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Visiting Fellowship Report

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| Name: | Hélder Manuel Videira da Fonte |
| E-mail address: | Helderfonte14@gmail.com |
| Country of residence: | Portugal |
| Country of visiting fellowship: | Switzerland |
| Host centre: | Lindenhofspital |
| Name of the host: | Prof. Dr. med Ralph Hertel |
| Dates of visiting fellowship: | 26 th April – 18 th June 2021 |

I agree to share this report of EFORT & EFORT Foundation's website and social media channels: Yes No

Expenses:

Travel: EUR 500
 Accommodation: EUR 2200
 Other expenses: EUR 1300

| Topic | Please tick one of the boxes <input checked="" type="checkbox"/> 1 (poor) to 5 (very good) | | | | | Your comments, thoughts, recommendations |
|--|---|--------------------------|--------------------------|--------------------------|-------------------------------------|---|
| | 1 | 2 | 3 | 4 | 5 | |
| Education | | | | | | |
| Could you improve your knowledge and gain new experiences? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Host Department | | | | | | |
| How was your communication with your host centre (regarding accommodation, programme, etc.)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Did they offer you a social programme? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Not applicable due to pandemic restrictions |



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EFORT FELLOWSHIP REPORT

October 24th, 2021



Figure 1

a) Lindenhofspital; b) Me assisting Prof. Dr. med Ralph Hertel in the Operating Room; c) Prof. Hertel, me and Dr. Armando Oseguera, a team photo that make me remember all the good moments spent in this fellowship

My name is Hélder Fonte and I am an Orthopaedic resident in *Centro Hospitalar Universitário do Porto*, Portugal. During these years I've been working in all units of my department, and I ended up gaining a special enthusiasm for shoulder pathology. I immediately began to look for a reputable and skillful international shoulder surgeon with whom I could expand my knowledge, not only in terms of updated and technically challenging procedures, but also someone that based his practice in experience and long-term outcomes. I wish to express my gratitude for the opportunity that was granted to me through the EFORT Foundation and Medacta® to complete my international visiting Shoulder and Elbow Fellowship with Prof. Dr. med Ralph Hertel in the beautiful city of Bern, Switzerland.

Despite the ongoing restrictions due to COVID19 pandemic I was able to get the fellowship accepted and to travel. I arrived in the end of April 2021 and the country had low case volumes. Due to institutional restrictions at Lindenhofspital I wasn't able to be attending clinic appointments but remained able to scrub in and assist in the operating room (OR), and the relevant cases of the clinic were discussed during the week. I was lucky to be present on the period of recovery in terms of surgical volume and we had at least three fully days of surgeries per week.

Since the first day that I felt very welcomed by everyone and felt integrated into the team, and that was an important aspect for the enjoyment of the fellowship. The easy and respectful communication allowed me to have a continuous discussion about upper limb pathology and about all the treated patients.

Over the 2 months I assisted Prof. Dr. Ralph Hertel in 66 surgeries covering multiple shoulder and elbow pathologies. The most common procedures were open rotator cuff



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repair (RCR, n=28), upper limb trauma osteosynthesis (ORIF, n=12), and total shoulder arthroplasty, either anatomic or reverse (TSA, n=9). Other cases included Shoulder Instability treatments (arthroscopic *Bankart* repair and *Eden Hybinette* procedure), arthroscopic decompression of calcific tendonitis, arthroscopic debridement and capsular release for Elbow Arthritis and *Mumford* procedure for AC joint arthritis.

It was especially relevant all the insights that were given about baseplate positioning on the glenoid, like the attention that the surgeon needs to pay relative to patient specific anatomy, as the *glenoid vault*, the *paleoglenoid* and other bony aspects that enter in the equation for the perfect planning if we want to have a biomechanically functioning replacement for that specific patient. Prof. Dr. med. Hertel emphasized his technique for posterior capsular release combined with posterior humeral dislocation for glenoid access during total and reverse shoulder arthroplasty. He explained the rationale for complete and thorough capsular release for improved surgical exposure, easy component alignment, and balanced force-coupling of the cuff tendons during arthroplasty.

We also discussed the utility of Patient-Specific Instrumentation (PSI) in challenging glenoids. In these cases, it was even more well-defined the advantage of the systematic approach and glenoid exposure technique performed in every shoulder arthroplasty as it allows the placement of the PSI guide in better conditions. I also had the opportunity to discuss some design aspects that can be improved to help the critical attachment of the glenosphere to the baseplate, that is considered by many shoulder surgeons a critical step (figure 2).



Figure 2.

Discussion and practice the critical step of glenosphere attachment to the baseplate in Reverse Shoulder Arthroplasty



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I had the opportunity to assist Prof. Dr. med Ralph Hertel in video documenting and production of some operative cases. As part of my scientific activities, we created one instructional video of his technique for glenoid exposure during shoulder arthroplasty – “glenohumeral posterior shoulder dislocation” (figure 3). The video was edited, narrated, and revised by me after many discussions and it is available on VuMedi.com and can be viewed [here](#).

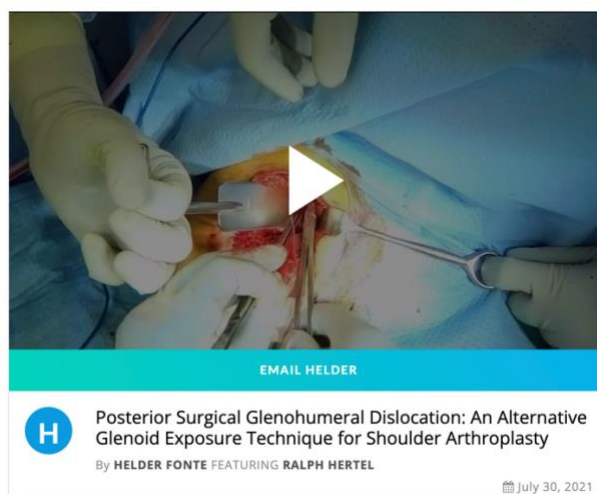


Figure 3.

Posterior Surgical Glenohumeral Dislocation: An Alternative Glenoid Exposure Technique for Shoulder Arthroplasty – Video published and available on VuMedi platform

There were many first experiences regarding technical skills that I learned. I assisted for the first time to an open RCR, I gained correlation of advanced imaging findings to intraoperative arthroscopic pathology, indications for surgical intervention, superior and deltopectoral approaches to the shoulder, soft tissue releases of the rotator cuff tendons, anatomic repair and osseous tunnel fixation, and postoperative rehabilitation protocols. Although in my future practice it will likely be rare that I perform an open RCR, there was great utility in observing a master surgeon performing in his element while perfectly describing the pertinent anatomy, critical steps, and pitfalls to avoid. There are certain elements of his technique that are applicable to multiple surgeries, and I found that the open procedures regularly facilitated a higher understanding and mental visualization of the goals of the arthroscopic equivalent procedure.



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This international fellowship experience couldn't be complete if it wasn't the opportunity to explore the city of Bern and some of the things that the country has to offer. It has interesting museums and it's full of history. I could embrace the swiss lifestyle going every day to work by bicycle. It was also the way of transportation that I used to move around, explore the city and the beautiful surrounding nature. I rode all the way to Neuchâtel, Thun and Lucerne though the Emmental region, and I could cross the famous Furkapass. I visited many cities and villages like Montreux, Zurich and Zermatt by train and I could swim in the beautiful lakes of Léman, Lucerne and Lugano. In the end of the fellowship I had the honor to be invited by Prof. Dr. med Hertel to have dinner in his hometown with him and his wife, and I couldn't be more grateful for that lovely evening.

During my rotation I had the pleasure to work with another fellow, Dr. Armando Oseguera from Mexico, that was an important element in our team as we shared many moments together. He constantly provided relevant information for our multiple scientific discussions. I would like to thank Dr. med Petra Waldherr-Marty for her kindness and a special thanks also to Sara Afonso and Manuela Bieri that were constantly available to help me with administrative aspects. Thanks to all the nurses and OR staff that were always warm and welcoming with me.

Finally, I wish to conclude again with a recognition to the EFORT Foundation and Medacta® support for this fellowship. My most sincere thanks go to Prof. Dr. med. Ralph Hertel, I feel pleased with the decision to apply for this experience. The memories I gained will not be forgotten and the knowledge I acquired will continue to be applied in my future practice.

Merci Vilmal,

Helder Manuel Videira da Fonte, MD