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Federation of European Societies for Surgery of the Hand

FESSH Travel Fellowship Report

Dr. Camilo CHAVES, MD, MSc

1st May – 19th of November 2021

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Summary

- **Project**
- **Visited units in chronological order**
  - Dr Piñal y Asociados – Madrid and Santander, Spain
  - Institut Kaplan – Barcelone, Spain
  - Schön Klinik, Handzentrum – Munich, Germany
  - Klinikum rechts der Isar der Technischen Universität München, Sektion für Handchirurgie – Münich, Germany
  - OKM Orthopädische Klinik Markgröningen, Zentrum für Hand- und Plastische Chirurgie – Markgröningen, Germany
  - Schulthess Klinik, Handchirurgie – Zürich, Switzerland
  - Universitätsspital Zürich, Klinik für Plastische Chirurgie und Handchirurgie – Zürich, Switzerland
  - Universitätsklinik Balgrist, Handchirurgie – Zürich, Switzerland
  - Dr Andrea Atzei – Treviso, Italy
  - Orthoca, Hand Surgery Unit – Antwerpen, Belgium
  - Rhön-Klinikum Campus Bad Neustadt, Klinik für Handchirurgie – Bad Neustadt, Germany
  - Katholisches Kinderkrankenhaus Wilhelmstift, Handchirurgie – Hamburg, Germany
  - Queen Elizabeth Hospital Birmingham, Hand, Wrist and Peripheral Nerve unit – Birmingham, UK
- **Conclusion**
- **Acknowledgement**

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Project

- **Schedule**
  - Between May and November 2021
  - Visits at each center between 1 to 3 weeks
- **Goals**
  - To exchange experience and knowledge with the different teams
  - To observe different diagnosis, treatments, concepts, techniques and discuss them with the members of the units
  - To gain international experience regarding practices and healthcare systems
  - To enlarge the network of hand surgeons and to establish new links and platforms internationally
  - To have a more comprehensive view of care, surgical techniques, and post-operative protocols from different perspectives
  - To get involved in laboratory and anatomical research applied to hand surgery
  - To start or enhance projects
  - To use this experience in practice and share it with my colleagues
  - To promote the links and exchanges between teams and encourage this kind of internship
- **Centers**
  - Selected FESSH Members or known Hand Units based in their specific interest particularly, anatomy, biomechanics, posttraumatic reconstruction, nerve repair, microsurgery, arthroscopy, treatment of degenerative and congenital conditions as well as clinical, fundamental research and tissue engineering.
- **Funding**
  - This Travel Fellowship was funded by the *FESSH* and by the *SOFCOT* (Société Française de Chirurgie Orthopédique et Traumatologique)

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Project

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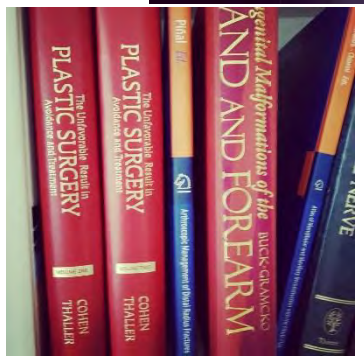
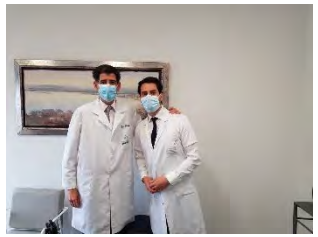
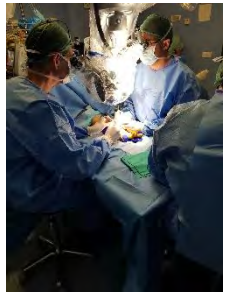
Dr Piñal y Asociados

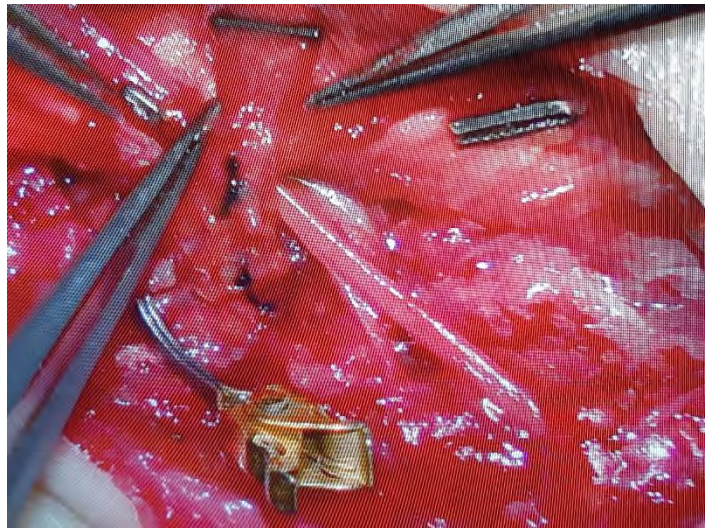
- Period:
  - 17t to 30 May 2021
- Responsable:
  - Dr Francisco del Piñal
- Location:
  - Madrid and Santander, Spain
- Areas of interest:
  - Complex cases and secondary/tertiary referrals from all over the country and abroad
  - CRPS of the upper and lower limb, radius malunions, vascularized transfers, tetraplegia, wrist arthroscopy, post-traumatic reconstruction
- City and other activities:
  - Madrid and Santander offer plenty of cultural and social activities. A visit to Museo del Prado and to the different restaurants around the clinics is mandatory
- Website:
  - https://drpinal.com/en/

DR. PIÑAL
y ASOCIADOS
MADRID-SANTANDER









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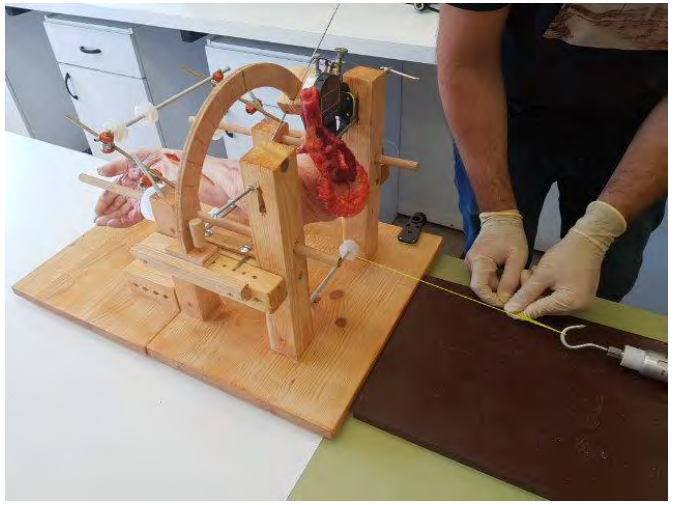
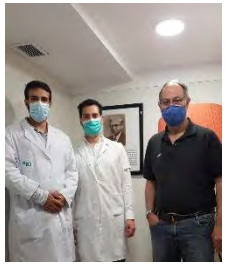
Institut Kaplan

- Period:
  - 31 May to 13 June 2021
- Responsable:
  - Dr. Anna Carreño, Dr. Ángel Ferreres
- Location:
  - Barcelone, Spain
- Areas of interest:
  - High interest in biomechanics. Cadaveric and biomechanical laboratory with several projects going on
  - Arthroscopy, ultrasound, degenerative conditions, WALANT
  - Emphasis in proprioception and periarticular muscle reinforcement for articular and ligamentous lesions
- City and hobbies:
  - The Sagrada Familia, Gaudi Buildings, jogging around the Barceloneta. The old gothic center
- Website
  - https://institut-kaplan.com/

Kaplan hand Institute





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Schön Klinik, Handzentrum

- Period:
  - 14 to 27 June 2021
- Responsable:
  - Pr. Kai Megerle
- Location:
  - Munich, Germany
- Areas of interest:
  - The Schön Klinik is a clinic that treats orthopedic conditions. The hand surgery here is therefore highly specialized with colleagues specialized in plastic and orthopedics and frequent meetings and discussions
  - Sport injuries, wrist arthroscopy, high quantity of elective surgeries, WALANT, nerve transfers, microsurgery, free flaps, elbow surgery (arthroscopy and open), radius fracture
  - Medical software, availability of imaging and organization
- City and hobbies
  - The Euro football cup was taking place during this visit. Visit at the Haus der Kunst. Munich has plenty of open green spaces to practice any kind of sport and even surfing.
- Website:
  - https://www.schoen-klinik.de/muenchen-harlaching/handzentrum

SCHÖN KLINIK
München Harlaching

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Klinikum rechts der Isar der Technischen Universität München, Sektion für Handchirurgie

Klinikum rechts der Isar
Technische Universität München

- Period:
  - 21 to 27 June 2021
- Responsable:
  - Dr. Dr. Haydar Kükrek
- Location:
  - Munich, Germany
- Areas of interest:
  - Complex trauma and post-traumatic reconstruction. Degenerative conditions, wrist arthroscopy, scaphoid nonunion.
- City and hobbies
  - (similar as on page 8)
- Website
  - https://www.mri.tum.de/handchirurgie

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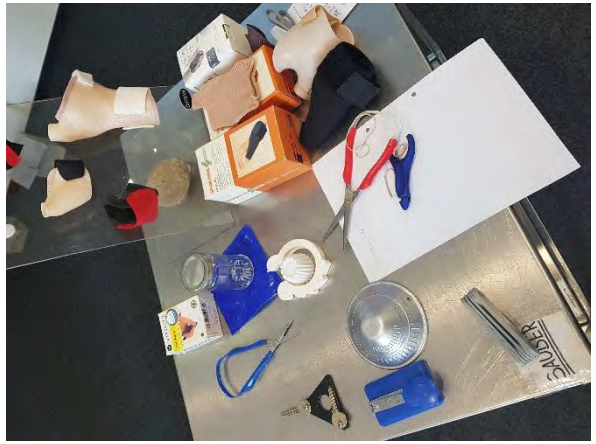
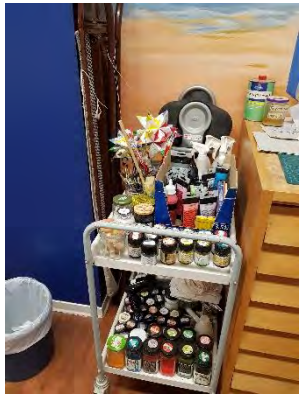
Orthopädische Klinik Markgröningen, Zentrum für Hand- und Plastische Chirurgie

- Period:
  - 12 to 25 July 2021
- Responsable:
  - Pr. Max Haerle
- Location:
  - Markgröningen, Germany
- Areas of interest:
  - With an operating theater designed for arthroscopic procedures, the organization is impressive
  - A complete physiotherapy unit dedicated to hand surgery and rehabilitation
  - Lots of elective surgery and some emergencies, particularly complex wrist fractures and arthroscopically assisted interventions
- City and hobbies
  - The area around Markröningen is green with lots of green places for jogging. Ludwigsburg is a beautiful baroque city with a magnificent palace and castles around. For the lovers of cars, the Porsche and Mercedes-Benz Museums factories are in the area
- Website
  - https://www.rkh-kliniken.de/kliniken-zentren/fachbereiche/okm-orthopaedische-klinik-markgroeningen/zentrum-fuer-hand-und-plastische-chirurgie/

RKH Kliniken





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Schulthess Klinik, Handchirurgie

- Period:
  - 26 July to 15 of August 2021
- Responsable:
  - Dr. Daniel Herren, Dr. Stephan Schindele
- Location:
  - Zürich, Switzerland
- Areas of interest:
  - Elective conditions with particular emphasis on osteoarthritis and joint replacements as well as secondary referrals of difficult joint-replacement cases. Inflammatory conditions.
  - The interest of the team on research, the development of registries and publication is outstanding. Weekly scientific meeting.
  - Development of new techniques and devices/implants
- City and hobbies
  - Zurich offers a lot of social and sport activities particularly around the Lake of Zurich. Moving around Switzerland is quite easy. A visit to Davos, Lucern can be done in one day easily
  - Visit to the REGA (Swiss Air-Rescue) and visit to the city with the Schulthess team!
- Website :
  - https://www.schulthess-klinik.ch/en/department/hand-surgery

schulthess klinik

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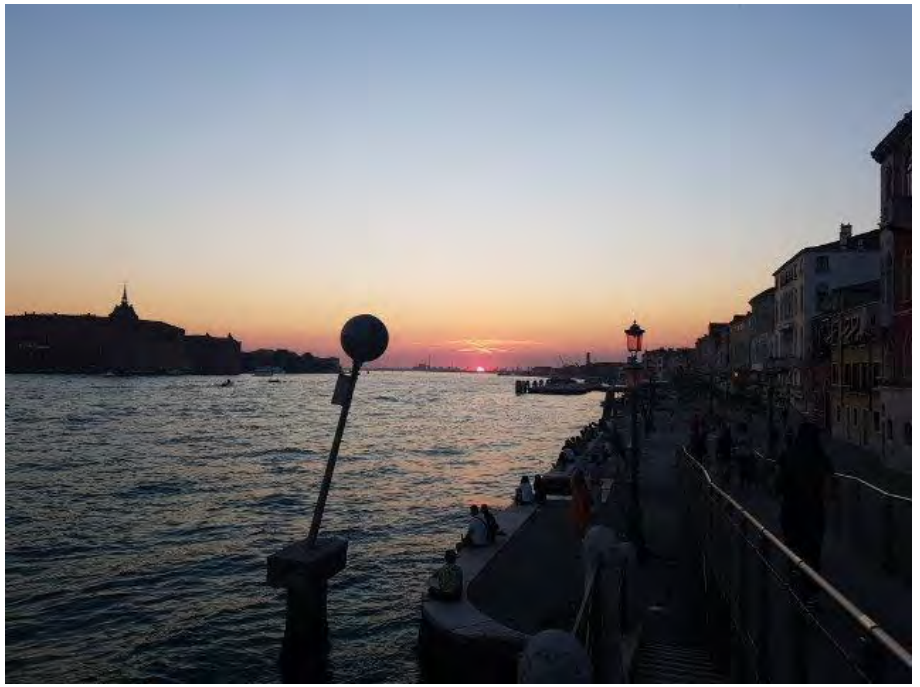
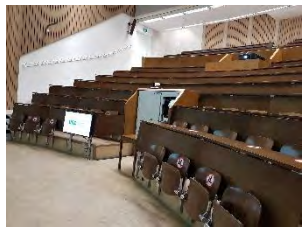
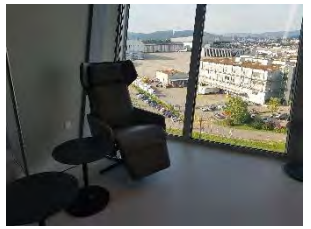
Universitätsspital Zürich, Klinik für Plastische Chirurgie und Handchirurgie

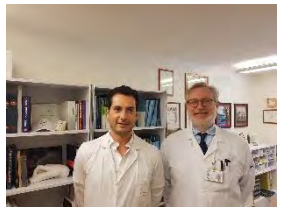
- Period:
  - 26 July to 15 of August 2021
- Responsable:
  - Dr. Maurizio Calcagni, Dr. Marco Guidi
- Location:
  - Zürich, Switzerland
- Areas of interest:
  - Complex traumatic, post-traumatic and oncological cases. Joint reconstruction and arthroplasties
  - Microsurgery, lymphoedema, free flaps. Standardization of PROMs, registries
  - Research on microsurgery, robotics, movement analysis.
- City and hobbies
  - (same as on page 13)
- Website :
  - https://www.usz.ch/fachbereich/plastische-chirurgie-und-handchirurgie/

USZ Universitäts Spital Zürich









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Universitätsklinik Balgrist, Handchirurgie

- Period:
  - 26 July to 15 of August 2021
- Responsable:
  - Pr. Nagy Ladislav, Pr. Andreas Schweizer
- Location:
  - Zürich, Switzerland
- Areas of interest:
  - Wrist and hand surgery with an orthopedic approach
  - Patient-specific 3D models and 3D printing. Development of implants. Research building 20 mts from the hospital
  - Pediatric plexus injuries, nerves and tendon transfers. Forearm, scaphoid and elbow nonunions/malunions treated with 3D modeling.
- City and hobbies
  - (same as on page 13)
- Website :
  - https://www.balgrist.ch/angebot/unsere-aerzte/hand/

Balgrist University Hospital

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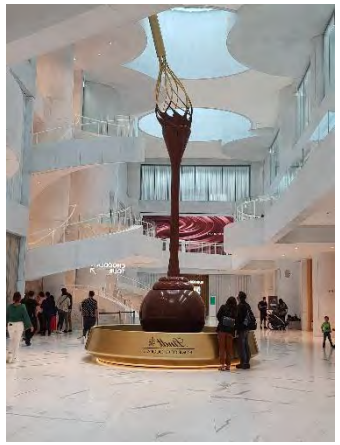
Balgrist

University Hospital



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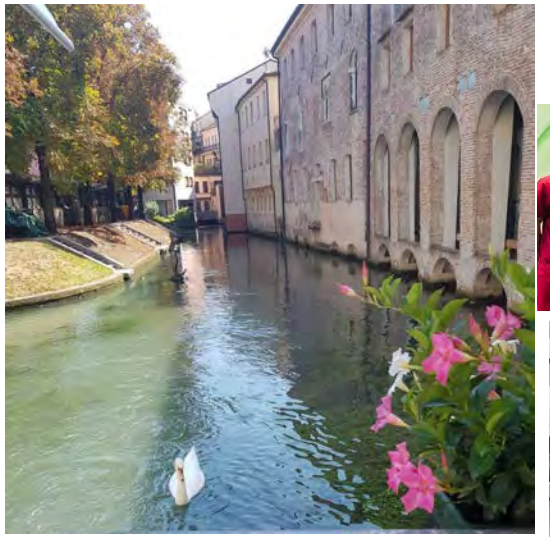
Dr Andrea Atzei

- Period:
  - 6 to 19 September 2021
- Responsable:
  - Dr. Andrea Atzei
- Location:
  - Treviso, Udine, and Padova, Italy
- Areas of interest:
  - Arthroscopy in all its states: TFCC, SL, 4CF, radius non/malunions, development of new techniques
  - Elective surgery and some trauma. Treatment of elite sports players.
  - Scientific writing and publications. Cadaveric workshop. Surgeries with Dr. Ricardo Luchetti and Dr. Lucian Lior Marcovici
- City and hobbies
  - The region of Treviso is beautiful, and Venice is 20 minutes away.
- Website :
  - https://www.andreaatzei.it/

dr. andrea atzei



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Orthoca, Hand Surgery Unit

- Period:
  - 20 September to 3 October 2021
- Responsable:
  - Dr. Frederik Verstreken
- Location:
  - Antwerpen, Belgium
- Areas of interest:
  - Elective surgery with degenerative conditions as the main point. Thumb osteoarthritis (prothesis, CMC fusion). Arthroscopy, tumors, correction of forearm malformations with 3D specific guides. Important research on 3D printing and modeling. Development of medical devices for orthopedics
  - Elbow surgery is available as well with Pr. Roger van Riet
- City and hobbies
  - Lots of museums are around: Ruben's house, the Museum Mayer van den Bergh exposes paintings from Bruegel and Fouquet. The road bike world championship was taking place in the city on those days
- Website :
  - https://orthoca.be/fr/

ORTHOCA
Orthopaedic Center

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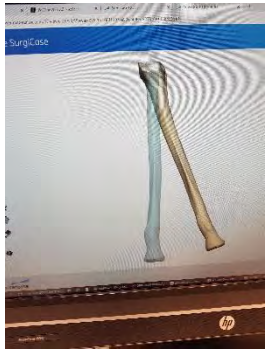
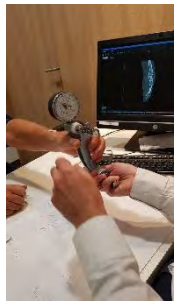
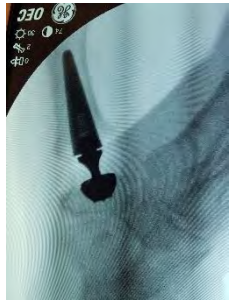
ORTHOCA
Orthopaedic Center







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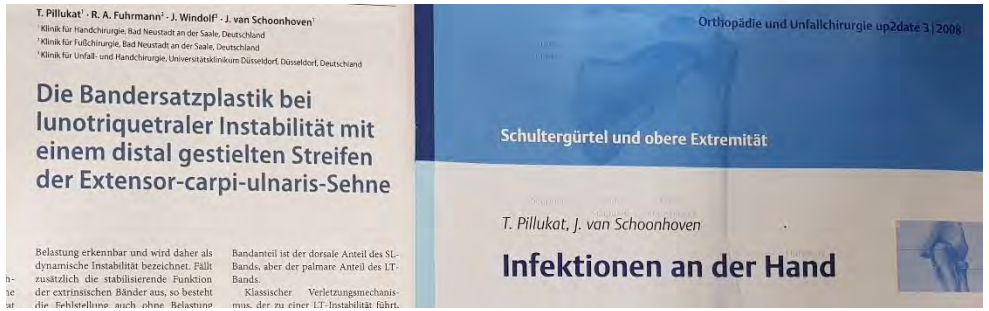
Rhön-Klinikum Campus Bad Neustadt, Klinik für Handchirurgie

- Period:
  - 4 to 17 October 2021
- Responsable:
  - Pr. Jorg van Schoonhoven
- Location:
  - Bad Neustadt, Germany
- Areas of interest:
  - This unit comprises more than 30 healthcare givers dedicated to hand surgery. All conditions are treated here, and it is the reference center of the region. The hand unit has a hand rehabilitation unit with an in-patient ward, social workers, psychologist, physiotherapist and occupational therapist.
  - Microsurgery, trauma from simple to complex cases, pediatrics, arthroscopy, degenerative, post-traumatic reconstruction. Ulna head arthroplasties, Kienböck disease
- City and hobbies
  - Bad Neustadt is a small city surrounded by woods and fields. A good place to chill and enjoy nature.
- Website :
  - https://www.campus-nes.de/medizin-pflege/unsere-kliniken/handchirurgie.html

RHÖN-KLINIKUM
Campus Bad Neustadt
Medizinische Exzellenz aus Tradition


T. Pillukat[1] · R. A. Fuhrmann[2] · J. Windolf[3] · J. van Schoonhoven[1]
[1] Klinik für Handchirurgie, Bad Neustadt an der Saale, Deutschland
[2] Klinik für Fußchirurgie, Bad Neustadt an der Saale, Deutschland
[3] Klinik für Unfall- und Handchirurgie, Universitätsklinikum Düsseldorf, Düsseldorf, Deutschland

Die Bandersatzplastik bei lunotriquetraler Instabilität mit einem distal gestielten Streifen der Extensor-carpi-ulnaris-Sehne

Belastung erkennbar und wird daher als dynamische Instabilität bezeichnet. Fällt zusätzlich die stabilisierende Funktion der extrinsischen Bänder aus, so besteht die Fehlstellung auch ohne Belastung

Bandanteil ist der dorsale Anteil des SL-Bands, aber der palmare Anteil des LT-Bands.

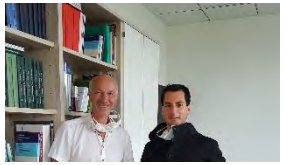
Klassischer Verletzungsmechanismus, der zu einer LT-Instabilität führt,

Orthopädie und Unfallchirurgie up2date 3 | 2008

Schultergürtel und obere Extremität

T. Pillukat, J. van Schoonhoven

Infektionen an der Hand



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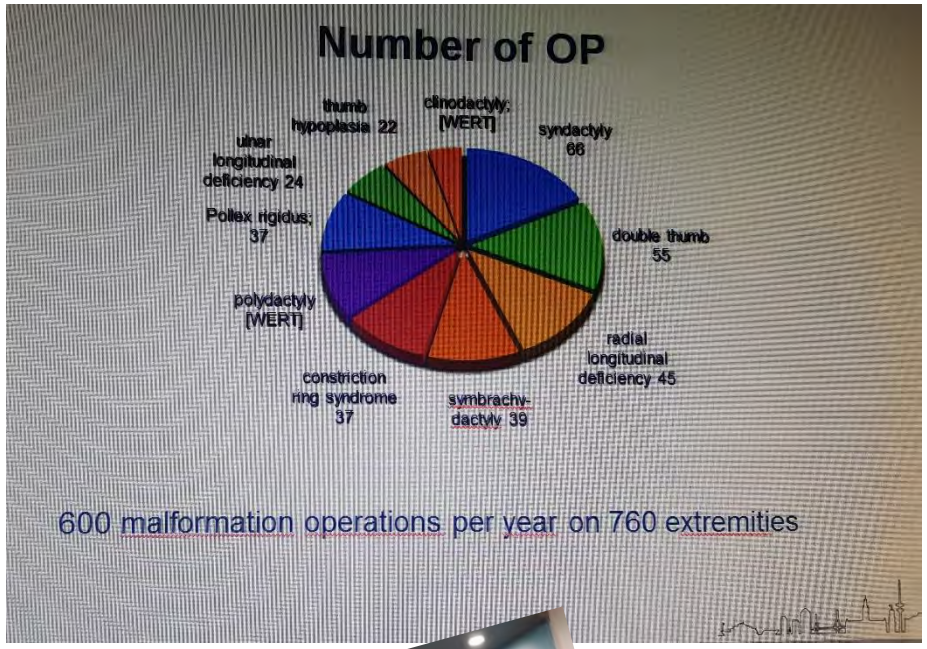
Katholisches Kinderkrankenhaus Wilhelmstift, Handchirurgie

- Period :
  - 8 to 14 November 2021
- Responsable:
  - Dr. Wiebke Hüselmann
- Location:
  - Hamburg, Germany
- Areas of interest:
  - This unit is specialized in pediatric hand malformations on a very large spectrum. All conditions, from the most common to the rarest, are treated. Consultation is dense and there are surgeries every day for pediatric hand conditions. Madelung, Apert, Syndactyly, thumb duplications, radial deficiencies, Symbrachydactyly, cleft hand, vascular deformities, polydactylies, constriction ring syndrome, Lamb-Schaffer syndrome. 3D specific plates for Madelung to mention few.
- City and hobbies
  - Hamburg is a charming city that can be a little bit rainy. The cases on the hospital were so interesting that I spent most of the time learning and catching up on everyday cases.
- Website :
  - https://www.kkh-wilhelmstift.de/fachbereiche-experten/handchirurgie/

WILHELMSTIFT

Katholisches Kinderkrankenhaus



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Queen Elizabeth Hospital Birmingham, Hand, Wrist and Peripheral Nerve Unit

- Period:
  - 15 to 21 November 2021
- Responsable:
  - Dr Dominic Power
- Location:
  - Birmingham, UK
- Areas of interest:
  - Traumatic hand injuries, nerve conditions. This unit it specialized in peripheral nerves and the number of patients and consultations for nerve conditions is impressive. Thoracic Outlet Syndromes, neurological lesions after Covid. Wrist surgery, arthroscopy. Nerve allografts and neurotubes.
  - Visit of Pr. Dahlin and Dr. Nyman for two days on peripheral nerve discussions and research meeting
  - High level of research going on with multicentric prospective randomized trials, grant applications, PhD projects, and meetings
- City and hobbies
  - The Christmas market was already open. We had a great time in pubs and nice restaurants around the hospital!
- Website:
  - https://www.nhs.uk/Services/hospitals/Services/Service/Treatment/DefaultView.aspx?id=178341&spid=347475

NHS
University Hospitals Birmingham
NHS Foundation Trust

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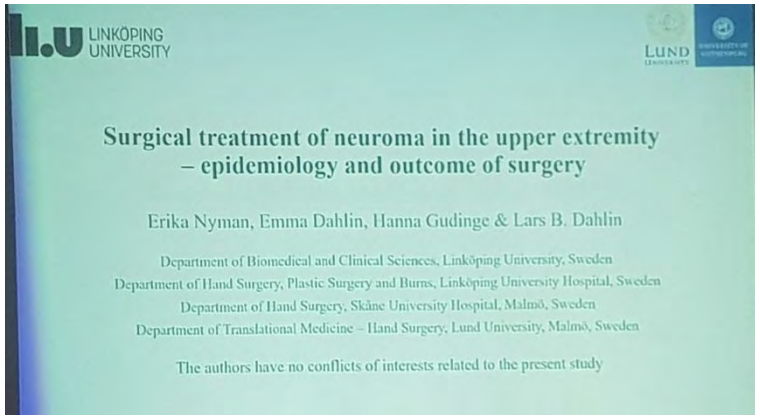
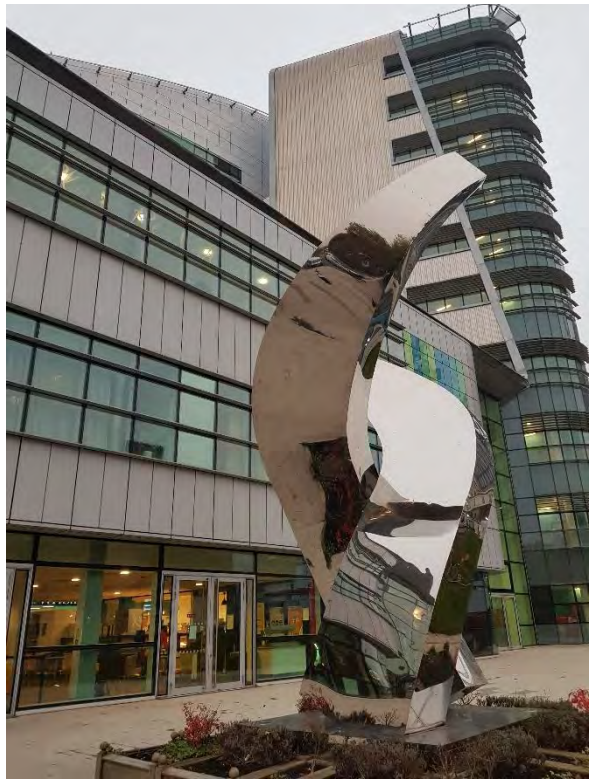
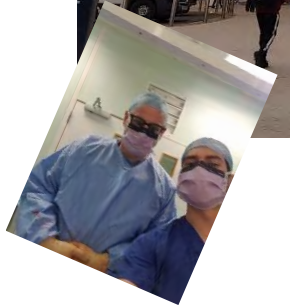
University Hospitals Birmingham

NHS Foundation Trust







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Conclusion

This was an extraordinary and incredible experience. I tried to summarize and share as much as possible in this report, but more than mere text and images are required to capture the richness of this experience.

During the past six months, I was able to participate in scientific meetings, cadaveric dissections, surgical procedures, ward visits, medical consultations and physiotherapy sessions. I did not expect to attend a particular number of cases or procedures, but rather to deal with every single case in profound detail and to discuss it widely within the team. This analytical approach was much more beneficial to me than a quantitative one, and it allowed us to have interesting discussions and share our knowledge. Most importantly, it open the doors to new friendships and partnerships.

I was impressed by the high quality of care, the solidarity and knowledge of our colleagues. Every day, I knew I was going to learn something new, and very often, I finished the day with a lot of new knowledge and new ideas to develop. This was a mind-opening experience and I encourage all my colleagues to participate in this kind of travel fellowship.

It was a pleasure to meet all teams and to realize that, although we work in different places with different languages, eduacation and cultures, we are all moving in the same direction: towards the development of hand surgery to the benefit of the patient!

Acknowledgement

A special and friendly thankyou to the secretaries, medical assistants and nurses that helped with the organization of this project. Their support was essential, and although the organization of this fellowship was particularly arduous given the current pandemic, everything went well and ran smoothly. They were always kind to help with the organization around the visits to be sure that the experience was enjoyable and pleasant for everyone.

I express my deepest gratitude to the Chiefs of Departments and colleagues (doctors, students, nurses, physiotherapist, occupational therapist) that opened their doors for me and shared their daily work, experiences and valuable time. Thank you for the discussions and the devotion that we share for hand surgery.

During the past 6 months, I was able to meet passionate surgeons and I was pleasantly surprised by their friendliness and goodwill. Some of them shared not only their professional knowledge with me, but also their personal experiences, guidance and encouragement, which helped me to make important choices during this journey. Not only did I meet talented and passionate surgeons, but I met real friends!

Thanks to my mentors who supported this project and encouraged me: Dr. Philippe Bellemère, Dr. Thierry Dubert, Pr. Luc Favard, Pr. Franck Fitoussi, Dr. Etienne Gaisne, Pr. Emmanuel Masmejean, Pr. Raphaël Vialle.

Finally, thanks to my family and friends who keep supporting me in my adventures, which are not bound to stop any time soon!

Thank you

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DR. PIÑAL
Y ASOCIADOS
MADRID-SANTANDER

FELLOWSHIP CERTIFICATE

Santander, 18th October 2021

This is to certify that **Dr. Camilo Chaves**, has been visiting our unit between the **17th and the 28th of May 2021** doing a fellowship in the private practice in Santander and Madrid, training in arthroscopic and microsurgical hand and wrist reconstruction.

During his time with us he has shown great interest to improve his knowledge in hand surgery and he has attended all our activities: office, surgery, and clinical session in both clinics in Santander and Madrid.

Dr. Francisco del Piñal
Head and Director
Instituto de Cirugía Plástica y de la Mano
Private Practice

Kaplan hand Institute

CERTIFICATE
IN
HAND AND UPPER EXTREMITY SURGERY

June 16th 2021

This is to certify that **Dr**. **Camilo CHAVES** has observed and participated in most Hand and Upper Extremity surgical procedures, as well as teaching activities at our institution, from 31st May to 13th June, 2021.

Very truly yours,

Sincerely,

Dr. Alberto Lluch Dr. Marc Garcia-Elias Dr. Àngel Ferreres Dr. Àlex Lluch Dra. Anna Carreño

Institut Kaplan
Passeig de la Bonanova 9, 2-2
08022 Barcelona
+34 93 417 84 84
info@institut-kaplan.com

The Institut Kaplan has been accredited by the Federation of European Societies for Surgery of the Hand (FESSH) for the training in Surgery of the Hand and Upper Extremity.

BAYERISCHE
LANDESÄRZTEKAMMER
Körperschaft des öffentlichen Rechts

Bestätigung einer Hospitation

(gemäß aktuell gültiger Fortbildungsordnung und aktuell gültiger Richtlinie)

Hospitant:

Name: Chaves

Vorname: Camilo

Geburtsdatum: 23.6.86

Einheitliche Fortbildungsnummer (EFN):

Hospitationsgeber:

Institution: Schön Klinik München Harlaching

Anschrift: Harlachinger Straße 51, 81547 München

Telefonnummer: 089/6211 2061

Fachbereich: Zentrum für Hand-,Mikro-,Plastische und Ellenbogen Chirurgie

Kurzbeschreibung der Tätigkeit: Vermittlung Operationstechniken, Diagnostik & Indikation Stellung

Verantwortlicher ärztlicher Leiter /

Ansprechpartner: Prof. Dr. med. Kai Megerle

Hospitationszeitraum:

Datum	Uhrzeit (von)	Uhrzeit (bis)	Datum	Uhrzeit (von)	Uhrzeit (bis)
14.06.-25.6.21	07:15	16:30			

25.6.21

Datum, Unterschrift und Stempel des Hospitationsgebers

Prof. Dr. med. Kai Megerle
Chefarzt
Facharzt für Plastische und Ästhetische Chirurgie
Handchirurgie
Zentrum für Hand-, Mikro- und Plastische Chirurgie
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Körperschaft des öffentlichen Rechts
Mühlbaurstraße 16 81677 München
Telefon 089 4147-124 Fax 089 4147-705 www.blaek.de

Erstellt von: Abt. Fortbildungsanerkennung; Stand: Januar 2020

Ärztlicher Direktor
Professor Dr. Max Haerle
Facharzt für Hand- und
Plastische Chirurgie

Kurt-Lindemann Weg 10
71706 Markgröningen

Telefon: 07145/91-53101
Telefax: 07145/91-53920
Internet: www.okm.de

Certificate

We certify that Dr Camilo CHAVES did a 2-week fellowship in our unit from the 12th until the 23rd of July 2021. He attended all our activities: office, surgery, and clinical sessions.

Prof. Dr. Max Haerle
Ärztlicher Direktor

Handchirurgie
Dr. med. Daniel Herren, M.H.A.
Chefarzt
T +41 44 385 74 81
F +41 44 385 75 91
daniel.herren@kws.ch

Zürich, 2. November 2021

Certificate

We certify that Dr Camilo CHAVES did a 3-week fellowship in our unit from the 26th of July until the 13th of August 2021. He attended all our activities: office, surgery, and clinical sessions.

Kind regards

Dr. med. D. Herren, M.H.A.
Chefarzt
Orthopädie / Handchirurgie

USZ Universitäts Spital Zürich

Department of
Plastic Surgery
and Hand Surgery

Universitätsspital Zürich, Rämistrasse 100, 8091 Zürich

Maurizio Calcagni MD
Professor and Deputy Clinic Director

Universitiy Hospital Zurich
Division of Plastic Surgery
and Hand Surgery
Raemistrasse 100
CH-8091 Zurich

Email Maurizio.calcagni@usz.ch
Phone +41 (0)44 255 33 39

To whom it may concern

Zurich, 1.11.2021

Confirmation

We certify that Dr Camilo CHAVES did a 3-week fellowship in our unit from the 26th of July until the 13th of August 2021. He attended all our activities: office, surgery, and clinical sessions.

Kind regards

Maurizio Calcagni, MD
Professor and Deputy Clinic Director

Balgrist
Universitätsklinik

Universitätsklinik Balgrist
Orthopädie

Prof. Mazda Farshad
Medical Director

Contact person
Prof. Dr. med. Andreas Schweizer
Head of Hand Surgery
Forchstrasse 340
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Secretary
Tel. 044 386 30 11
hand@balgrist.ch
www.balgrist.ch

To whom it may concern

Zurich, 28.10.2021

CERTIFICATE

Camilo CHAVES MD, 23/06/1983, France

This is to certify that Dr. Camilo Chaves has completed a visiting observership at the department of Hand Surgery at Balgrist University Hospital Zurich from July the 26th to August 13th 2021.

His field of interest was the surgery of the hand and wrist and he particularly joined the hand specialty team under the direction of the undersigned. He observed clinical activities such as outpatient clinic, surgical procedures and office.

It was a pleasure to have him here and we wish Dr. Camilo Chaves all the best for his future career.

Sincerely,

Prof. Dr. med. Andreas Schweizer
Head of Hand Surgery Department

Dott. ANDREA ATZEI

SPECIALISTA in ORTOPEDIA E TRAUMATOLOGIA
CHIRURGIA PLASTICA RICOSTRUTTIVA
DIPLOMA EUROPEO in CHIRURGIA DELLA MANO

MediLAB di PRO-MANO s.r.l.

Società Italiana di Chirurgia della Mano
Presidente Commissione Linee Guida

EWAS
European Wrist Arthroscopy Society
President, 2014-2015

ASSH American Society for Surgery of the Hand
International Member

CHIRURGIA DELLA MANO, POLSO E GOMITO • MICROCHIRURGIA RICOSTRUTTIVA

Treviso, 22/01/22

Re: FESSH Traveling fellowship of Camilo CHAVES, MD

This is to certify that

Camilo CHAVES, MD

attended clinical and surgical activity in Hand Surgery, as awardee of

FESSH Traveling Fellowship

under my guidance from the 6th to the 17th of September 2021.

During his fellowship, Dr. Chaves showed strong willingness and commitment to improve his knowledge and practical skills in Hand and Wrist Surgery and especially in Arthroscopy and Microsurgery.

Sincerely,

Dott. Andrea Atzei

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ORTHOCA
Orthopaedic Center

Prof. Dr. O. Verborgt, PhD
Diensthoofd
Schouderpathologie

Dr. G. Declercq
Schouder- en
kniepathologie

Dr. P. Dolhain
Heup- en knie-
pathologie,
Traumatologie

Dr. N. Jansen
Schouder- en
kniepathologie

Dr. K.C. Lagae
Kniepathologie

Dr. T. Leenders
Voet-, enkel- en
kniepathologie

Dr. J. Londers
Heup- en knie-
pathologie

Dr. G. Mahieu
Wervelzuilpathologie

Dr. M. Vandenberghe
Voet- en enkel-
pathologie

Dr. M. Vanhees PhD
Hand- en pols-
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Dr. P. Van Hoonacker
Hand- en pols-
pathologie

Dr. J. Van Melkebeek
Heuppathologie,
Traumatologie

Prof. Dr. R. van Riet, PhD
Elleboogpathologie

Dr. B. Vanermen
Kinderorthopedie
Evaluatie
menselijke schade

Prof. Dr. P. Verdonk, PhD
Kniepathologie

Dr. F. Verstreken
Hand- en pols-
pathologie

Dr. A. Veyt
Neurochirurgie en
Wervelzuilpathologie

To whom it may concern,

Antwerp, the 6th of December 2021

Dear,

Concerning: Dr. Camilo Chaves

Rotation certificate

Dr. Camilo Chaves has fulfilled a rotation at Orthopedic Centre Antwerp AZ Monica (Antwerpen, Belgium) during the period 20/09/2021 - 3/10/2021. He has been integrated in the Department activity as a visiting surgeon, fulfilling clinical activity, both at consultation and in surgery, where he expended his knowledge as a surgeon.

Yours sincerely,

Prof. Dr. F. VERSTREKEN
Hand surgeon
Orthopaedic Surgeon

Dr. F. VERSTREKEN
1-08167-86-480
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Klinik für Handchirurgie
Campus Bad Neustadt
Medizinische Exzellenz aus Tradition

KLINIK FÜR HANDCHIRURGIE | Von-Guttenberg-Straße 11 | 97616 Bad Neustadt

Herrn
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Zentrale Patientenanmeldung
Telefon: +49(0)9771-66-21777
Internet: www.handchirurgie.de

15.10.2021/mo

To whom it may concern

Camilo Chaves MD, MSc has visited the Klinik für Handchirurgie (Centre for Surgery of the Hand) in Bad Neustadt (Germany) full time from October 4th 2021 to October 15th 2021.

In our centre surgery of the upper extremity of all kinds including microsurgery, replantation surgery, surgery of the rheumatoid hand and wrist, surgery for congenital deformities of the upper extremity, elbow surgery and surgery for degenerative or post-traumatic deformities is performed. The centre consists of 60 in patient hospital beds for acute patients, 14 beds for rehabilitation of the hand, daily theatre sessions in four operative rooms and a busy out patient clinic treating approximately 20.000 patients per year. In our centre approximately 6.500 operative procedures are performed per year.

During his visit Dr. Chaves has worked full time and daily attended the theatre sessions and the out patient clinic. He was eager to gain special knowledge and insights into the normal and pathological anatomy and biomechanics of the hand and the forearm as well as the diagnostics, etiology and epidemiology, pathogenesis and prognosis of injuries, illnesses and malformations of the hand and the upper extremity.

It was a pleasure to have Dr. Chaves as a visitor during these weeks and I do hope that we will stay in contact.

With kind regards

Prof. Dr. med. J. van Schoonhoven
Chefarzt Klinik für Handchirurgie

Klinik für Handchirurgie
Campus Bad Neustadt
Medizinische Exzellenz aus Tradition

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15.10.2021/mo

BESCHEINIGUNG

Hiermit wird bestätigt, dass Herr Camilo Chaves MD, MSc vom 04.10.2021 bis 15.10.2021 in der Klinik für Handchirurgie in Bad Neustadt/S. unter der Leitung von Herrn Prof. Dr. med. van Schoonhoven hospitiert hat.

Prof. Dr. med. J. van Schoonhoven
Chefarzt Klinik für Handchirurgie

WILHELMSTIFT
Katholisches Kinderkrankenhaus

Akademisches Lehrkrankenhaus
• der Universität Hamburg
• der Universität zu Lübeck

Handchirurgie
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Wilhelmstift ■ Postfach 73 10 40 ■ 22130 Hamburg

Herrn
Camilo CHAVES
8 rue Charles Richet
44700 Orvault
Frankreich

Hamburg, 30.11.2021

Bescheinigung

Herr Camilo Chaves, geb. 23.06.1986 hospitierte vom 08.11.2021 bis 12.11.2021 in unserer handchirurgischen Abteilung. Er nahm an der am Montag und Donnerstag stattfindenden Spezialsprechstunde für angeborene Fehlbildungen sowie an mehr als 10 Operationen bei angeborenen Fehlbildungen in diesem Zeitraum teil.

Die handchirurgische Abteilung des Katholischen Kinderkrankenhauses Wilhelmstift beschäftigt sich schwerpunktmäßig mit der Behandlung angeborener Fehlbildungen der oberen und unteren Extremitäten. Es werden Patienten aus dem gesamten Bundesgebiet hierher überwiesen.

Mit freundlichen Grüßen

Kath. Kinderkrankenhaus
WILHELMSTIFT gem. GMBH
Liliencronstr. 130
22149 Hamburg-Rahlstedt
Tel. 040 67377-0

Dr. med. Wiebke Hülsemann
FÄ für Chirurgie/Unfallchirurgie/Handchirurgie
Chefärztin
Handchirurgische Abteilung

University Hospitals Birmingham
NHS Foundation Trust

Medical Resourcing Team
2nd Floor
Regent Court
George Road
Edgbaston
Birmingham
B15 1NU
0121 371 8397

24th November 2021

RE: Confirmation of Honorary Contract – Dr Camilo Chaves
DOB: 23/06/1986

I would like to confirm Dr Camilo Chaves' Honorary Observer Placement based at University Hospitals Birmingham NHS Foundation Trust.

Employee Name:	Camilo Chaves
Position:	Observer
Honorary Term:	15/11/2021 – 19/11/2021
Supervising Consultant:	Mr Dominic Power
Specialty:	Hand Surgery

I trust this information is to your satisfaction. Should you require any further clarification, please do not hesitate to contact me on 0121 371 8397

Yours Sincerely,

Natalie Lampett
Medical Resourcing Officer

Received: 17 June 2021 | Revised: 15 August 2021 | Accepted: 22 October 2021

DOI: 10.1002/micr.30835

CASE REPORT

MICROSURGERY WILEY

Free vascularized second metatarsophalangeal joint transfer for scaphotrapezial joint reconstruction after distal scaphoid excision and carpal collapse: A case report

Francisco del Piñal MD, PhD[1] | Michiel Cromheecke MD[2] | Camilo Chaves MD, MSc[1]

[1]Private Practice, Piñal y Asociados, Madrid, Spain

[2]Hand Surgery, AZ Maria Middelares, Ghent, Belgium

Correspondence
Camilo Chaves, Private Practice, Piñal y Asociados, Madrid, Spain.
Email: med@cchaves.com

Funding information
SOFCOT; FESSH

Abstract

Treatment of the destroyed scaphotrapezial (ST) joint in young patients is challenging due to the limited available options as they might not tolerate the stiffness, loss of grip strength and long-term complications of partial fusions, bone resections, and interposition implants or arthroplasties. This report presents the results of a free osteocutaneous joint transfer used to reconstruct the ST joint in a young patient suffering from ST destruction and carpal collapse. This 34-year-old patient was previously treated for a right scaphoid nonunion with distal scaphoid excision and interposition implant that evolved to destruction of the ST space, symptomatic carpal collapse associated and a ST height loss of 7 mm. The DASH score was 34 and the grip strength of 32 kg. The patient was treated with an osteocutaneous vascularized free transfer from the second metatarsophalangeal joint vascularized by the first dorsal metatarsal artery and anastomosed to the palmar carpal branch of the radial artery and a palmar superficial vein. After 3.5 months, the patient returned to full duty work as a mechanic. At the last follow-up, 3 years after the surgery, the patients had complete range of motion without clinical nor radiological degenerative changes. There were no postoperative complications. The DASH score was 3 and the grip strength was 53 kg. This reconstructive procedure allows to recreate a functional ST joint and to correct a carpal collapse avoiding degenerative wrist changes. It may be proposed to young patients who aim to recover a near normal function of their wrist.

1 | INTRODUCTION

Reconstruction of a destroyed intracarpal joints is a challenge. The small surfaces involved, limited bone volumes and intracarpal biomechanics require bone, cartilage, and periarticular tissue replacement while the vascularity of carpal bones is fragile (Obert et al., 2021).

Particularly, nonunion of the distal pole of the scaphoid is a common posttraumatic condition affecting mainly young patients that can evolve to destruction of the scaphotrapezial joint (ST) (Oron et al., 2013). Surgical treatment of the destroyed ST is limited to partial scaphoid or ST joint resections, interposition implants (synthetic or biological grafts), arthroplasties, and palliative techniques such as scapho-trapezio-trapezoid fusions. These techniques do not reconstruct the anatomy of the ST joint and are difficult to propose to young active patient with high functional demands as they might not tolerate stiffness, loss of grip strength, carpus imbalance, and long-term complications of such techniques (Catalano et al., 2020; Garcia-Elias, 2011; Goubier et al., 2006; Malerich et al., 2014; Obert et al., 2021).

The purpose of this report is to present an unusual case of ST destruction and carpal collapse in a young demanding patient that was treated by creating a neo-ST joint with a free vascularized second metatarsophalangeal joint transfer. This procedure restored a complete function and anatomy of the destroyed ST joint.

Work should be attributed to: Private Practice, Madrid and Santander, Spain.

2 | CASE REPORT

A 34-year-old right-handed patient presented with a chronic and progressive disabling pain of the radial border of his right wrist. The patient reported an old trauma and a scaphoid fracture that required three previous surgeries performed at another center. In the last operation, resection of the distal scaphoid, radial styloidectomy and Artelon™ (Small Bone Innovations, Morrisville, PA) interposition implant was performed. The patient suffered from further destruction of the proximal articular surface of the trapezium, the distal scaphoid and evolved to symptomatic carpal collapse. Radiographs and CT-scan confirmed the distal scaphoid resection and a proximal trapezial destruction with degenerative and reactive changes at the ST joint, a midcarpal collapse with dorsal intercalated segment instability deformity (DISI) and a static 7.1 mm ST defect compared to the contralateral side (Figure 1). The DASH score was 34 The grip strength was 32 versus 62 kg at the contralateral side. Because of persistent pain and disability, options were sought for this young and highly demanding patient. Possible treatments would have consisted of salvaging procedures as scapho-trapezial-trapezoid fusion, an interposition implant, proximal row carpectomy or four corner fusion. Because these options are known to limit range of motion grip strength and daily activities, a free osteocutaneous vascularized free joint transfer from the second metatarsophalangeal joint vascularized by the first dorsal metatarsal artery was proposed.

The patient was operated under general anesthesia, with a combined sciatic and an axillary block. The scaphoid was explored using the previous volar incisions. The interposition implant was excised. The distal end of the scaphoid and proximal trapezium was debrided and smoothened to provide a regular and healthy bone bed. A lamina spreader (also called Meary spreader) was used to restore the length of the ST joint and to correct the midcarpal collapse. A free 7.2 mm osteocutaneous vascularized second toe metatarsophalangeal (MTP) joint graft was harvested based on the first dorsal metatarsal artery and a subcutaneous vein. The free MTP joint was interposed into the ST space with the metatarsal head fixed to the scaphoid and the phalanx to the proximal trapezium while the lamina spreader was distracting the ST space. In this way the DISI deformity and the ST length were corrected. Fixation was carried out with three 1.0 mm K-wires. The flap was anastomosed in a termino-terminal fashion to the palmar carpal branch of the radial artery and a palmar superficial vein with 10/0 nylon running sutures (Figure 2). The skin monitor paddle was sutured at the wrist flexion crease. At the donor site, the toe was syndactylyzed to the third toe. The patient was immobilized with a forearm cast and foot splint for 6 weeks. At that time, the K-wires were removed in the office. Progressive range of motion exercises were allowed, full loading was permitted after 3.5 months, and the patient returned to full duty work as a mechanic at this stage.

At the last follow-up, 3 years after the surgery, the patient continued to be pain free and had completely returned to work and previous activities. Range of motion was: 60° of wrist extension, 60° of wrist

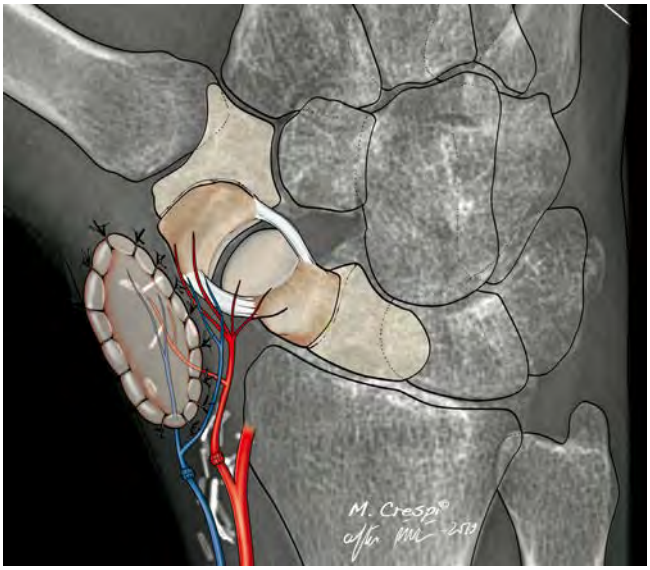

FIGURE 2 Schematic drawing of the neo-scaphotrapezial-joint from the second metatarsophalangeal joint

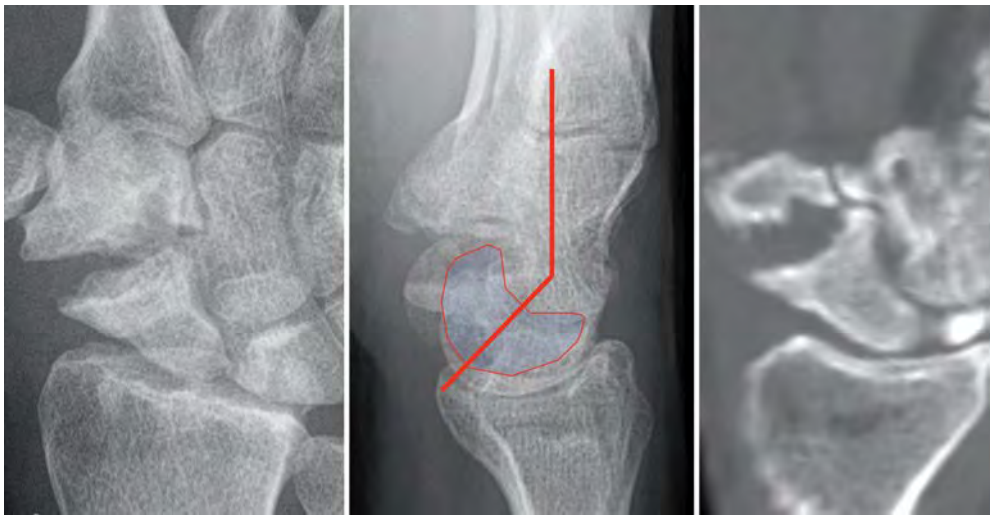

FIGURE 1 Initial posteroanterior (left), lateral (middle), and CT-scan (right) radiographical views showed a scaphotrapezial joint destruction and dorsal intercalated segment instability (DISI) (middle)

FIGURE 3 Three years post-operative posteroanterior (left), lateral (middle), and oblique (right) radiographical imaging showed an integrated neo-scaphotrapezial-joint. A good correction of the midcarpal instability and dorsal intercalated segment instability (DISI) were appreciated (middle). There were no signs of degenerative changes

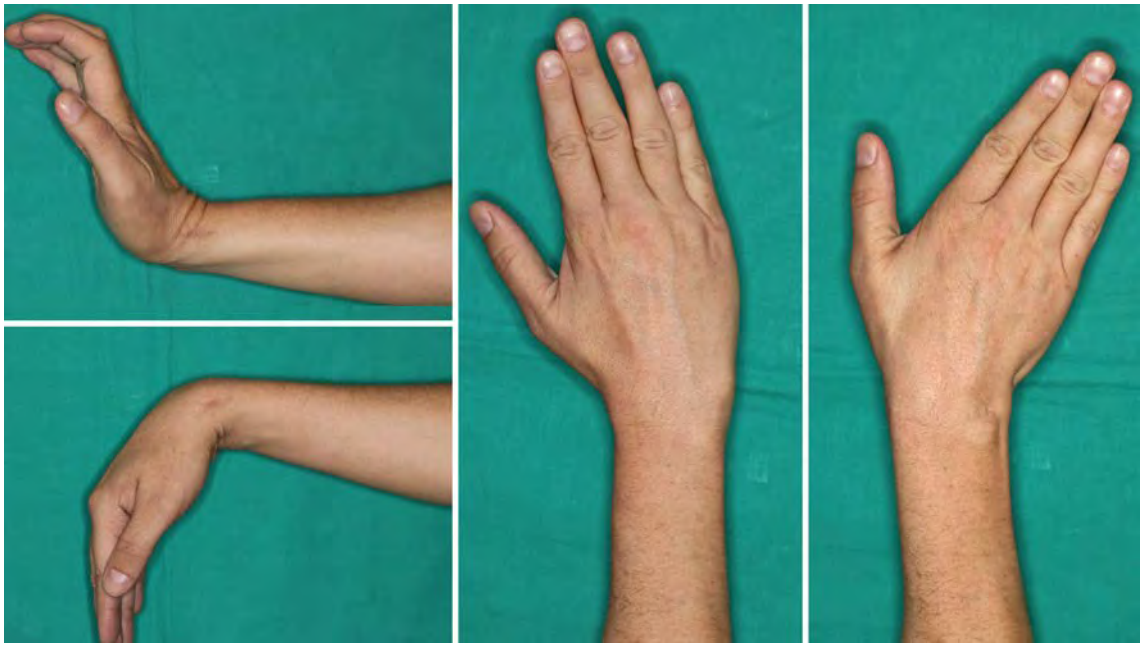

FIGURE 4 Three years post-operative clinical results showed a complete range of motion in extension, flexion, radial, and ulnar inclination

flexion, 40° of ulnar deviation, 20° of radial deviation and full pronation and supination (Figure 4). Postoperative DASH score was 3. The patient's grip, strength was 53 kg on the operated side versus 60 kg for the opposite side. Radiographs demonstrated bony consolidation, incorporation of the joint without any degenerative changes and a correct scaphoid an ST length with correction of the initial adaptative carpal collapse (DISI) (Figure 3).

3 | DISCUSSION

ST reconstruction in young patients is a challenging scenario particularly after previous failed surgeries, reduced bone stock, radiocarpal osteoarthritis, and dorsal midcarpal instability in the context of distal scaphoid pathology.

In our case, the main problem was the significant bone loss of the distal scaphoid and proximal trapezium after distal scaphoid excision and destruction of the ST joint secondary to an interposition implant. In a young patient such interposition could be a treatment option for distal pole necrosis, but this failed in our case and the proximal row collapsed into DISI and created reactional changes around the ST space (Obert et al., 2021).

Restoration of the ST length and fusion of the scapho-trapezio-trapezoid joint is another possible treatment, although technically difficult due to the size of the non-vascularized bone graft needed. The risk of nonunion after grafting of this large bone defect is not to be

underestimated as some studies report non-union rates up to 30% (Goubier et al., 2006). This palliative treatment also overloads the scapholunate fossa as the scaphoid no longer has the possibility to go into dorsiflexion during ulnar deviation, thus the scaphoid tends to subluxate dorsally giving a problem more proximally at the radiocarpal joint in the short run. Moreover, flexion/extension motion and radial-ulnar deviation are decreased in up to 60% and 52%, respectively, with such techniques (Obert et al., 2021).

Interposition implants such as silicone, pyrocarbone, autologous, allografts and synthetic materials combined with distal pole excision might be an option for the treatment of a primary degenerative ST joint in absence of DISI. In our case these options should be avoided as they have already failed, and would increase further carpal instability (Bellemère, 2019; Garcia-Elias, 2011; Pequignot et al., 2005). As significant bone loss and scaphoid height were already present, further debridement would not be an option as literature demonstrates that scaphoid height loss of over 3 mm leads to further carpal instability (Obert et al., 2021).

This scarcity of techniques to reconstruct the ST joint in young patients suffering from carpal instability in a scaphoid-related condition with ST joint destruction after multiple failed surgeries pushed us to propose this unique salvage technique (Catalano et al., 2020). We were looking for an anatomical reconstructive solution and the shape of the MTP joint recreated the anatomy of the distal scaphoid and proximal trapezium. Our fair experience and durable long-term results with free joint and vascularized osteochondral grafts allowed us to propose this microsurgical technique to our patient without any hidden agendas (del Piñal, 2018; del Piñal et al., 2013).

The novelty of our technique is the fact that it allows to anatomically reconstruct the ST joint with a biological autologous vascularized tissue. To our knowledge, this is the first described case of intracarpal joint reconstruction with a free composite osteochondral cutaneous vascularized MTP joint transfer. Vascularized toe joint transfers are well-established techniques for the reconstruction of the radiocarpal, proximal interphalangeal (PIP) or metacarpophalangeal joints (del Piñal, 2018; del Piñal et al., 2013). Commonly the PIP joint of the second toe is used, while the MTP joint is rarely used as a free graft. Parallelly, reconstruction of carpal joints with free vascularized joints grafts have been proposed for the trapezio-metacarpal joint but our case is the first time that a free vascularized graft has been used to reconstruct the ST joint (Foucher et al., 1990).

This procedure requires a trained team used to advanced microsurgical techniques and should be reserved to young and motivated patients with high functional demands presenting a scaphoid nonunion advanced collapse (SNAC) 1 and ST destruction. Other requirements include an adequate height of the trapezium and scaphoid which should not be less than 5 mm after debridement of the pathological tissue, a good permeability of the radial artery, and a normal second metatarsophalangeal joint. While we believe this technique can be proposed in presence of a DISI deformity, it should not be proposed to patients presenting a pantrapezial osteoarthritis or patients with intraosseous trapezial cyst as it can lead to trapezium collapse.

The advantages of this procedure are the anatomical reconstruction of a neo-ST joint and correction the DISI deformity in cases of ST destruction while the donor site morbidity is low. It limits the evolution to a degenerative wrist, secondary pain and loss of motion and grip strength. The drawbacks are the requirement of a 2–3 days of hospitalization with close vascular monitoring of the flap by a trained surgical and paramedical team. It requires immobilization of the donor site during for at least 6 weeks and concomitant anti-thrombotic treatment until bone consolidation is achieved. We believe that the advantages overcome largely the disadvantages of this techniques and it may be proposed to young patients suffering from ST destruction who aim to recover a near normal function of their wrist.

ACKNOWLEDGMENTS

The authors would like to thank Angharad Williams for her kind while editing the English version of this manuscript. This article was possible thanks to the FESSH and SOFCOT Awards. The principles of the Declaration of Helsinki have been respected during this study.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Camilo Chaves https://orcid.org/0000-0002-3257-0003

REFERENCES

Bellemère, P. (2019). Medium- and long-term outcomes for hand and wrist pyrocarbon implants. *The Journal of Hand Surgery*, *44*, 887–897.

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