UKM
Universitätsklinikum
Münster

IBRA International Bone Research Association

International Bone Research Association (IBRA)
IBRA Program C Scholarship Report

Zentrum für Zahn-, Mund- und Kieferheilkunde
Zahnklinik - UKM

Host Hospital: Department of Oral and Maxillofacial Surgery
Universitätsklinikum Münster
Münster, Germany

Head: Prof. Dr. Dr. Johannes Kleinheinz

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This document aims to provide information about my stay and IBRA internship at the department of Mund, Kiefer und Gesichtschirurgie of the Universitätsklinikum Münster, Germany; where I participated during the months from June to September of the current year.

Why Germany?

During my residency, I was able to do a rotation abroad at one IBRA training center, in Araraquara, Brazil. With that experience, as a junior surgeon, I wanted to increase my knowledge in terms of maxillofacial surgery. I tried to choose a center where I could see other surgical procedures as part of the integral treatment of different pathologies in the oral and maxillofacial field. That is the reason I applied for the IBRA internship in Münster, Germany.

Daily activities

Every day, at 7:30 hr., all the team meets to discuss the patients that were seen during the shift the day before. They present the diagnosis and if the patient is hospitalized or not. On Mondays, the surgery schedule of the week is presented. On Wednesdays, the team sees the postoperative radiographs of the patients who need it. On Fridays, the research team of Regenerative Medicine und Vascular Biology Oral Structure (VABOS) presents the progressions they achieve during the week or new studies they are developing at the moment. Then, the team starts their activities between ward, policlinic, patient consultation, local and general anesthesia's surgery. The activities end frequently at 17:00 hr.

Experience

During the four months at the UKM, I had the opportunity to see what I was interested the most: orthognathic surgery. The department works very closely with the orthodontic team, because of that, they have 3 to 4 orthognathic procedures per week. I saw a different technic for Le Fort 1 and BSSO osteotomies. Also, they do many surgically assisted rapid palate expansions (SARPE) in patients who need orthognathic in the future. One thing that keeps my attention was the anatomical Trilock plates for ostheosynthesis and the 90° screwdriver and drill for mandibular osteotomy.

Other type of mandibular osteotomy for orthognathic surgery was performed: Anterior mandibular body osteotomy in prognathism, where only the anterior segment moves in patients with reasonable occlusion posteriorly.

In the area of osseous distraction, besides SARPE, they have cases of transmandibular symphyseal distraction, for the correction of mandibular transverse deficiencies and anterior crowding. This was the first time I watched.

For reconstruction of oral cavity cancer defects, the radial forearm free flap is what they usually use. However, I had the chance to see a platysma flap for oral mucosa reconstruction.

In the trauma field, I saw a different approach for subcondylar and ramus mandible fracture, the Perimandibular approach for open reduction and internal fixation (ORIF), which is done via a skin

incision along with the inferior outline of the mandible. It has lower risk of facial nerve disturbance and provides good accessibility to the fracture site. Another novel technique for me is the use of PDS in defects of an orbital floor facture. This is a polydioxanone foil, applied to cover small and medium defects. This reduces the operation time and makes it easier. The approach employed for orbital floor is only the transconjuntival.

I could also see one patient with facial paralysis. She was treated with static facial suspension with Fascia Lata on both sides of the face.

The team is in charge of two types of treatment in cases of Obstructive sleep apnea (OSA), using orthognathic surgery and placing a novel item around the hypoglossal nerve to stimulate the tongue. This last surgery is a new technique, very meticulous, uses the microscope to locate the correct fiber of the nerve responsible of stick out the tongue during apnea.

And, last but not least, the department is in charge of cleft lip and palate patients. They have not only children as patients; also they have to reconstruct some complications of secondary surgeries in adults. The iliac crest bone graft is frequently used for augmentation of the premaxilla. After a convenient period, when is possible, dental implants are collocated to reestablish the function of the jaws.

Research

As part of the researcher team, I helped Prof. Kleinheinz to do an update review about dental implants in osteoporotic patients, article that will be presented in an ITI course in the future; another article was about a review of mandible fracture treatment with 3D Medartis plates, used at the MKG department of the UKM. And, I searched some literature about ideas for reconstruction of an absent premaxilla in patients with bilateral cleft palate, a late complication that can occur after surgeries or some of these defects are presented in osseous deficient syndromes.

Conclusion

The experience lived at the UKM was very gratifying. I had the opportunity to see new surgeries and different techniques. I am looking forward to use this knowledge in Peru, in order to complement and improve the operations. I would like to use this occasion to kindly thank the IBRA scholarship Committee, Prof. Johannes Kleinheinz and his team for all their support and for giving me the chance to have this exceptional experience!

Carla Marino

Prof. Johannes Kleinheinz