

POSNA/APPOS Traveling Fellowship Report

Dates of Fellowship: 9/9/2017 to 9/25/2017

Fellows:

- Mark C. Lee, MD (Connecticut Children's, Hartford, CT)
- Rushyuan Jay Lee, MD (Johns Hopkins, Baltimore, MD)
- Raymond Liu, MD (Case Western, Cleveland, OH)

Introduction

The practice of Pediatric Orthopaedics is built on the contributions of a diverse array of physicians with particular interests in certain disease processes. The conversation between surgeons with varied perspectives has led to continued advances in the field and, ultimately, better care for patients. However, it is easy for a surgeon whose practice and training have been restricted to a certain geographic region and a certain practice style to become dogmatic and anecdotal, ultimately limiting the options available to their patients.

As the three 2017 POSNA/APPOS traveling Fellows, we viewed the opportunity provided as a chance to share ideas with a portion of the world with which we do not often interact. At the outset, we were excited to see new surgical techniques and new processes, as well as experience the cultural differences that may influence overall care. As the trip progressed, and as described in the following, we began to understand that the practice insight into Pediatric Orthopaedics gained in the 2.5 weeks of travel will likely take years to completely digest.

Day by Day Itinerary

9/9/2017 – 9/10/2017

Travel from USA to Japan with transfer from Tokyo to Fukuoka. The flight from Tokyo to Fukuoka brought us directly over Mt. Fuji, with its peak visible through the backdrop of clouds.



Mount Fuji as viewed from the air.

9/11/2017

The day began with a tour of the recently constructed Fukuoka Children's Hospital. Here, notable differences in patient management were immediately apparent, as Dr. Yamaguchi, took us on rounds.



Fukuoka Children's Hospital first level, as seen from 2nd level.



Dr. Yamaguchi demonstrating an abduction orthosis with an ischial prop for protected weight-bearing, used in Perthes disease.

We later visited Kyushu University Hospital, the adult hospital in Fukuoka. There, we observed the very complex Sugioka osteotomy, essentially a rotational osteotomy around the axis of the neck as a treatment for AVN, where the most viable portion of the femoral head is brought into the weight-bearing zone.



At Kyushu University. From Left to Right: Dr. Iwamoto, Jay Lee, Raymond Liu, Dr. Nakashima and Mark Lee



Dr. Nakashima tests a drill during Sugioka Osteotomy. Raymond Liu looks on from under the arch of the C-Arm.

The day was capped by a wonderful dinner at Yakitori Restaurant, which was truly a feast.

9/12/2017

We began the day observing several more surgeries at Fukuoka Children's Hospital and Kyushu University Hospital. In the children's hospital, a scoliosis surgery was performed by Dr. Yanagida with free-hand pedicle screw instrumentation. At Kyushu University Hospital, we observed a unique lateral approach for a spherical periacetabular osteotomy and then a proximal femoral varus osteotomy through a dome cut at the intertrochanteric level by Dr. Nakashima.

In the evening, each of the Fellows gave scientific presentations to the faculty, Fellows and residents of Kyushu University Orthopaedics Department, followed by an excellent discussion session.

We were later brought to Bistro au bascou, our introduction to the delicious Japanese-French fusion cuisine. Our gracious hosts provided us with ties bearing the Kyushu University seal to commemorate the visit.



Dr. Yanagida (far right) preparing for posterior spinal fusion at Fukuoka Children's Hospital.



At Bistro au bascou with our hosts in Fukuoka. From far Right, Dr. Iwamoto and Dr. Nakashima.

9/13/2017

We spent the morning exploring the downtown area of Fukuoka, where an annual fair was being held. One of the stands had a number of gold fish in an aquarium that one could try to catch with a paper net. As the paper dissolved with each swipe in the water, we understood why this game would make a successful stand.



Fair in downtown Fukuoka. One can play catch the goldfish with a not-too-sturdy fish net.



Standing in front of the bathing site for an annual religious festival with our gracious guides for the morning. Left to Right: Dr. Ma, Jay Lee, Mrs. Iwamoto, Dr. Iwamoto and Raymond Liu.

We later departed Fukuoka by high speed rail and arrived at Shin-Kobe Station. We were greeted there by Dr. Kobayashi, a pediatric orthopaedic surgeon at Kobe Children's Hospital, who would serve as our local host.

That evening, we had dinner with the local Pediatric Orthopaedic surgeons in downtown Kobe and discussed the basic differences between the nationalized health care system of Japan and the private system of the U.S. Dr. Satsuma, the Chief of Pediatric Orthopaedics in Kobe, explained how the declining birth rate in Japan is affecting the practice of Pediatric Orthopaedics.



Waiting on a train platform in Fukuoka. Left to Right: Mark Lee, Raymond Liu and Jay Liu.



Dr. Satsuma (left), Chief of Pediatric Orthopaedics, discussing Pediatric Orthopaedics in Japan.

9/14/2017

We visited Kobe Children's Hospital and marveled at another children's hospital with exceptionally modern touches. Our hosts explained that hip dysplasia is found with high prevalence in Japan and discussed the utility of preoperative traction prior to closed or open reduction. In the OR, we observed an open reduction procedure through an anterior approach.

In the evening, we traveled to downtown Kobe to experience Japanese Italian food. Interestingly, the restaurant made a mean pizza.



Patient receiving traction for hip dysplasia with a tibial pin traction apparatus.



Left to Right: Raymond Liu, Dr. Satsuma, Jay Lee and Dr. Kobayashi

9/15/2017

Prior to leaving for Seoul, we made the most of a free morning in Kobe by pursuing the famous Kobe steak. The meat is a reflection of the pampered and, literally, massaged existence of the cow from whence it came.



Left to Right: Raymond Liu, Jay Lee and Mark Lee



The marbled texture of Kobe steak before it was cooked and consumed.

We then traveled from Osaka Kansan Japan to Seoul, South Korea. In Seoul, we were greeted by Dr. Yon-Woon Shin and Sung Min Kim (Fellow), who would serve as our local hosts. They were wonderful enough to pick us up at a late hour and take us into downtown Seoul, some 45 minutes away from the airport.

9/16/2017

The Saturday had little activity in the hospitals. So, we took an extended tour of Seoul with our terrific tour guide, Dr. Sung Min Kim, a Pediatric Orthopaedic Fellow at Severance Hospital.



Gyeongbokgung Palace in downtown Seoul. Korean Pediatric Orthopaedic fellow Dr. Kim, our terrific guide, showed us how royalty used to live in old Korea.



Standing in the tallest structure in Seoul, Lotte tower, and looking straight down through the glass floor. Shoes belong to, from Left to Right, Raymond Liu, Jay Lee and Mark Lee.

9/17/2017

Dr. Yong-Woon Shin guided us to Daejeon, a town outside of Seoul, for the Korean Pediatric Trauma Symposium. The day covered the gamut of pediatric upper and lower extremity injury, from the mundane to the complex. Although the entire conference was given in Korean, we were still able to follow along with the radiographs on the slides and the intermittent phrase in English. We each gave a presentation on a specific topic: Raymond Liu – Management of physeal arrest, Mark Lee – Posterior approach to the lateral condyle fracture, Jay Lee – Pediatric ACL reconstruction.



Traveling with Dr. Yong-Woon Shin (white shirt) to and from Daejeon, the location of the Pediatric Trauma Symposium.



Group photo with members and leadership of the Korean Pediatric Trauma Symposium.

9/18/2017

With Pediatric Orthopaedic Fellow Sun Ming Kim again as our guide, we visited Yonsei University and its teaching hospital, Severance Hospital. Severance Hospital is one of the largest medical complexes any of us had ever visited, with over 3,000 beds. The hospital also includes a literal mall, with more than 10 restaurants and shops which patients can visit while waiting for a text message that their appointment is almost ready. It was rated 4th in customer satisfaction on a recent national survey, behind three 5-star hotels. Following the tour of the hospital, we participated in an evening conference discussing management of pediatric neuromuscular hip disorders and gait impairment. The day concluded with a wonderful meal at a local Korean restaurant.



The massive and impressive Severance Hospital, inclusive of Children's Hospital. The hospital has almost 3,000 beds and most of the hospital was built over the last 15 to 20 years.



Group photo with the staff from Severance Hospital. Far left is Dr. Sun Ming Kim, our fantastic guide throughout Severance Hospital. Dr. Hyun-Woo Kim (blue shirt, khaki pants) is the Department Chair and specializes in cerebral palsy, Dr. Kun-Bo Park (dark sports jacket) is a staff surgeon who focuses on pediatric sports medicine and Dr. Lee Jung Woo (blue scrubs), is a staff pediatric orthopaedist.

9/19/2017

We visited Seoul National University Children's Hospital, the other large Children's medical facility in Seoul that helps to support a population of almost 30 million people. We were immediately struck by the extensive construction in the front of the hospital. An ambitious, outpatient facility was to be built 7 stories underground.

We attended the morning pediatric orthopaedic case conference where we met Professor Tae-Joon Cho. We then observed Professor Cho insert a custom-built telescoping rod to stabilize the tibia in a patient with osteogenesis imperfecta. The locking mechanism distally and proximally consisted of interlocking pins placed under fluoroscopy.

We were then taken on a tour of the children's hospital, which was interestingly founded at the same time as Severance hospital and shares an interesting joint history. Most fascinating was that the hospital was developed adjacent to one of the ancient Korean palaces and the palace is visible from some of the patient rooms.



Dr. Tae-Joon Cho beginning to demonstrate use of a telescoping rod, of his own design, to stabilize a tibia fracture in an osteogenesis imperfecta patient.



Partially threaded wire interlock in telescoping rod.

In the evening, we made our way to Incheon international Airport and flew from Seoul, South Korea to Delhi, India.

9/20/17

After arriving in Delhi, we passed the 10 hour layover in nearby hotels. Upon returning refreshed to the Delhi airport from the hotel in the morning, we discovered that our domestic flight to Goa had been cancelled because of heavy rains in Mumbai. After looking around for travel alternatives, we were able to obtain a flight from Delhi to Goa in the afternoon.

We arrived in Goa at 8PM and were met by Prashant, one of the very busy orthopedic residents at Goa Medical College. The poor guy was just post-call and going to be on call the following day. The residents at Goa take Q2 call, operate through most nights, and stay to the end of day post call. Prashant had also come to the airport earlier at 2PM thinking we were on the now cancelled flight. We will always remember his kindness and patience with our travel misadventures.

After arriving, we were promptly delivered to a conference of the Goa Orthopaedic Association (GOA), where we headlined the educational program. We gave presentations on our research involving: Pediatric ACL Repair (Jay Lee), Slipped Capital Femoral Epiphysis (Raymond Liu) and Biologic Epiphysiodesis (Mark Lee). After the conference, delicious Indian food was brought out for everyone's enjoyment.



A crowd outside Goa International airport, waiting for arrivals.



Professor Bandekar, Chief Surgeon at Goa Medical College, passing the microphone to an attendee of the Goa Orthopaedic Association conference at Hotel Fidalgo Panaji in Old Goa.

9/21/2017

Today was a visit to Goa Medical College. It is the sole medical training institution in Goa and offers excellent orthopaedic trauma exposure for the residents with an amazing trauma volume. We attended a case conference where patients were initially presented on Powerpoint and then presented in person. Mark Lee also presented on the general management of pediatric tibia fractures and, subsequently, an interesting discussion ensued on management of a tibial nonunion. A tour of the hospital was provided and we were introduced to the large, open wards devoid of air-conditioning and with beds crowded one next to the other. The organization is very common for public hospitals in developing nations.



The senior and junior resident crew standing with the Raymond Liu and Jay Lee in the open male ward of the hospital. The



A 10 year old boy treated the night before with debridement and plating for an open both bones forearm fracture.

senior resident Prishant (third from left) had just completed a 36 hour shift but looked no worse for the wear as he continued to offer us tours about hospital and the local area.

Professor Bandekar, Chief Surgeon at Goa Medical College and our local host, took us on a tour afterwards of Dona Paula, a coastal point in Goa from which one can see the Arabian Sea. We then visited Miramar beach, where a group of locals were playing a fast-paced game of soccer. Professor Bandekar and Prishant, the senior resident, then hosted us for dinner at a local Goan restaurant. There, we attempted to learn the rules of Cricket, while watching a game between Australia and India on TV.



The Fellows standing with our local host, Dr. Bandekar (2nd from right), at Dona Paula.



Enjoying the view from Miramar beach with Dr. Bandekar and Prishant (3rd and 4th from left).

9/22/2017

The Asian Pacific Pediatric Orthopaedic Society (APPOS) Meeting, in combination with the Asian Pacific Spine Society (APSS), provided an excellent opportunity to hear from the leading surgeons from this side of the world. Striking were the volumes of specific disease processes reported upon, with one presentation detailing their experience with more than 600 patients with club feet. The meeting also provided excellent reviews, with courses on spine osteotomies and femoral osteotomies.



One of several courses organized during the APPOS with panelists on stage.



Selfie of the three fellows in between sessions.

9/23/2017

After a brief morning session, we used the afternoon to explore the downtown area of Old Goa. It is home to several large churches built during the Portuguese colonial rule.

In the evening, we attended the closing ceremonies. A Goan shirt was necessary for all participants. During the ceremony, we received certificates for participation in the traveling fellowship.



The three Fellows in front of the Basilica of Born Jesus in Old Goa, an heirloom from Goa's Portuguese past.



Jay receiving his traveling fellowship certificate from Drs. Ashok Johari from Mumbai and Saw Aik from Luala Lumpur at the closing ceremony. The very obvious theme for the evening was Goan shirt night.

9/24/2017

The final day of the APPOS/APSS conference consisted of presentations by the traveling Fellows. Raymond Liu spoke about the anatomic peculiarities of SCFE, Mark Lee spoke about minimizing radiation in orthopaedics and Jay Lee discussed Pediatric ACL reconstruction with research on a novel tibial spine osteotomy.

Following the conference, Mark Lee and Raymond Liu departed for home, while Jay Lee stayed an extra day to meet up with his family in Singapore.



Final selfie after the Fellow presentations at APPOS/APSS.
From Left to Right: Raymond Liu, Mark Lee and Jay Lee.



The amazing architectural ceiling in Mumbai international airport, where Raymond Liu and Mark Lee would board a plane to home.

9/25/2017

Raymond Liu and Mark Lee traveled from Goa, India to Mumbai, India, then to Toronto, Canada and, finally, back home safely to Hartford, CT and Cleveland, Ohio. Jay Lee made it back home to Baltimore, MD safely as well, but at a slightly more leisurely pace with his wife and son.

Conclusions

The opportunity offered by POSNA/APPOS to travel to Japan, South Korea and India, meet the amazing surgeons providing care in these locales and understand the different approaches to the delivery of orthopaedic care was truly an experience of a lifetime. We appreciated the very stark differences in practice between countries that are at times difficult to separate geographically in the Western mind. We also began to understand that certain characteristics were common to good surgeons and good surgical care: attention to detail, patient selection and rigorous self-study. At the same time, we also understood that certain features of our daily practice demonstrate significant global variability and may represent an opportunity for efficiencies: wound dressing practice, length of hospital stay and post-operative pain protocol.

We are immediately indebted to our hosts for the surgical lessons we have learned, that osteotomies should not be discounted as an excellent tool for joint reconstruction, that closed reduction may be possible for almost any fracture type and that “busy practice” is a relative term. However, we remain forever indebted to our hosts at each site for their other-worldly hospitality. We could not begin to imagine the time and organization required to divert attendings and trainees from a busy surgical practice for several days to introduce us to the cities and the hospitals, while carving out enough time for long dinner discussions of the healthcare landscape in each region.

It is difficult to find specific constructive criticisms with regards to our experience, as it was overwhelmingly positive. However, if one needs to be offered, we agree that a valuable addition to the experience would be exposure to the busier and likely more global medical centers of India (Delhi, Mumbai), as the pace and practice of Pediatric Orthopaedics in these areas likely differs significantly from the picture offered by Goa Medical Center.

To conclude, we thank sincerely the leadership and the selection committee of POSNA/APPOS for an experience that will shape our thought processes for a lifetime.