Dyke, PT, DPT; Jeffrey Albaugh, PT, MS, ATC; Theodore J. Ganley, MD; Children's Hospital of Philadelphia, Philadelphia, Pennsylvania

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Meniscus Tears in Young Athletes: Results of Arthroscopic Repair

Kelly L. Vanderhave, MD; Jon K. Sekiya, MD; Edward M. Wojtys, MD; James Moravek, MD; University of Michigan, Ann Arbor, Michigan

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Evgeny E. Krynetskiy, MD; Martin J. Herman, MD;
St. Christopher's Hospital for Children, Philadelphia, Pennsylvania

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A Minimally Invasive Stepwise Surgical Algorithm for Displaced Pediatric Phalangeal Neck Fractures: The Importance of Percutaneous Reduction

Jonas L. Matzon, MD; Roger Cornwall, MD
Children's Hospital of Philadelphia, Philadelphia, Pennsylvania

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Percutaneous Pinning of Pediatric Supracondylar Humerus Fractures: Does Pin Size Matter?

Umasuthan Srikumaran, MD; Eric Tan, BS; Gurkan Erkula, MD; Michael S. Bahk, MD;
Arabella I. Leet, MD; Mary Catherine Sargent, MD; Michael C. Ain, MD; Paul D. Sponseller, MD;
Johns Hopkins, Baltimore, Maryland

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Surgically Treated Tibial Tuberosity Fractures in Adolescents

Jack A. Conoley, MD; S. Terry Canale, MD; Jeffrey R. Sawyer, MD;
University of Tennessee – Campbell Clinic, Memphis, Tennessee

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Percutaneous Release for Trigger Thumb in Children

Adnan Sevencan, MD; Nusret Kose, MD; Ulukan Inan, MD; Hakan Omeroglu, MD;
Sinan Seber, MD;
Eskisehir Osmangazi University Hospital, Eskisehir, Turkey

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Systemic Mobilization of Endothelial Progenitor Cells During Distraction Osteogenesis In Human

Dong Yeon Lee, MD; Tae-Joon Cho, MD; Hye Ran Lee, MS; Won Joon Yoo, MD; Chin Youb Chung, MD; In Ho Choi, MD; Seoul National University Children's Hospital, Seoul, Korea

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Abnormal Responses to Melatonin in Osteoblasts Cultured from Adolescent Idiopathic Scoliosis

Chi Wai Gene Man, BSc; Weijun Wang, Mphil; Hiu Yan Benson Yeung, PhD; Kin Wah Bobby Ng, FRCSEd; Vivian Wing-Yin Hung, Mphil; Kwong Man Simon Lee, PhD; Tzi Bun Ng, PhD; Yong Qiu, MD; Jack Chun Yiu Cheng, MD; The Chinese University of Hong Kong, Hong Kong, China

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Anatomic and Radiographic Study to Ensure Accurate Positioning of Tension Band Plates (8 Plates)

David S. Feldman, MD; Douglas D. Duncan, MD; Fulya Ustunkan, BS; Frederick J. Kummer, PhD; NYU Hospital for Joint Diseases, New York, New York

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Reliability and Repeatability of Measuring Vertebrae Rotation from Spine Radiographs

Douglas M. Hedden, MD; Marc J. Moreau, MD; James K. Mahood, MD; Edmond Lou, PhD; Douglas L. Hill, MBA; James V. Raso, MASc; University of Alberta, Edmonton, Alberta, Canada

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Do Modern Pedicle Screw Constructs Benefit from the Addition of Crosslinks?

John E. Tis, MD; Melvin Helgeson, MD; Anton Dmitriev, MD; Department of Orthopaedics, Johns Hopkins Medicine, Baltimore, Maryland

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Musculoskeletal Health in MPS II: Pediatric Outcomes Data Collection Instrument (PODCI) Demonstrates Functional Improvements in Patients on ERT

Klane K. White, MD, MSc; Susana Hale, ARNP, MN; Michael Raff, MD; Michael J. Goldberg, MD; Seattle Children's Hospital, Seattle, Washington

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The 3-Dimensional Configuration of the Typical Hip and Knee in Diastrophic Dysplasia

Dennis S. Weiner, MD; David K. Jonah, MA; Steven E. Koptis, MD (deceased); Akron Children's Hospital, Akron, Ohio

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Congenital Synostosis of the Knee: Early Results of Limb Reconstruction Surgery

Mohan V. Belthur, MD; Rolf D. Burghardt, MD; John E. Herzenberg, MD, FRCSC;
Dror Paley, MD, FRCSC;

Texas Children's Hospital/Shriners Hospital for Children-Houston, Houston, Texas

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Limited Cervical Motion in Patients with Familial Dysautonomia

Eric R. Henderson, MD; Mark E. Schweitzer, MD; **David S. Feldman, MD;**

NYU Hospital for Joint Diseases, Center for Children, New York, New York

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◆ **Fracture of the Long Bone Stabilized By Telescopic Rod in Osteogenesis Imperfecta Patients**

Tae-Joon Cho, MD; Ji Beom Kim, MD; Sung Jin Shin, MD; Moon Seok Park; Won Joon Yoo, MD;
Chin Young Chung, MD; In Ho Choi, MD;

Seoul National University Children's Hospital, Seoul, Korea

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Correlation of Radiographs to Pedobarographs In Nonoperatively Treated Idiopathic Clubfeet

Joshua Meier, MD; Kelly A. Jeans, MS; **Lori A. Karol, MD**

Texas Scottish Rite Hospital for Children, Dallas, Texas

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Toward Effective Ponseti Clubfoot Care: The Uganda Sustainable Clubfoot Care Project

Shafique P. Pirani, MD, FRCSC; Edward Naddumba, MSOrth; Richard Mathias, FRCPC;

Joseph Konde Lule, PhD; Jackson Amone, MD, MPH; Ben Mbonye, FRCS;

Norgrove Penny, MD, FRCSC; Fulvio Franceschi, MD; Titus Beyeza, MD, MMed;

University of British Columbia, Vancouver, British Columbia, Canada

This study was supported by National Institute of Health (NIH)

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The Mechanism of Clubfoot Tarsal Anlagen Deformity Correction During Ponseti Treatment

Shafique P. Pirani, MD, FRCSC; Sorin Siegler, PhD; David Hodges, FRCPC;

Roza Mahmoodian, PhD; Jayaram Udupa, PhD; William Morrison, MD; Richard Brand, MD;

Ignacio Ponseti, MD;

University of British Columbia, Vancouver, British Columbia, Canada

This study was supported by Canadian International Development Agency and CBMI

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Progression of Idiopathic Clubfoot Correction Using the Ponseti Method

Alice Chu, MD; Amy S. Labar, Debra A. Sala, MS, PT; Harold J.P. Van Bosse, MD;

Wallace Lehman, MD;

NYU Hospital for Joint Diseases, New York, New York

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Percutaneous Heel Cord Tenotomy Performed Under General Anesthesia on Infants with Clubfoot

Glen O. Baird, MD; Roberto Auffant, MD; Bryan J. Tompkins, MD; Paul M. Caskey, MD;

Shriners Hospitals for Children, Spokane, Washington

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A Novel Biomechanical Model to Assess the Risk of Slipped Capital Femoral Epiphysis in the Contralateral Hip

John M. Martell, MD; Jimmi Mangla, MD; Robert Ellis, MD; Alfred Atanda, MD; Christopher M. Sullivan, MD; Robert J. Bielski, MD; Lee S. Segal, MD; Phoenix Children's Hospital, Phoenix, Arizona

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A Positive Impingement Sign Identifies Labral Pathology and Assists in Planning Surgical and Imaging Protocols for Adolescent Hip Disease

Daniel J Sucato, MD, MS; David A. Podeszwa, MD; Adriana Hernandez, BS; Texas Scottish Rite Hospital for Children, Dallas, Texas

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Epidemiologic Characterization of Patients Who Develop a Subsequent Contralateral Slip After a Unilateral Stable Slipped Capital Femoral Epiphysis

Pablo Castañeda, MD; Irving Martínez, MD; Shriners Hospital for Children, Mexico City, Mexico

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Kalamchi and MacEwen Group I AVN Has Objective Adverse Effects on the Radiographic Outcome in DDH

Haluk Agus, MD; Hakan Omeroglu, MD; Ali Bicimoglu, MD; Yucel Tumer, MD; Multicentric Study Group for DDH; Eskisehir Osmangazi University, Eskisehir, Turkey

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Hinge Abduction in Legg-Calvi-Perthes Disease - Definition with Hip Arthrography Under General Anesthesia

Junichi Nakamura, MD; Makoto Kamegaya, MD; Takashi Saisu, MD; Naoshi Ikegawa, MD; Makoto Takazawa, MD; Tomonori Kenmoku, MD; Shunji Kishida, MD; Yoshitada Harada, MD; Kazuhisa Takahashi, MD; Chiba Children's Hospital, Chiba City, Chiba, Japan

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Reproducibility of Herring's Classification Using Two Different Techniques and its Alteration During the Evolution of the Disease

Renjit A. Varghese, MBBS, MS(Ortho), MHSc(Epi); Kishore Mulpuri, MBBS, MS(Ortho), MHSc(Epi); Benjamin Joseph, MBBS, MS(Ortho), MCh; University of British Columbia, Vancouver, British Columbia, Canada

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Spica Cast Immobilization Following Management of Bladder Extrophy

Kit M. Song, MD; Brett Wiater, MD; Ismael Zamilpa, MD; Margaret Shnorhavorian, MD; Richard Grady, MD; Vincent S. Mosca, MD; Gregory A. Schmale, MD; Ernest U. Conrad III, MD; Klane White, MD; Seattle Children's Hospital, Seattle, Washington

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Natural Progression of Hip Dysplasia in Newborns: A Reflection of Hip Ultrasonographic Screenings in Newborn Nurseries

Chia-Hsieh Chang, MD; Hui Wen Chen, MD; Yu Y. Chen, PT, MS; Ken N. Kuo, MD; Chang Gung Memorial Hospital, Taoyuan, Taiwan

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Residual Acetabular Dysplasia After a Closed Reduction in the Treatment of Developmental Dysplasia of the Hip

*Pablo Castañeda, MD, Jelitze Sosa-Colomé, MD;
Shriners Hospital for Children, Mexico City, Mexico*

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On the Relationship Between Femoral Neck Inclination and Femoral Version

*Raymond W. Liu, MD; Paul Toogood, BS; Daniel E. Hart, BS; Dwight T. Davy, PhD;
Daniel R. Cooperman, MD;
Case Western Reserve University, Cleveland, Ohio*

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Triple Pelvic Osteotomy in Complex Hip Dysplasia Seen in Neuromuscular and Teratologic Conditions

*Gleeson Rebello, MD; Christof Zilkens, MD; Marcel Dudda, MD; Travis Matheney, MD;
Young Jo Kim, MD, PhD;
Children's Hospital Boston, Boston, Massachusetts*

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Heel Pad Migration Following Modified Syme/Boyd Amputations in Children

*Janet L. Walker, MD; Vishwas R. Talwalkar, MD;
Shriners Hospitals for Children, University of Kentucky, Department of Orthopaedic Surgery,
Lexington, Kentucky*

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◆ **Angular Deformity Correction by Asymmetrical Physeal Suppression in Growing Children: Stapling versus Transphyseal Screw**

*Tae-Joon Cho, MD; Sung Jin Shin, MD; In Ho Choi, MD; Won Joon Yoo, MD;
Chin Youb Chung, MD; Moon Seok Park;
Department of Orthopaedic Surgery, Seoul National University Children's Hospital, Seoul, Korea*

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Functional Comparison of Proximal Focal Femoral Deficiency (PFFD) Patients with No Contiguous Hip Joint

*Kimberly Savarino; Anita Bagley, PhD; Joel A. Lerman, MD; Sherry Middleton,
Richard J. Haynes, MD; Douglas A. Barnes, MD;
Shriners Hospital-Northern California, Sacramento, California*

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Distal Tibial Rotation Osteotomies Normalize Frontal Plane Knee Moments

*Bruce MacWilliams, PhD; Mark McMulkin, PhD; Glen O. Baird, MD; Peter M. Stevens, MD;
Shriners Hospitals for Children, Spokane, Washington*

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James Hoi Po Hui, FRCSE; Mala Satku, MD; Ismail Munajat, MD; Azura Mansor, MD; Kevin B.L. Lim, FRCSEd(Orth); Arjandas S. Mahadev, MD; S.T. Quek, MD;

Eng Hin Lee, MD, FRCSC;

National University Health System, Singapore

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Comparison of Digital versus Manual Measurements of Lower Extremity Alignment

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Shriners Hospital for Children, University of Kentucky, Lexington, Kentucky

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Shelden L. Martin MD; Dino Samartzis PhD; Amy Gerson BA; Peter F. Sturm MD;

Shriners Hospital for Children, Chicago, Illinois

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Impact on Personal Time in Parents of Children with Neuromuscular Disease

Michael G. Vitale, MD; Hiroko Matsumoto, MA; Debra Clayton-Krasinski, PhD, PT;

Jaime A. Gomez, MD; Joshua E. Hyman, MD; David P. Roye, Jr., MD;

Pediatric Orthopaedic Surgery, Department of Orthopaedic Surgery, Columbia University, College of Physicians and Surgeons, New York, New York

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The Cerebral Palsy Hip Scale is Valid and Reliable

Michael L. Murnaghan, MD, MEd, FRCS(C); Jonathan G. Robin, MBBS (Hons);

H. Kerr Graham; Paulo R. B. Selber, MD; Pamela Simpson, BSc (Hons);

Royal Children's Hospital, The University of Melbourne, Melbourne, Victoria, Australia

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◆ Effectiveness of the Pain Pump for Postoperative Pain Management in Children with Cerebral Palsy

Komalam Muthusamy, MBChB, MRCS; Sarah M. Recktenwall-Work, BS; Richard M. Friesen, BA;

Jeannie Zuk, PhD; Jane Gralla, PhD; Nancy Hadley Miller, MD; Jeffrey L. Galinkin, MD;

Frank M. Chang, MD;

The Children's Hospital, Aurora, Colorado

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Three-Dimensional Computed Tomography for Determination of Femoral Anteversion in Children with Cerebral Palsy

Joseph R. Carney, MD; Anthony I. Riccio, MD; Mark D. Stanley, MD; Nathan C. Hammel, MD;

Jeffrey A. Cassidy, MD; Jon R. Davids, MD;

Naval Medical Center San Diego, San Diego, California

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Do Children Lose Weight after Significant Orthopaedic Intervention?

Anuj Prasher, MD; Vishwas R. Talwalkar, MD; Janet Walker MD; Henry Iwinski, Jr., MD;

Todd A. Milbrandt, MD, MS;

Shriners Hospital for Children, University of Kentucky, Lexington, Kentucky

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Femur Fractures in the Pediatric Population: Abuse or Accidental Trauma?

Keith Baldwin, MD, MPH, MSPT; Nirav K. Pandya, MD; Hayley Wolfgruber, BA; Cindy Christian, MD; Denis S. Drummond, MD; **Harish S. Hosalkar, MD, MBMS, FCPS, DNB**; Department of Orthopaedic Surgery and Department of General Pediatrics, Children's Hospital of Philadelphia, Pennsylvania

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Comparing Three Quality of Life Measures in a Pediatric Orthopaedic Population

Brian K. Brighton, MD, MPH; **Ryan C. Goodwin, MD**; Boris Bershadsky, PhD; David P. Gurd, MD; R. Tracy Ballock, MD; Thomas E. Kuivola, MD; Cleveland Clinic, Cleveland, Ohio

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Outcomes Analysis After Routine Removal of Implants in Healthy Pediatric Patients

Alice Chu, MD; Maura R. Madou, BS; Debra A. Sala, MS, PT; Gail S. Chorney, MD; David S. Feldman, MD; NYU Hospital for Joint Diseases, New York, New York

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Septic Arthritis in Children: A Contribution on Epidemiology, Microbiology and Therapeutic Aspects

Edwa Russel, MS; Eugene Leibowitz, MD; David Grimberg, MD; **Eugen Cohen, MD**; Soroka Medical Center, Ben Gurion University, Beer-Sheva, Israel

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What Paediatric Core Competencies Should be Included in an Orthopaedic Surgery Residency-training Program?

Veronica Wadey, MD, MA, FRCSC; Parvati Dev, PhD; Decker Walker, PhD; **Douglas M. Hedden, MD**; University of Alberta, Edmonton, Alberta, Canada

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Coaptive Film versus Subcuticular Suture: Comparing Skin Closure Time Following Identical, Single Session, Bilateral Lower Limb Surgery in Children

Brian E. Grottkau, MD; Gleeson N. Rebello, MD; Ravi Parikh, BS; Department of Pediatric Orthopedics, Massachusetts General Hospital, Boston, Massachusetts

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MRI Prospective Study of Steroid-induced Osteonecrosis in Childhood SLE

Junichi Nakamura, MD; Makoto Kamegaya, MD; Takashi Saisu, MD; Naoshi Ikegawa, MD; Makoto Takazawa, MD; Yoko Miura, MD; Shunji Kishida, MD; Yoshitada Harada, MD; Kazuhisa Takahashi, MD; Chiba Children's Hospital, Chiba City, Chiba, Japan

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Epiphysial Sparing Techniques for Malignant Tumors in Children Using Epiphysial Distraction (Pamplona Technique) and Transepiphysial Resections

Ulrich G. Exner, MD; Charles Eduard Dumont, MD; Orthopädie Zentrum Zürich, Seestrasse, Zürich

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The Etiology and Short-term Morbidity of Fasciotomy for Acute or Impending Compartment Syndrome in Children

Kevin B.L. Lim, FRCSEd(Orth); Tero Laine, MD, PhD; Unni G. Narayanan, MD, FRCSC; The Hospital for Sick Children, University of Toronto, Ontario, Canada

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Pelvic Fixation in Cerebral Palsy Scoliosis Results in Better Restoration of Pelvic Obliquity, Sitting Ability and a Lower Reoperation Rate: Do the Benefits Outweigh the Costs?

Suken A. Shah, MD; Paul D. Sponseller, MD; Mark F. Abel, MD; Peter O. Newton, MD; Lynn Lekto, MD; Daniel J. Sucato, MD; Randal R. Betz, MD; Alfred I. duPont Hospital for Children, Wilmington, Delaware

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What Factors are Important in Determining Intraoperative Blood Loss During Scoliosis Surgery?

Suken A. Shah, MD; Gabriela Ramirez-Garnica, PhD; Gang Ye, PhD; Robert P. Stanton, MD; Celerin Lubica; Alfred I. duPont Hospital for Children, Wilmington, Delaware

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Effect of Intra-Operative Tensioning of an Anterolateral Spinal Tether on Spinal Growth Modulation in a Porcine Model

Peter O. Newton, MD; Christine L. Farnsworth, MS; Vidyadhar V. Upasani, MD; Reid Chambers, BA; Shunji Tsutsui, MD; Michael A. Sliwka, MA; Riley Hawkins, BS; Rady Children's Hospital San Diego, San Diego, California

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Five-Fold Increased Risk of Pseudoarthrosis or Delayed Infection Following Early Wound Infection in the Neuromuscular Scoliosis Patient

Burt Yaszay, MD; Jeff Pawelek, BS; Shunji Tsutsui, MD; Tracey P. Bastrom, MA; Peter O. Newton, MD; Rady Children's Hospital San Diego, San Diego, California

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Disc Health Preservation After Six Months of Spinal Growth Modulation: Expanding the Treatment Options for Fusionless Scoliosis Correction

Vidyadhar V. Upasani, MD; Christine L. Farnsworth, MS; Reid C. Chambers, BA; Tracey P. Bastrom, MA; Gregory M. Williams, MS; Robert L. Sah, MD; Peter O. Newton, MD; Rady Children's Hospital San Diego, San Diego, California

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Optimization of the Fluid Management and Blood Transfusion Strategies During Adolescent Scoliosis Surgery

Leonard Seimon, MD; Marina Moguilevitch, MD; Alok Sharan, MD; Terry Amaral, MD; Adam Wollowick, MD; Vishal Sarwahi; Montefiore Medical Center, Bronx, New York

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Hospital Costs Associated with Surgical Treatment of Adolescent Idiopathic Scoliosis

Charles T. Mehlman, DO, MPH; Jun Ying, PhD; Cassie L. Kirby, BA; Cincinnati Children's Hospital, Cincinnati, Ohio

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VEPTR Spine to Spine Constructs (Growing Rods) for Infantile and Juvenile Neuromuscular Scoliosis, Early Results

Klane K. White, MD, MSc; Nathan Frost, MD; Kit M. Song, MD; Seattle Children's Hospital, Seattle, Washington

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Coagulopathic States in Pediatric Spine Patients

Kit M. Song, MD; Dana Matthews, MD; Joseph Eichinger, MD; Nathan Frost, MD Seattle Children's Hospital, Seattle, Washington

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Poor Bone Quality in Adolescent Idiopathic Scoliosis - Using Non-Invasive Calcaneal Quantitative Ultrasound

Vivian Wing-Yin Hung, MPhil; Ling Qin, PhD; Hiu-Yan Yeung, PhD; Kwong-Man Lee, PhD; Bobby Kinwah Ng, MD; Jack Chun Y. Cheng, MD; The Chinese University of Hong Kong, Hong Kong, China

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Pedicle Screw Placement in Pediatric Scoliosis Surgery: Do Non-Idiopathic Patients Have Higher Misplacement Rates?

Michael G. Vitale, MD, MPH; David M. Privitera, MD; Jaime A. Gomez, MD; Hiroko Matsumoto, MA; Steve A. Klinge, MD; Joshua E. Hyman, MD; David P. Roye, Jr., MD; Columbia University, College of Physicians and Surgeons, New York, New York

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Minimizing Tourniquet Pressure in Pediatric Anterior Cruciate Ligament Reconstructive Surgery: A Blinded, Prospective Randomized Controlled Trial

Christopher W. Reilly, MD, FRCSC; James A. McEwen, PhD, PEng; Lise Leveille, BSc; Angeliki Perdios, MSc; Kishore Mulpuri, MBBS, MS(Ortho), MHSc(Epi); University of British Columbia, Vancouver, British Columbia, Canada

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Outcomes of Hip Arthroscopy Between Pediatric and Adult Populations

Micah T. Long, BS; James McCarthy, MD; James Keene, MD; Kenneth J. Noonan, MD; Blaise Nemeth, MD; University of Wisconsin, Department of Orthopedics & Rehabilitation, Madison, Wisconsin

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The Passive Distraction Test: An Aid for the Clinical Diagnosis of Superior Labral Pathology in Adolescents

John A. Schlechter, DO; Dostacey Summa, PA-C; Benjamin D. Rubin, MD; Children's Hospital Orange County, Orange, California

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Access to Care for Pediatric Orthopedic Patients in South Florida

Christopher A. Iobst, MD; Wesley F. King, MD; Avi C. Baitner, MD; Michael A. Tidwell, MD; Stephen M. Swirsky, DO; Miami Children's Hospital, Miami, Florida

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Supracondylar Humerus Fractures in Older Children: Treatment Modalities and Outcomes

Brent G. Mollon, BHSc; W. Scott McGuffin, BSc; Jamie A. Seabrook, MA, PhD Candidate;

Kristinn Kellie Leitch, MD, MBA, FRCS(C);

Schulich School of Medicine & Dentistry, London, Ontario, Canada

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Fracture Type Primarily Influences the Final Outcome in Pediatric Hip Fractures

Hakan Omeroglu, MD; Ulukan Inan, MD; Nusret Kose, MD;

Eskisehir Osmangazi University Hospital, Eskisehir, Turkey

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Are There Identifiable Risk Factors that Lead to an Increased Incidence of Trampoline Injuries in the Pediatric Population?

Melissa S. Smith, CPNP; Alan K. Stotts, MD; Stephanie M. Holmes, MD; Sarah Mumford, MBA;

John T. Smith, MD;

University of Utah, Salt Lake City, Utah

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A New Protocol for Non-operative Management of Pediatric Type I Open Fractures

Christopher A. Iobst, MD; Craig Spurdle, MD; Wesley King, MD; Avi Baitner, MD;

Michael A. Tidwell, MD; Stephen M. Swirsky, DO;

Miami Children's Hospital, Miami, Florida

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Are Fracture Patterns Sustained by Children in Automobile Accidents Influenced by Age or Obesity?

Jeffrey R. Sawyer, MD; Aaron Creek, BS; Matthew Rudloff, MD; Jason Schroeder, PhD;

John Gehrig, BS;

Campbell Clinic-University of Tennessee, Memphis, Tennessee

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Escalators, Rubber Clogs and Severe Foot Injuries in Children

Kevin B.L. Lim, MD, FRCSEd(Orth); Robert T.J. Yap, MBChB, BAO; Elvin Lokino, MD;

Arjandas S. Mahadev, MD, FRCSE; James Hoi Po Hui, MD, FRCSE; Khee-Sien Lam, MD, FRCSE;

Eng Hin Lee, MD, FRCSC;

KK Women's and Children's Hospital & National University Hospital, Singapore

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Operative versus Non-Operative Treatment of Medial Epicondyle Fractures:

A Systematic Review

Jeremy M. LaMothe, MD, PhD; Heather L. Hurdle, BSc, MSc; Carmen A. Brauer, MD, MSc;

University of Calgary, Calgary, Alberta, Canada

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Growth Arrest in Medial Malleolar Physeal Fractures

Susan T. Mahan, MD, MPH; Tracy A. Curtis, MA;

Children's Hospital Boston, Boston, Massachusetts

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A Multi-Planar Osteotomy of the Distal Humerus via the Posterior Approach for Correction of Cubitus Varus

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Do EMG Characteristics Predict Muscle Function in Neonatal Brachial Plexus Palsy?

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Correction of Cubitus Varus after Pediatric Supracondylar Elbow Fracture: Improved Method Using the Taylor Spatial Frame

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Operations for Type II Forearm Deformities in Multiple Hereditary Osteochondromatosis

Yin-Chun Tien, MD; Ko-Zuki Kenso, MD;

Kaohsiung Medical University Hospital, Taiwan

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Results of Modified Woodward Operation for Severe Sprengels Deformity

AlaaEldin Azmi Ahmad, MD; Hugh G. Watts, MD;

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