

MEETINGS ROUNDUP³⁶⁰



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7TH INTERNATIONAL CONGRESS ON EARLY ONSET SCOLIOSIS AND GROWING SPINE (ICEOS), RANCHO BERNARDO, CALIFORNIA, USA, NOVEMBER 21–22, 2013

This year's International Congress on Early Onset Scoliosis and Growing Spine (ICEOS) was a special one as it was hosted in San Diego, California, which is regarded by some as the home of early onset scoliosis surgery. Dr Behrooz Akbarnia, who is from San Diego, has been the constant force behind the ICEOS meeting since its inception seven years ago. Even prior to ICEOS formally becoming a congress, Dr Akbarnia hosted several smaller meetings in which he invited international early onset scoliosis thought leaders to come to San Diego to share their views. The meeting has evolved over the years and the 7th International Congress was superb. The course chairman, Dr David Skaggs, did a wonderful job of putting together a stellar programme of thought-provoking subjects and excellent speakers.

On the day prior to the ICEOS meeting, the Growing Spine Study Group and the Children's Spine Study Group (formerly the Chest Wall and Spine Deformity Study Group), held a combined study group meeting in which discussions were held on several combined study group projects. It was clear that there is a synergy between the groups and that, by combining forces on certain projects, better designed and more powerful studies will emerge. This meeting also demonstrated a willingness for consensus on controversial topics such as the definition of early onset scoliosis. Despite the initial definition of "scoliosis of any etiology with onset prior to the age of five years", there has been a growing trend over recent years to expand that definition to the age of ten years. This reflects not only the changes in the maturity of the lungs, chest wall, and spine, but also reflects an age at which treatments for scoliosis typically change as well. The sub-group, which includes members from both study groups, plans to propose this change in definition to the executives of both groups, as well as to the Scoliosis Research Society Growing Spine Committee and to the Pediatric Orthopaedic Society of North America.

On November 21st, the ICEOS meeting itself kicked off in style with a unique approach to the free paper session. Moderator Dr David Marks and "judges" Dr Charlie Johnston, Dr Laurel Blakemore, and Dr Rick Schwend were all in full costume as the session was conducted "American Idol" style. The 15 papers in this session were presented and then scored/critiqued by the judges. Not surprisingly, the judging was fair, and the session was quite entertaining. The highest score in this session was awarded to "Pulmonary And Radiographic Outcomes Of VEPTR Treatment In Early Onset Scoliosis", co-authored by Ozgur Dede, Etsuro K. Motoyama, Charles I. Yang, Rebecca L. Mutich, Austin J. Bowles, and Vincent F. Deeney. The investigators evaluated medium-term results of 21 children with thoracic insufficiency syndrome who were treated with Vertical Expandable Prosthetic Titanium Rib (VEPTR) and thoracoplasty. They observed correction of Cobb angle (80° pre-implantation to 67° at final follow-up) and no significant change in sagittal alignment in most patients. Importantly, Forced Vital Capacity (FVC)

increased with time; however, percent-predicted FVC and respiratory system compliance decreased over time. This thought-provoking paper underscored the importance of careful pulmonary assessments of our treatments for early onset scoliosis.

The best paper winner was a multicentre group, including Michael G. Vitale, Howard Y. Park, BA, Hiroko Matsumoto, Tricia St. Hilaire, Evan P. Trupia, Hasani W. Swindell, John M. Flynn, David L. Skaggs, and David P. Roye. Their paper, "The Classification for Early Onset Scoliosis (C-EOS) Identifies Patients at Higher Risk for Complications at 5 years of Follow Up", used a new consensus-based classification system to further validate the prognostic potential of the C-EOS, with a specific goal of examining the frequency and severity of device-related complications among C-EOS classes following surgery. This study identified 78 EOS patients, with minimum five years of follow-up, from the Children's Spine and Growing Spine Study Groups databases. These patients were classified using the C-EOS, which includes categories for aetiology (C: Congenital, N: Neuromuscular, S: Syndromic, I: Idiopathic), Cobb (1: ≤ 20°, 2: 21° to 50°, 3: 51° to 90°, and 4: >90°) and kyphosis ("-" ≤ 20°, "N"; 21° to 50°, "+" >50°). Complications were categorised by the Complication Classification System in Growing Spine Surgery, which differentiates device-from disease-related complications and groups them into mild, moderate, and severe. Two thirds of patients experienced at least one complication, although only 18% of patients experienced a complication affecting outcome (Severity > 2A). The greatest frequency of device-related complications with the highest severity (> 2A) occurred within non-idiopathic, hyper-kyphotic classes with large Cobb angles (> 51°). Within the idiopathic aetiology, no patients experienced a severe complication (> 2A) requiring a return to the operating room or a change in treatment, irrespective of Cobb angle and Kyphosis severity. These findings demonstrated that the frequencies and types of complications varied among classification subtypes of patients with early onset scoliosis. The results will help us better counsel families about the risks associated with growth-friendly surgery and may help us better understand the different treatment modalities used for this challenging condition.

These are just two of 39 free papers that were presented at the meeting, which also featured case presentations of complications, moderated by Dr John Lonstein, debates, master's techniques, tips and tricks, and industry-sponsored hands-on workshops. Overall, there were 135 surgeons from 23 countries, including about 60% from North America, 30% from Europe, and 10% from other countries such as Turkey, Egypt, China, Brazil, and Australia. ICEOS was truly an international meeting and will continue with its tradition of alternating years between locations in North America and Europe. The 8th International Congress on Early Onset Scoliosis and Growing Spine will be hosted in Warsaw, Poland on November 20–21, 2014. Program Chair, Dr David Skeggs, promises to deliver another action-packed ICEOS meeting that will include the most up-to-date and relevant research on early onset scoliosis. We look forward to seeing you there.