

THE ORTHOPAEDIC FORUM

2014 Austrian-Swiss-German Fellowship

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Abstract: The Austrian-Swiss-German (ASG) Traveling Fellowship, started in 1979, is a unique opportunity for surgeons from the United States, Canada, and the United Kingdom to travel for an extended period to premier orthopaedic surgery sites throughout Austria, Switzerland, and Germany every other year. In turn, the United States, Canada, and the United Kingdom host representatives from Austria, Switzerland, and Germany in the intervening years. In 2014, three of us were chosen to participate: Dr. Ahmad Nassr from the Mayo Clinic in Rochester, Minnesota, and Dr. James Slover from NYU Langone Medical Center in New York, NY, both sponsored by the American Orthopaedic Association; and Dr. Phillip Heaton from Pilgrim Hospital in Boston, England, sponsored by the British Orthopaedic Association.

The Rhine Region, Germany

The 2014 tour took place from April 4 to May 4. We began our experience in the Rhine region in Düsseldorf. We were greeted by Dr. Christoph Zilkens, the vice chairman of the University Clinic at Düsseldorf. During our trip to the Rhineland, we stayed in the Schloss Mickeln, a lovely hotel converted from a castle. On Sunday, we had coffee at the home of Dr. Zilkens' parents. His father, who was an ASG Fellow in 1981, had recently retired, and we thoroughly enjoyed our visit with the Zilkens family. That evening, we returned to the Schloss Mickeln and had our first German dinner at a local restaurant. This gave us three fellows our first real opportunity to get to know each other, something that continued for the four weeks that we traveled together. On Monday morning, we met Professor Rudiger Krauspe and the remainder of the team at the Orthopaedic Clinic in Düsseldorf. We were given a tour of the current facility, including the research facilities, and we observed hip surgery. In the afternoon, we received a tour of their soon-to-be-opened, state-of-the-art hospital and had a symposium in

which we gave lectures on adult reconstruction and spine topics and attended lectures on their work on the applications of dGEMRIC (delayed gadolinium-enhanced magnetic resonance imaging of cartilage) to evaluate cartilage quality to enhance decision-making and surgical treatment of hip impingement disorders.

The next day, we met Professor Peer Eysel in Cologne and had an interesting session in which we reviewed every one of the cases currently in the hospital, which included many complex and interesting cases in the spine, tumor, adult reconstruction, and pediatric subspecialties. That afternoon, we had an academic exchange with Professor Eysel and his team at an organized conference. Professor Eysel then generously hosted us for coffee at his home, where we met his lovely family. Dr. Heaton even gave Professor Eysel's son some coaching lessons in athletic sprinting. That evening we were taken to dinner at Brauhaus Früh am Dom, where we experienced German drink and cuisine with many members from all of the Rhine region facilities. After dinner, we had a guided tour

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of Cologne Cathedral that included a visit to its majestic rooftop.

The next day, we packed our bags and headed to the Essen University Hospital, led by Dr. Marcus Jäger. We observed several interesting surgeries and exchanged lectures. We then had a tour of the Zollverein mine, where we experienced the power of the German industrial complex with Dr. Stefan Landgraaber, and then took the first of many train rides, to Magdeburg.

Magdeburg, Germany

We were greeted on the train platform that evening by Professor Christoph Lohmann, who took us to the Maritim Hotel, where we bonded over the Bayern Munich versus Chelsea football game. Dr. Heaton was able to have a friendly interaction with his rival football fans from Germany during the game. The next morning, we were given a tour of the University Hospital Orthopaedic Clinic at the Otto Von Guericke University Magdeburg and observed several interesting surgical cases, including a hip arthroplasty, a knee arthroplasty, a revision total ankle arthroplasty, and treatment of a periprosthetic hip fracture. That afternoon, the team organized a symposium in which we gave talks on the effect of parathyroid hormone on spine fusion in a rabbit model, hip dysplasia, and acetabular strain distribution, while our European colleagues gave outstanding presentations on shoulder arthroplasty, chemokine receptor type-4 (CXCR-4) regulation and metallosis, and immune modulation of periprosthetic tissues in the setting of revision for infection. That evening, we were treated to an elegant dinner party at Dr. Lohmann's home. The next morning, we had a guided walking tour of Magdeburg, where we were able to see firsthand many of the impressive historical sites and we gained important insight into the transformations of the city as East and West Germany united. We then departed by train to Berlin that afternoon.

Berlin, Germany

The Berlin team met us at the Hauptbahnhof Berlin. We stayed for the weekend at the trendy Hotel Q!, which is located just off the famous Kurfürstendamm street, where all of the premier retail shopping stores from around the world are located, along with many interesting restaurants and bars. Professor Ulrich Nöth, the chairman of the Orthopaedic Department at the Evangelisches Waldkrankenhaus Spandau, hosted us for our stay. On Saturday, we met the team for lunch and shopping at the world-famous KaDeWe department store near the hotel and took a sightseeing tour around Berlin using the hop-on hop-off bus tour. It included many beautiful and historic sites such as Checkpoint Charlie, the remains of the Berlin Wall, the Brandenburg Gate, the Holocaust Memorial, and the Victory Column. More importantly, we had a great day interacting with the team. We also enjoyed a special opportunity to visit Potsdam and the historic windmill, along with Sanssouci Palace, the magnificent summer estate of King Frederick the Great. The next morning, we arrived at the clinic to begin the academic aspect of the program. We began the day observing the morn-

ing rounds where all of the cases from the weekend were reviewed, along with postoperative images for the previous week's cases and preoperative images for the day's planned cases. We observed several interesting surgical cases, including total hip replacements performed via the direct anterior and Watson-Jones approaches and a pelvic discontinuity treated with a unique cup prosthesis that includes a flange and peg construct for stability. We then had a symposium in which we gave talks on hip dysplasia, strain distribution in cemented and uncemented acetabular cups, and a novel spinous process-splitting approach for use in spine surgery. The Berlin team presented an algorithm and case examples for the treatment of complex hip revision reconstructions. We then hurried to the airport for a short flight to Frankfurt that evening.

Frankfurt, Germany

Frankfurt was one of the top highlights of the tour. We were hosted by Professor Andrea Meurer, the current president of the South German Orthopaedic Society, and several members of her team. The first night, a dinner was held in Holbein's Restaurant at the Stadel Museum along the scenic Main River. This provided us the chance to take in the city skyline along a beautiful walkway approaching the restaurant, and the atmosphere of the restaurant was picturesque. More importantly, we made many new friends and had interesting discussions over our wonderful meal. The next day, we arrived at the Orthopaedic University Hospital Friedrichsheim in Frankfurt, where we had a tour of the facility and the opportunity to observe Professor Meurer perform a total knee arthroplasty. We toured the research facilities, including the gait laboratory and the Frankfurt Initiative for Regenerative Medicine (FIRM) facilities, and several researchers provided presentations with background and updates of their exciting work. We then visited the German Orthopedic History and Research Museum maintained in Frankfurt and saw the amazing collection reflecting the history and development of our specialty. We then took a train to our last stop in Germany, in Heidelberg and Mannheim.

Heidelberg and Mannheim, Germany

We were met on the train platform by Dr. Marcus Eichler. He took us to the Orthopaedic Clinic at Heidelberg University Hospital, where we were greeted by the chairman, Professor Volker Ewerbeck. The clinic is a former home for disabled citizens and is located in a scenic setting along the Neckar River. The clinic has the feel of a university campus and we were given apartments within the hospital for our stay. Dr. Marcus Egermann took us to dinner that evening, where we had long discussions about the differences, strengths, and weaknesses of the German and U.S. health-care systems. The next morning, we traveled to the University Clinic at Mannheim, led by Professor Hanns-Peter Scharf. There we participated in the morning rounds and observed many interesting surgical cases, including total hip and reverse shoulder arthroplasties and a forequarter amputation. That evening, we had a splendid dinner hosted by Professor Scharf and attended by several consulting physicians from the department. The next day, we attended the morning rounds at

Heidelberg University Hospital and observed numerous cases, including knee arthroplasty and cartilage restoration procedures. We had dinner at a traditional German brewery, Weisser Bock, that evening and were treated to an outstanding sunset over historical Heidelberg and Heidelberg Castle. The next day we participated in a guided walking tour of Heidelberg, which included Heidelberg University, the castle, and an informative presentation of the stories behind this historic city. This completed the German part of our tour, and we then headed off to enjoy our Easter weekend.

Salzburg, Austria

After enjoying two days off for the Easter weekend, we traveled to Salzburg to begin the Austrian leg of the tour. We were greeted by our host, Dr. Ulrich Dorn, and were taken to Schloss Arenberg, the home of the American Austrian Foundation. It is a former nineteenth-century palace and currently hosts numerous international medical conferences. It is decorated with sophisticated art inside and has numerous sculptures on the grounds. Dr. Dorn accompanied us on a walk through Salzburg, and we also visited the Salzburg Castle, which overlooks the city. The next morning, we visited the Orthopaedic Clinic at Salzburg General Hospital and observed two hip revision arthroplasties, one of which was performed with use of a pedestal cup for pelvic discontinuity. We participated in a scientific meeting with the department, with numerous presentations from the fellows and members of the Salzburg orthopaedic department. That evening, we enjoyed great company and food at a dinner with Dr. Dorn and his wife, Cosi, both natives of Salzburg, at one of their favorite restaurants, Carpe Diem, located adjacent to the famous Salzburg Festival House, dedicated to Mozart. The next morning, we toured the research facilities of the Paracelsus Medical University in Salzburg, including the departments exploring physiological research and the research institute for bone and tendon degeneration. This included several informative presentations about the status of their groundbreaking work examining the molecular pathways of tendon and bone repair and healing. We then departed by train for our next stop, Vienna.

Vienna, Austria

In Vienna, we stayed in a hotel in the heart of the city with a view of St. Peter's Church. The next day, we arrived at Allgemeines Hospital, the second largest hospital in Europe, and were greeted by Dr. Catharina Chiari. We began our visit by attending morning rounds led by the chairman and our host, Dr. Reinhard Windhager, and then observed several surgical procedures, including a complex hip replacement, in a patient with dysplasia and a previous osteotomy through an anterior approach, and excision of a knee hemangioma. That evening, we were treated to a dinner at DO & CO overlooking the city center and St. Stephen's Church. The next morning, we participated in an academic exchange with the department and had substantial discussions about hip dysplasia, hip biomechanics, and minimally invasive spine surgery. We observed several additional procedures, including a revision knee arthroplasty. That after-

noon, we visited the Adolf Lorenz Museum, a fascinating preservation of office and medical devices used to treat scoliosis, bone deformities, and other ailments, by this pioneering physician who studied at the University of Vienna and founded the German Society of Orthopaedic Surgery. We then had a guided tour of the Josephinum collection, which contains 1200 wax anatomy and obstetrical models commissioned by Emperor Joseph II. They were truly amazing and could easily be used to effectively teach anatomy today. Dr. Chiari then arranged to have us all taken to Vienna's famous Prater outdoor park, made public by Emperor Joseph II, for a traditional Austrian meal at Schweizerhaus. This concluded our Austrian tour, and we used the weekend to enjoy Vienna and to travel to Zürich to begin our tour of Switzerland.

Zürich, Switzerland

In Zürich, we were greeted by Professor José Romero, the leader of the Swiss delegation of the ASG Fellowship and former Swiss football star. We were taken to the elegant Hotel Opera, just behind the Zürich Opera House, in the heart of the city. That evening, despite our first real experience with rain, we walked through much of the Old Town and took a lake cruise on gorgeous Lake Zürich. The evening ended with dinner in a traditional cheese restaurant where we experienced the taste of Raclette. The next morning, we proceeded to the Endoclinic Zürich and participated in a complex knee revision with Professor Romero. In the afternoon, we toured the facility along with the research facilities of the Balgrist University Hospital, located right next door. This included the biomechanics laboratory and the robotic research and therapy area located in the Spinal Cord Injury Center. They also have an extensive three-dimensional printing and machining area, and we were able to see the results the next day when a three-dimensional model of a radial deformity was used to create patient-specific cutting guides for a complex osteotomy procedure of the proximal radius for one of their pediatric patients. That evening, we experienced the annual Zürich spring festival, a fascinating cultural event that marks the end of winter and is highlighted by the burning of the Böögg and the parade of the guilds. The next morning, we attended morning rounds at Balgrist University Hospital, where the orthopaedic department is headed by Professor Christian Gerber. We observed a full program of surgery—including numerous shoulder, hip, spine, and tumor cases—in their very efficient operating theater. We then headed by train to our last clinic stop, in Basel.

Basel, Switzerland

In Basel, we were hosted by Professor Anke Eckardt and Professor Victor Valderrabano. We were housed in the luxurious Grand Hotel Les Trois Rois, located on the historic Rhein River. We had a stimulating academic exchange with our Swiss colleagues at a nicely attended symposium organized that afternoon. Later that evening, we were treated to a dinner with Professor Eckardt and Professor Valderrabano at a traditional cheese restaurant, and many members of the orthopaedic department joined as well to discuss their experiences studying in

the United States. The next morning at the University Hospital of Basel, we participated in a knee hinge prosthetic placement and a revision spine procedure. We had a tour of the research facilities with the head of research, Dr. Thomas Hugle. We also had the chance to review the display and to discuss the history from the department's recent fifty-year celebration. We enjoyed a relaxing evening and headed off to our last stop, the meeting of the South German Orthopaedic Society in Baden-Baden, Germany.

Baden-Baden, Germany

Baden-Baden is a scenic spa town in southern Germany. We arrived and settled into our hotel, which was a short walking distance from the conference center. That evening, we were treated to a traditional Spargel dinner, hosted by Dr. Hans-Werner Springorum. Many former ASG Fellows were in attendance, along with many friends we had made along the way. The next day, we proceeded to the conference and participated in the ASG session, moderated by Dr. Max Bohler. The session included our final presentations on hip biomechanics, *Staphylococcus aureus* prevention, and minimally invasive spine surgery, as well as several interesting presentations by our colleagues in English. It was a stimulating session and, at the conclusion, we received our ASG Fellowship Certificates and had the opportunity to thank all of our hosts and new colleagues. After the session, we attended the traditional annual ASG luncheon. In addition to seeing many familiar faces, we had the opportunity to meet many other ASG Fellows and experienced the final presentation of last year's group that traveled to our countries. It seemed that they had become great friends and had the same fantastic experience that we had with our tour. That evening, Professor Meurer hosted us at a very elegant and entertaining gala at the Casino facility. Members of Cirque de Soleil and a

very spirited band helped entertain the lucky attendees. We were very grateful to Professor Meurer for including us in this event.

At this point, our tour had come to an end, but in our minds the journey is still at the beginning. The three of us have become lifelong friends, and we made many more friends throughout the tour. The experiences we enjoyed have demonstrated some of the differences and similarities in the practice of orthopaedic surgery in our diverse environments, but fundamentally we all pursue the same goals of improved patient care. We have been stimulated scientifically by the great work we have seen, and we are already talking about collaborations that we hope to pursue with each other and our new colleagues and when we will get together again. We sincerely thank the American and British Orthopaedic Associations and all of our gracious hosts for sponsoring our remarkable journey. ■

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