Written Report

I am grateful to accept the Travelling Sponsorship to attend the *15th Annual International Pediatric Orthopaedic Symposium* in Orlando, Florida on 27 November to 1 December 2018.

The Symposium was presented by the Pediatric Orthopaedic Society of North America (POSNA) and the American Academy of Orthopaedic Surgeons (AAOS). My learning objectives of the symposium were:

- Effectively assessing children with musculoskeletal conditions requiring care
- Comparing and contrasting surgical and non-operative treatment options for common pediatric orthopaedic conditions
- Applying alternative treatment techniques for selected pediatric orthopaedic conditions
- Identifying, managing, and preventing complications of common pediatric orthopaedic conditions and treatments
- Implementing evidence-based strategies for infection control, fracture care, and management of sports-related injuries

The course was intensive and fulfilling. The first full day started with a rapid-fire review of challenges and controversies in paediatric trauma. Dr. Donald Bae from Boston Children's Hospital discussed his hospital's algorithm in posterior sternoclavicular dislocations, only choosing to treat acute posterior dislocations and having thoracic surgery colleagues stand-by in operating room. A beach chair position was used, with transverse incision. The joint was fixed with drill holes on both sides and figure-of-8 suture, paying attention to periosteal and capsular closure. A brief survey of the audience showed that thankfully, no attendees have faced catastrophic complications so far when fixing these dislocations. Dr. Haemish Crawford from Starship Children's Hospital shared his experiences with the proximal humeral neck fractures, where his experience with cases requiring surgical fixation usually failed with closed reduction and he preferred open reduction with crossed kirschner wires for 100% displaced fractures.

Dr. Peter Waters from Boston Children's Hospital shared his experience with supracondylar fractures with vascular compromise. His key points were:

- First step in treatment to be anatomic reduction of supracondylar fracture expediently
- No role for preoperative angiography
- Majority (70-80+%) of avascular or dysvascular hands would had restored blood flow to the hand with anatomic reduction of the fracture closed and then stabilized with pins

However, there is still controversy on the algorithm and urgency of treatment for the fractured, pink but pulseless hand.
No clear definitive test indicates patients with pink but pulseless hands
a. are at risk for compartment syndrome,
b. have sufficient collateral flow

c. have vasospasm secondary to the fracture will vasodilate with time

Therefore in Dr. Water's centre, these patients can be treated with
a. immediate surgical exploration similar to the white and pulseless hand, or
b. observe the pink, pulseless hand and receive emergent surgery if clinical status deteriorates. A quick survey found most of the audiences and faculties agreed that despite the evidence that a pulseless, pink hand had no long-term sequelae after anatomical fixation, most would observe these patients in their unit for 24-72 hours postoperatively.

In another session Dr. Jon Davids and Dr. Ben Shore, from the Shriners Hospital for Children and Boston Children's Hospital respectively, moderated a session about the medical and surgical treatment of the neuromuscular disease patient, going through all the topics of tone management indications and ideal candidates for Botox, oral baclofen, intrathecal pumps and selective dorsal rhizotomy. Hip surveillance guidelines, soft tissue and skeletal surgery for neuromuscular hip dysplasia, pelvic osteotomies and salvage procedures were all covered in one short afternoon.

Dr. David Spiegal from the Children's Hospital of Philadelphia shared his significant expertise in global orthopaedics on the third day of the symposium. He noted the burden of musculoskeletal diseases was difficult to quantify on a global scale due to lack of epidemiologic data and also challenges in measuring surgical diseases with existing metrics e.g. Disability Adjusted Life Years. However, he noted that the burden of those suffering musculoskeletal injury were more than tuberculosis, malaria and HIV combined. Only a multidisciplinary approach would work in meeting the global need. Dr. Jon Davids discussed about the management of a neglected clubfoot. The faculty together then shared their experience in operating in developing on third world countries and encouraged attendees to get involved as well.

I've covered only a tiny portion of all the pearls and wisdom that was shared by the faculty over the five days! The course had a comprehensive program, with a large breadth of programs to choose from, sometimes running concurrently and therefore making it difficult to choose which workshop or lecture to attend. The course was run punctually by all moderators, with each speaker having only five to ten minutes presentation time, therefore keeping the audience attentive and allowing adequate breaks between sessions. The best part of the course was the CME Breakout sessions, which allowed small-group interaction with the faculty. I chose to attend workshops on:

1. Six-axis deformity correction with the circular fixator. Dr. John Herzenburg from Sinai Hospital graciously gifted all attendees a copy of his books, The Art of Limb Alignment and The Art of Limb Alignment: Taylor Spatial Frame. Dr. Herzenburg and Dr. Christof Radler from Orthopaedic Hospital Speising provided step-by-step revision of the principles and clinical application of the Taylor Spatial Frame (TSF).

2. Saw bone Salter, Dega and Pemberton pelvic osteotomies workshop
3. Six-axis deformity correction with the circular fixator: Blount's Disease. Application of the TSF when the deformity was close to the joint.
4. Six-axis deformity correction with the circular fixator: Ankle equinus contracture. Application with distally-based referencing and use of the online software to titrate the soft tissue release.

There were daily CME Breakout workshops on Ponseti casting, pelvic osteotomies, gait analysis and adolescent sport conditions.

There was even a virtual-reality station to practice insertion of a retroverted screw in a case of slipped capital femoral epiphysis. Users inserted the guide pin, measured, drilled and inserted the screw, complete with calibrated vibration of the handle to mimic bone drilling.

There was a generous daily breakfast and lunch buffet provided, with ongoing coffee and tea supply throughout the day. The conference venue was comfortable, with desk tables provided in most rooms for the attendees. The meeting was virtually paperless, with all information provided through a well-designed digital app, including the agenda and all notes provided by the speakers ahead of time, which was wonderful. Corporate sponsors were present at their booths throughout the meeting and displayed all their paediatric-specific plasters, orthoses and implants. Other than the US hosts, I also met surgeons from Spain, Colombia, South Korea and Israel. It was a great cross-cultural meeting, with excellent academic content and highly recommended for anyone wishing to get a very concise update on the latest trends in paediatric orthopaedic surgery from the experts who have literally written the book on the topic and graciously shared their honest experiences first-hand.

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