

## **International Bone Research Association**

### **Report on the Hand Surgery Fellowship**

#### **Scholarship Application Program B**

**Time of fellowship: 4<sup>th</sup> October - 27<sup>th</sup> November 2009.**

**Training center: Kantonsspital St. Gallen Switzerland**

**Clinic of Hand-, Plastic and Reconstructive Surgery**

**Fellowship Director: Prof. J. Grünert**

#### **The purpose**

Due to current fast improvement of hand surgery more attention is being paid to the quality of education and competence as well as to the continuous training under the supervision of highly qualified specialists.

#### **Characteristics of department:**

In the Clinic of Hand-, Plastic- and Reconstructive Surgery (Klinik für Hand-, Plastische und Wiederherstellungschirurgie) are working four hand- and plastic surgeons: Prof. Jörg Grünert, Dr. Jürg Sonderegger, Dr. Benedict Stub, Dr. Philipp Esenwein. During my scholarship time there were three specialized doctors and one doctor in-training. The head of the clinic is Prof. Grünert. The clinic was well staffed by physiotherapists and occupational therapists.

The hospital and department service area covers more than 0.5 million people around St. Gallen. They have around 1800 elective cases, 1200 emergency cases and about 8000 outpatient visits (8130 patients in 2008) per year. In elective surgery all fields of hand surgery are covered, including children's hand surgery in co-operation with the Children's Clinics of St. Gallen. Most of emergency work is bone surgery, esp. the treatment of distal radius fractures, but also metacarpal and phalangeal fractures. Emergency treatment means different severity levels of injuries, including brachial plexus injuries as well as different microsurgical reconstructions. There is no special department for hand and plastic patients - all patients were in the same hospital building, although on a different floor with orthopedic patients. The number of hospital beds is not limited. In addition to diagnostics and operative work, a hand surgeon must manage postoperative treatment and decide a regimen with strong support from rehabilitation side.

#### **Weekly timetable**

All my mornings (except Thursdays) started at 7.40 with a short 20-minute meeting where the emergency patients as well as those in need of operation were discussed. The operation plan for the day was also considered. Every day operations started at 8.00. Those not involved with operations were busy in the outpatients' clinic or dealt with patients in the department.

On Tuesdays and Thursdays one operating theatre was reserved for Prof. Grünert for a long-lasting and complicated reconstructive (hand) surgery. I had a chance to observe his operations and to assist him. The ward round took place on Thursday morning at 7.35 and lasted about 40 minutes; in its course all patients were discussed. The discussion included a short overview of the accident, hand status, treatment and plans for future. The physiotherapist and occupational therapist from the hospital side took part in the ward round. The outpatient clinic was every day at 14.00 till 17.00, sometimes even more for all doctors. As my visiting doctor's plan was unfixed, I had a chance to observe different hand surgeons at work. Also, I had a chance to take part in emergency calls related to hand surgery. If there was an interesting complicated case, the doctor

on-call informed me and it was possible to join the operating team, even at weekends and at night time.

### **Operating theatre and operations:**

There were two operating tables in one operating theatre, which provides a chance to consult another team. Day-surgery patients were operated in the same operating theatre. The whole hand and plastic surgery team was very friendly and open to discussion about surgical techniques. The team was highly professional. However, the operations were interesting and I was lucky to be an assistant in some of these operations.

#### *Most interesting or useful operations for me in hand surgery*

reduction and plating of radius fractures, using new plates by volar as well dorsal approach (and with very good biomechanical explanation and comments on the fixation of distal radius fractures)  
wrist denervation of arthritic wrist  
osteosynthesis of metacarpal and phalangeal fractures by different plates (in that centre, a lot of different plates were used in metacarpal and phalangeal fractures).  
finger replantations in different techniques (five cases)  
carpal tunnel release in CTS patients with single mini open incision distal to wrist  
digital nerve's ends connection and relocation into muscle  
ligamentoplasty for treatment of chronic scapholunate dissociation  
implantations of PIP joints by Swanson implants  
acute perilunar luxation- open reduction and fixation with K- wires  
late reconstruction of extensor tendon (EDCII) with palmaris longus tendon slip in zone 4-5  
new incisions lines and releasing technique of Dupuytren's disease and postoperative regimen  
dry diagnostic arthroscopy of the wrist  
ulnar shortening osteotomy with a new ulna and radius shortening system  
trapeziectomy-tendon interposition ligamentoplasty by Epping.  
TOS operation by Wilhelm

#### *Most interesting or useful operations for me in plastic surgery*

free musculus gracilis flap  
breast reconstruction operations  
breast implantation operations  
liposuction and abdominoplastia  
tissue expanders implantation and handle before hand reconstructive operation  
skin plasty to cover plantar defects  
axillar lymphadenectomy  
skin tumors  
different skin plasty on foot  
muscles transposition in thigh

### **Outpatient clinic**

There was no essential difference between my and St. Gallen Hospital practice in consulting hand surgery patients, except the fact that the time for one patient is not limited and they had a preparatory room for documentation and X-ray pictures. In addition, they used dictophones for describing consultations, thus speeding up consultation (we tend to use computer programs). There were five occupational therapists in outpatient clinic (also for orthopedic and rheumatic patients). I spent one day with occupational therapist and physiotherapist on rehabilitation side

and got an overview of rehabilitation system as well as different rehabilitation and postoperative protocols.

### **Lectures and library**

Every Thursday (seldom also on Tuesday) morning there was a brief 10-15-minute presentation about one hand problem or medical case. It was prepared and presented by one specializing doctor or doctor in-training (in my period) and after that an open discussion followed. The presentation was in German or in English but there were no problems in translating and understanding the main ideas of presentation. I was also able to present my case histories. There was a chance to take part in the 43<sup>th</sup> Annual Congress of Swiss Hand Surgeons in Biel on 12-13 November 2009 (43. Jahreskongress SGH). One extremely good lecture by Professor Grünert took place in the EMLA Institute (Swiss Federal Laboratories for Materials Testing and Research) on 18 November: „Hand und Hirn - Interaktionen Zwischen Zentrale und Peripherie.”

I was able to spend my spare time in the library where the following journals were available: Journal of Hand Surgery (European Volume), Journal of Hand Surgery (American Volume), Journal of Plastic and Reconstructive Surgery.

### **Days off**

I had a possibility to get to know St. Gallen and its neighbourhood, old town and its churches, also the world-famous St. Gallen's Stiftsbibliothek. Two days I was taken to Appenzell and one weekend to Bern and Zürich. I learned a lot about Swiss culture, society, daily living, and the country's people. One day I was spent in the small city Rochach, and in Rochach Hospital where I observed the work performed at the operating theatre and outpatient clinic.

### **Conclusion**

My visit is related to the plans to establish the Hand Surgery Center at the Tartu University Hospital. I learned novel surgical techniques and got acquainted with different treatment strategies. I had a chance to obtain knowledge from specialist literature. Special attention was paid to using different plates and implants for the treatment of bone fractures. I learned a lot as to logistics and efficiency in operating theatre, how to build up organization of care for patients in need of complex hand surgery system in our clinic in Tartu.

One of the goals of short-run training and re-education programmes is to learn and practice contemporary methods of medical treatment. Therefore I find that the Clinic of Hand-, Plastic- and Reconstructive Surgery is an excellent and reputable medical institution for doctors to advance their professional experiences and competence in hand- and reconstructive surgery.

There was no problem with the English language but for more effective work the basics of the German language might be preferred.

**I am much obliged to the IBRA and Professor Grünert for this scholarship and opportunity to visit St. Gallen Hospital. Also, many thanks to all doctors in the Clinic of Hand Plastic and Reconstructive Surgery, Hospital of St. Gallen for explanations, kindness, hospitality and helpfulness.**

Andrus Metsa  
International Bone Research Association grantee

Tartu University Hospital  
Surgery Clinic  
Department of Vascular Surgery  
Hand-and vascular surgeon

Puusepa str. 8,  
Tartu, 51014  
Estonia  
[andrus.metsa@kliinikum.ee](mailto:andrus.metsa@kliinikum.ee)