IBRA SCHOLARSHIP REPORT

Centre: Swiss Ortho Center, Basel, Switzerland
Fellowship Director: Prof. Dr. med. Dr. phil. Victor Valderrabano

Figure 1. Swiss Ortho Center, Basel

I am currently a post CCT Foot and Ankle fellow from United Kingdom. I have been privileged to be awarded the IBRA Scholarship Program B to visit Professor Victor Valderrabano at the Swiss Ortho Center in Basel, Switzerland for 2 weeks (Figure 1). He is also the Chairman of IBRA Lower Limbs committee and a member of the Board of Directors of IBRA.

The main objectives of the fellowship were as follows:

- To gain a high-level experience in the assessment and management of various foot and ankle pathologies
- To understand Professor Valderrabano's decision making process for hindfoot osteoarthritis which includes joint conservation through osteotomies, cartilage surgery and total ankle replacement (TAR)
- To learn techniques in complex salvage failed TAR cases
- To learn the latest trends and techniques in foot and ankle sports orthopaedics from a world expert in this field who has edited the latest seminal textbook

My fellowship expectations were as follows:

Personal

- Cultural exchange and understanding of the Swiss healthcare model
- Interact with fellows to exchange knowledge and gain insight into how orthopaedics is practiced in their country and their training pathway

Professional

- To participate actively in the unit's daily activities
- Observe or assist in surgeries and learn new or modification in techniques from Professor Valderrabano which I could incorporate into my future practice
- Active discussion about interesting complex clinical cases and their management
- Create avenues for networking and collaboration for future research

Professor Valderrabano runs a bespoke and busy orthopaedic practice in the center of Basel at the Swiss Ortho Center. It is a stone's throw away from the main Basel SBB train station. His main expertise is in Foot and Ankle surgery. However he performs lower limb arthroplasty as well, having done a fellowship in Canada previously. I attended Professor Valderrabano's clinic at the Swiss Ortho Center in Basel every Monday, Tuesday, Thursday afternoon and Friday. Professor Valderrabano operates at Obach Hospital in Solothurn (Figure 2). I attended his operating lists at Solothurn on a Wednesday and Thursday morning every week. Although Solothurn is a small city an hour away from Basel, it is actually the mecca of Swiss Orthopaedics. Many huge multinational orthopaedic companies have their factories and headquarters located in Solothurn like Depuy Synthes, Stryker and Mathys. How lucky are these patients!!

Figure 2. Obach Hospital, Solothurn

I assisted for a total of 30 cases in 2 weeks. There was a huge variety of interesting operations and I have to thank Professor for organising the operation lists specially to cater to my learning objectives.

I was very fortunate to be one of the first few surgeons to see Professor Valderrabano implant the latest total ankle replacement called Vantage (Exactech, USA). Although the fixed bearing version of Vantage has been implanted in America since Sept 2016, the three component mobile bearing version only recently got CE mark in Europe (Figure 3). Professor Valderrabano, being one of the designer surgeons, is currently the only surgeon implanting the Vantage TAR prior to the European launch. I saw a total of three Vantage TAR in 2 weeks and I have to admit that it looks user friendly and most importantly it seems to have addressed the current problems of TAR available in the market.

Apart from this exciting new TAR, the other few techniques which stood out were his ankle ligament reconstruction cases where Professor does an anatomical intraossesous reconstruction rather than a Brostrum, Morton neuroma excision where he does a longitudinal plantar incision, and subtalar fusion where he places one screw in posterior subtalar joint and another anteriorly as this is the most biomechanically stable (Figure 4). I also had the opportunity to assist him in a failed TAR where he used a hindfoot fusion nail with the pillar technique. Professor is the world's leading expert in the field and has published several papers on different techniques in managing bone loss following failed TAR and being able to draw on his experience in this subject matter is invaluable.

Although I have personally done many total hip replacements, it was interesting to watch him do one with a modified minimally invasive Watson Jones approach which is not common in the United Kingdom. I also got to see several innovative products which he designed over the course of our operating days and the rationale of the designs. His Wednesday theatre list routinely finishes at 9pm which left me exhausted.

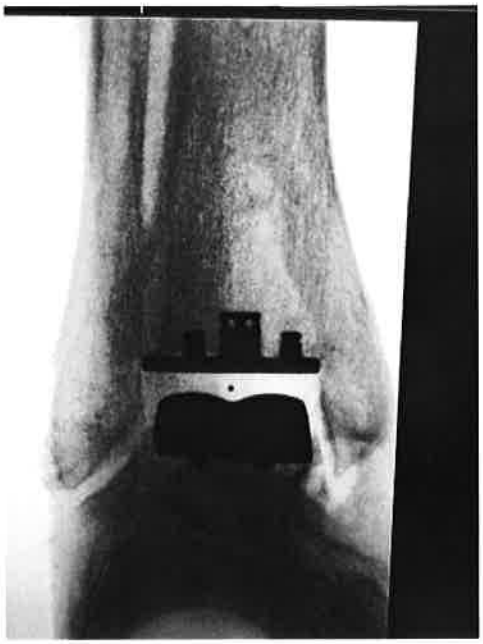

Figure 3. Vantage TAR

Figure 4. Subtalar fusion with Medartis Cannulated Compression Screws (CCS)

In terms of his clinics, they are run efficiently with at least 30 min slots for each patient. Although I could not understand German, he always kindly explained the patient's problem and the rationale of his management plan to me. I observed that he takes his time for each patient and practices a holistic patient-center approach. I understand there is a long waiting list to see him in clinic. As he is an well known expert in foot and ankle surgery, I also saw several interesting tertiary referral complex cases in his clinic who usually had failed surgery from other centres. Due to his popularity, his patient clientele is very diverse and they include Swiss, French, Italian, Germans, and the English speaking expatriate community in Basel from its thriving pharmaceutical industries. He is well versed in all these languages which definitely helps for his varied patient population and I was well awed with his linguistic skills. I also met two professional football players from the Middle East who plays for their national team during my fellowship. One came for a post-operative follow up and he was delighted with the clinical results. The other specifically flew over for 2 days and 1 night just to see Professor for his ongoing non traumatic ankle pain which was affecting his professional career. The answer to his ongoing pain was due to biomechanics which is a concept Professor always emphasises over my 2 weeks. His clinics can often run till 7pm most days. When I discreetly enquire about his secret on his ability to keep up with his busy clinical practice on top of his academic work, he tells me he has an Avatar!

During my stay, I also visited the Medartis factory (Figure 5) and IBRA center. I got to observe first hand how the products were manufactured and the amount of manpower and precision put into each product. It might take the surgeon an hour to implant the product but the actual manufacturing process from start to finish takes at least 18 days (Figure 6). This visit gave me a good insight on why medical implants are so expensive. I particularly like the concept of the CCS cannulated screws. It was also nice to get a tour of the IBRA center who has funded my educational fellowship and I had a chat to Patrick Koop, the education director on the history, philosophy and objectives of IBRA.

Figure 6. Tour of Medartis Factory

Figure 5. Medartis factory, Basel

My stay also coincided with the European launch of the Vantage Total Ankle Replacement by Exactech in Lucerne. Professor kindly invited me along to the informative lectures from several well known F&A surgeons and the cadaveric skills lab day. It helped reinforce what I have observed in theatre with the Vantage system and it was particularly useful to chat to the engineers to find out more about the design rationale and what the future plans are for the prosthesis going forward. I also got to meet the other designer surgeons (Professor. Dr. James A. Nunley, Professor. Dr. Mark Easley, Professor. Dr. James DeOrio) at this event who are eminent Foot & Ankle surgeons from Duke University, USA with a wealth of experience in TAR (Figure 7). This was a definite bonus of my fellowship.

Figure 7. Professor. Dr. James A. Nunley, Professor. Dr. Victor Valderrabano, Professor. Dr. James DeOrio, Professor. Dr. Mark Easley (Left to Right) during the cadaveric lab session for Vantage TAR in Lucerne

Professor also taught me several excellent life lessons and believes that there is more to life than work. He strongly believes a crucial part of the fellowship is learning about the culture of the country. He encouraged me to travel around Switzerland and enjoy the local cuisines. I particularly like Raclette, which is a form of grilled cheese. He also introduced me to the famous Swiss Bircher Muesli and I am a convert now (Figure 8). I also found out that one of his secrets to success is drinking Rivella, Switzerland's national beverage which is a soft drink containing milk whey. I will no doubt miss this drink when I am back in the

Figure 8. Professor Valderrabano presenting me with Bircher Muesli

United Kingdom. I also became great friends with his current fellow, Dr Saud Alshalawi, who is a military doctor from Saudi Arabia (Figure 9). He was very helpful during my stay and we bonded instantaneously over our love for F&A and exchanged loads culturally.

Figure 9. With Professor Valderrabano's fellow, Dr Saud Alshalawi

Figure 10. Original Lapidus fusion with Medartis plate

The best part of this fellowship is Professor challenges me continuously on my management plan for cases seen in either theatre or clinics. I believe I benefited the most out of this interaction although this was initially mind boggling and gave me a horrendous headache! Tough love! I have a better understanding of medial ankle instability now which is a commonly neglected topic. I look forward to Professor's seminal paper on this subject in the next edition of Foot and Ankle Clinics. I also have a better appreciation of medial ray instability and M1/2 instability in severe hallux valgus and the indication for the original or modified lapidus to avoid recurrences. Professor strongly believes in doing one good operation for the patient and never seeing them again. The lapidus plate he designed with Medartis is very slick and took into consideration the anatomy and biomechanics of the pathology (Figure 10). Another first of this fellowship was I was there in Basel when Professor live broadcast the inaugural IBRA Webinar on the topic: "Reconstruction of Ankle & Hindfoot Deformities".

Firstly, I would also like to thank his staff Miranda (secretary), Alexandra (OT coordinator), Charlotte (physician assistant) and Saud (his fellow) for their warm hospitality. The beauty of such fellowships is you make life long friends and I am sure Saud and I will continue to keep in touch in the future. I would also like to thank Lukas Regniet, International Education Manager

Foot & Ankle at Medartis for take time out of his busy schedule to give me an informative factory tour and Patrick Koop, Education director at IBRA, for showing me around IBRA center and taking time to speak to me.

Second, I would also like to thank IBRA for awarding me this scholarship. This was a truly rewarding experience and I could not find a better teacher than Professor Valderrabano. I would definitely recommend this to any future scholars who are interested in foot and ankle surgery. He has challenged my mind, stretched it and has given me a new perspective in the 2 weeks I was attached to his center. Although there is always going to be variation in practices in different countries for the same F&A pathology, I definitely felt many lessons learnt here would be useful to try out in my formative F&A practice.

“ I leave these invaluable two weeks having learnt the elegant ‘VV’ approach to F&A and the meaning of high quality patient care. ”

Lastly, I cannot thank Professor Valderrabano enough for his generosity over the two weeks. He was very kind to drive me to Solothurn for the operating lists to save me from the long commute. He also gave me a “Swiss Cow bell” as a souvenir for my office desk to commemorate surviving the fellowship! Professor Valderrabano is not only a skilled surgeon, but has great compassion for his patients. He has also taught me the meaning of providing high quality care. He is not only a thinker but an inventor too and it was extremely rewarding to hear his design rationale for each implant and instruments. I hope to collaborate on research papers with Professor in the near future.

In conclusion, I leave these invaluable two weeks having learnt the elegant “VV” approach to F&A and the meaning of high quality patient care. This two weeks have more than exceeded all my fellowship expectations!

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Figure 10. What a view of the Swiss Alps from Weissenstein mountain after our Solothurn operating list!