"Train the Trainers" in Highly Specialized Surgical Field - Reconstructive Microsurgery

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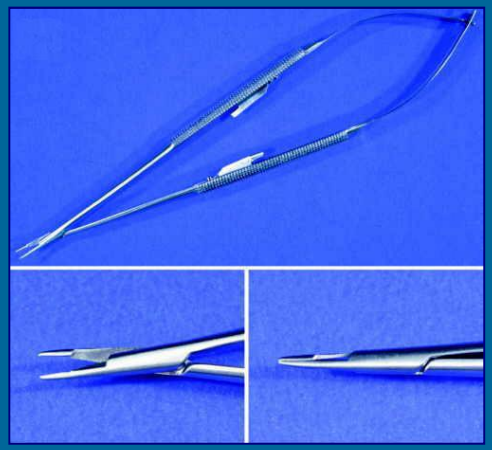
Train the Trainers *v.* Train the Train*ees*

- Different goals
- "Training the Trainers" aims at cultivating future leaders and educators
  - Train higher order thinking
  - Think at least 10 years ahead
  - Ideally global strategy – geographic

Reconstructive Microsurgery

- Operative Microscope (for magnification & illumination)
- Micro-instruments
- Micro-sutures
- Special skills

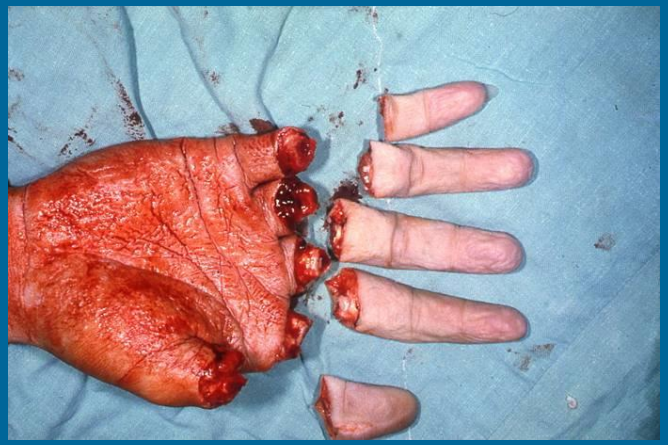


Clinical applications:

(vascular, neural, lymphatic, tubular)

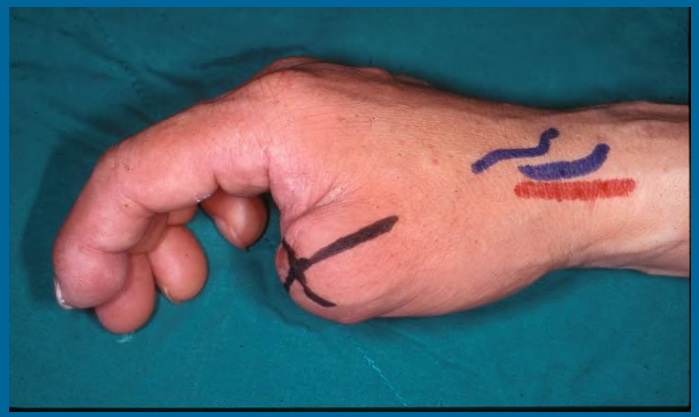
- Replantation surgery
- Free tissue transplantation

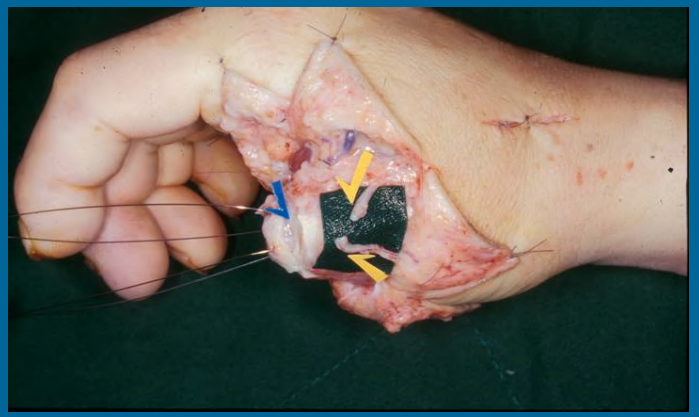
Replantation



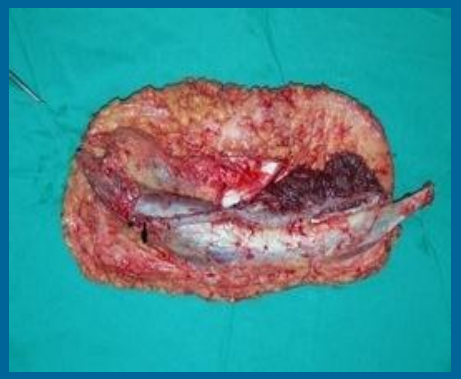



Trimmed Toe Transfer (T.T.T.) for Thumb Reconstruction



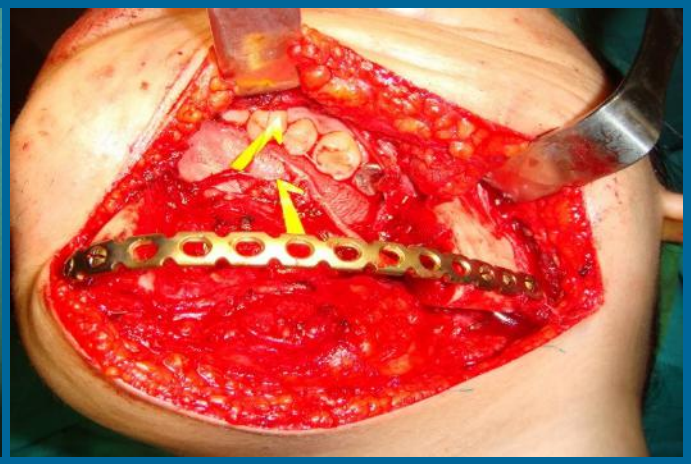


Microsurgical Lower Extremity Reconstruction



Tongue Reconstruction with a Thin Anterolateral Thigh Flap

Immediate (Primary) Osteointegration Teeth in the Fibula Reconstructed Mandible



Reconstructive Microsurgery Saves Lives, Reduces Amputation and Enhances Life Quality in Cancer and Trauma Patients

- It increases reconstructibility of tissue defect
  - Enhances cancer resectability
  - Enhances limb salvagibility
- It provides one stage reconstruction
  - Better functional and esthetical result
  - Shorter rehabilitation
  - Less suffering for the patient

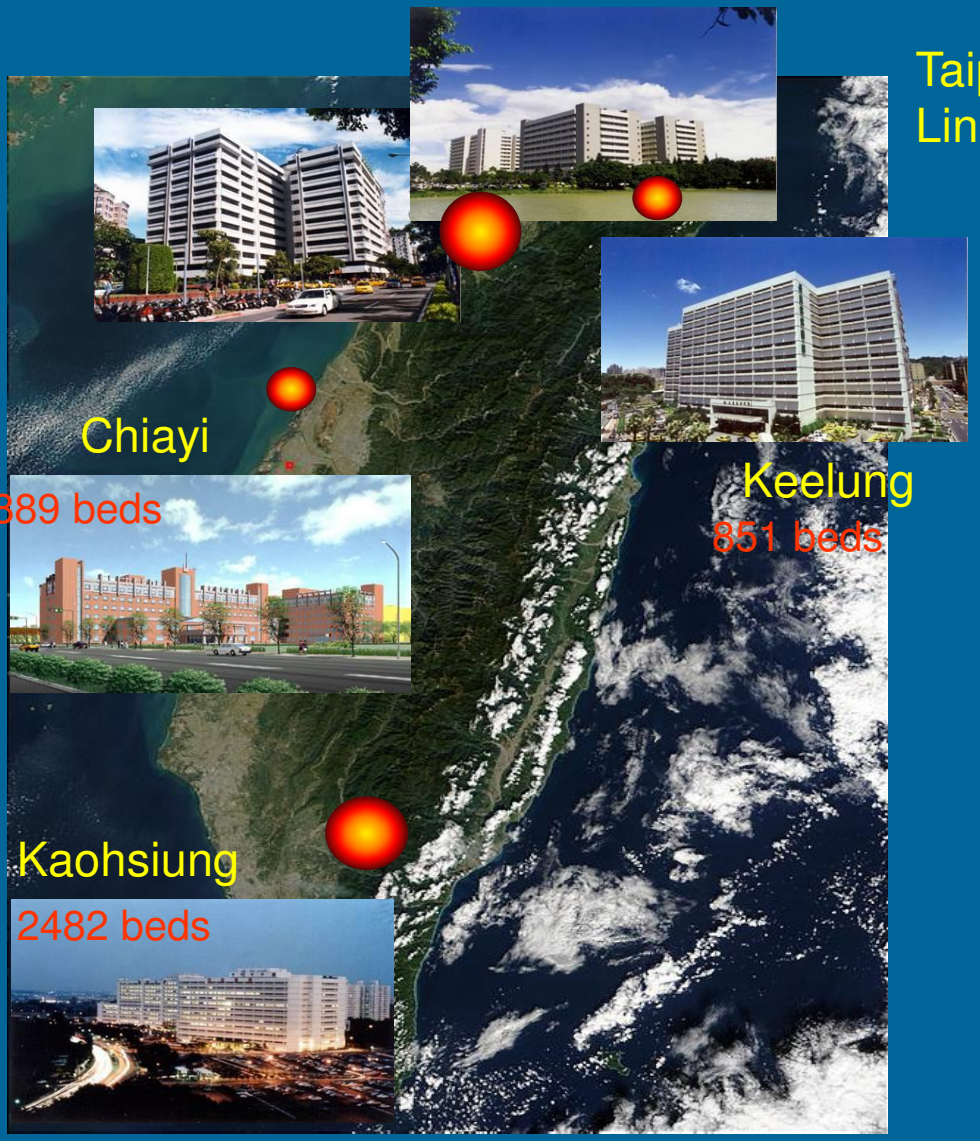
Great Challenges Exist in Expanding Reconstructive Microsurgery Globally

- Labor, time and resource intensive
  - Require highly specialized healthcare team and infrastructure
  - Multi-disciplinary – requires buy-in from others
- Lack of education within healthcare professionals
  Patients and doctors don't know what is possible!
- Perceived as economically unviable for most hospitals
  Huge problems with coding & tariffs esp. when large proportion of reconstructive cases are not 'routine'
- **Lack of training place**

Chang Gung Memorial Hospital Established in 1976

Mr. YC Wang

- Chang Gung Medical College, 1987



Total :
7 hospitals,
1017 beds

CHANG GUNG MICROSURGICAL CENTER at Linkou

- **Attending faculty** **15**
  - Head and neck surgery: 5
  - Upper and lower extremity: 5
  - Breast/lymphedema: 2
  - Peripheral nerve, brachial plexus: 3
- **PRS residents** **21**
- **International Fellows** **8-12**

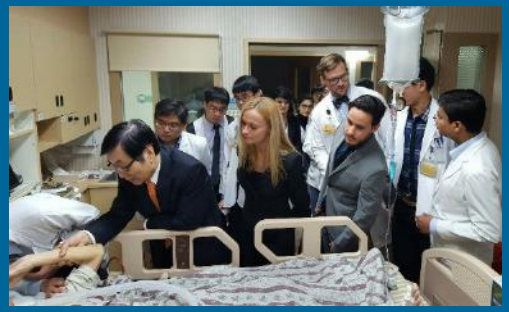
Established in 1988

- **24 Beds Microsurgical I. C. U.**

2009

2011

2016



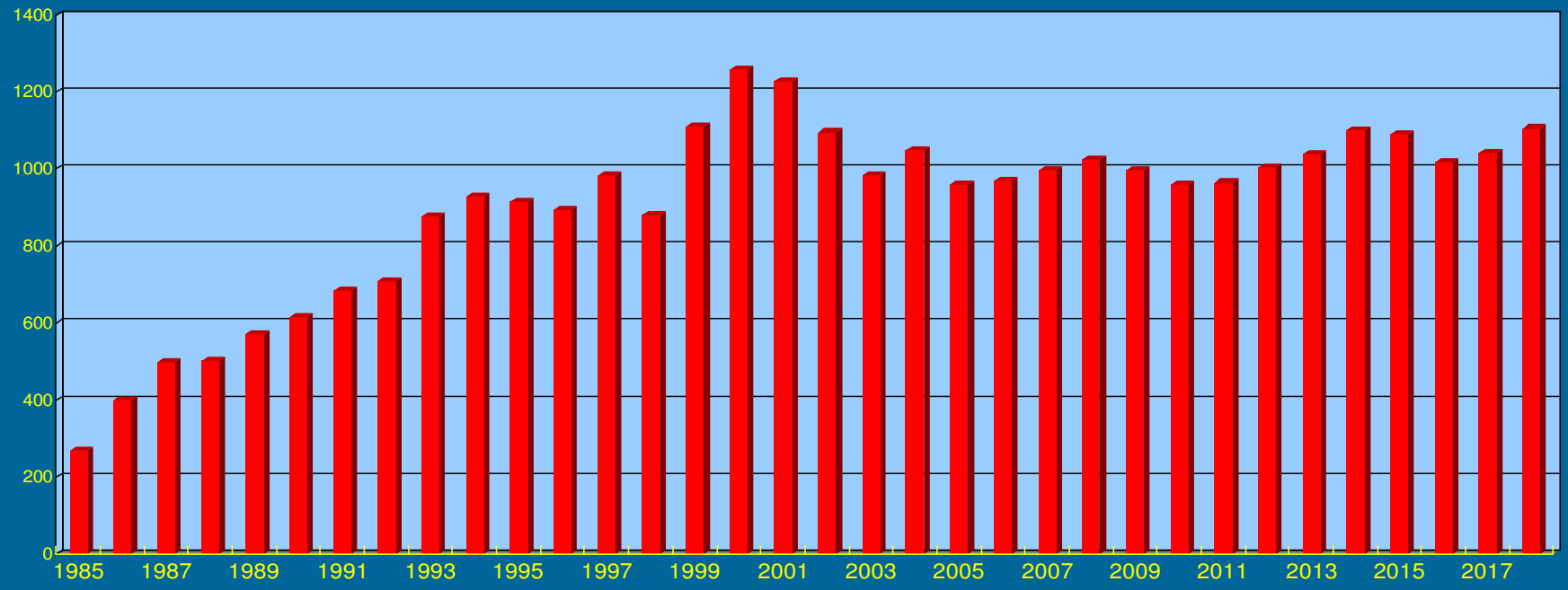
- **Rehabilitation Center**

15 Therapists

All Major Microsurgical Cases

Total : 30765

From Jan 1985 to Dec 2018



Free Flaps: 22369
Replantations: 4711
Brachial Plexus: 2627

Hepatic Artery Anastomosis: 766
Lymphaticovenous Anastomosis: 216
Extracranial-Intracranial (EC-IC) bypass: 84

The Goals of Microsurgical Fellowship at Chang Gung (Train the Trainers)

- **Clinical:**
  - Adequate knowledge
  - Sound judgement (critical thinking)
  - Competent and comfortable in all kinds of microsurgical reconstruction
- **Teaching mind and hand:**

  Willing and able to teach and to train future microsurgeons
- **Academic capability:**

  Capable of carrying out clinical/basic research

Rotations Schedule

(One mentor-one fellow, No overlap)

- Compulsory rotations in all 4 major fields (each 2 months)
  - Head and Neck
  - Upper and Lower Extremity
  - Breast / Lymphedema
  - Peripheral Nerve, Brachial Plexus
- 4 months elective courses for extra immersion in specific fields (to fit individual needs)

Rotation Schedule for International Microsurgical Fellows

2016-2017

Rotation course for International Microsurgical Fellows

Updated: 2016/9/6

	2016	2016	2016	2016	2016	2016	2017	2017	2017	2017	2017	2017	2017	2017
Fellow	July	August	Sep	October	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug.
Charles Loh [O] [Malaysia, ~2016/9/30]	Hsu CC	Hsu CC	Kao HK	Kao HK										
Chew Wei Chong [Trauma] [Malaysia, ~2013/12/31]	Lin Luke	Lin Luke	Chuang DCC	Chuang DCC	Lin CH	Lin CH	Lin YT							
Budhi Nath Adhikari Sudhin [O] [Nepal, ~2017/2/28]	Wu Jerry	Wu Jerry	Hsu CC	Hsu CC	Kao HK	Kao HK	Lin CH	Lin CH						
Vincent Gregory Laurence [USA, ~2017/6/30]	Chuang DCC	Chuang DCC	Lin Luke	Lin Luke	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC		
Olivia Ho [外] [Canada, ~2017/6/30]	Cheng MH	Cheng MH	Lin CH	Lin CH	Tsao CK	Tsao CK	Chuang DCC	Chuang DCC	Wei FC	Wei FC	Huang JJ	Huang JJ		
Lars Jonas Patrik Gustafsson[外] [Sweden, ~2017/6/30]	Wei FC	Wei FC	Cheng MH	Cheng MH	Chuang DCC	Chuang DCC	Lin Luke	Lin Luke	Lin CH	Lin CH	Kao HK	Kao HK		
Alba de Pablo Garcia-Cuenca[外] [Spain~2017/6/30]	Tsao CK	Tsao CK	Kao HK	Kao HK	Wu Jerry	Wu Jerry	Wei FC	Wei FC	Huang JJ	Huang JJ	Chuang DCC	Chuang DCC		
Ahmet Hamdi Sakarya[外] [Turkey, ~2017/6/30]	Chuang DCC	Chuang DCC	Huang JJ	Huang JJ	Lin Luke	Lin Luke	Hsu CC	Hsu CC	Cheng MH	Cheng MH	Wei FC	Wei FC		
Fahad Khaled Aljindan[外] [Saudi, ~2017/8/31]			Lin YT	Lin YT	Cheng MH	Cheng MH	Chen SH	Chen SH	Chuang DCC	Chuang DCC	Tsao CK	Tsao CK	Wei FC	Wei FC
Yun-Huan Hsieh Barry [Australia, ~2017/9/30]			Tsao CK	Tsao CK	Huang JJ	Huang JJ	Wei FC	Wei FC	Lu Johnny	Lu Johnny	Lin Luke	Lin Luke	Lin YT	Lin YT
Marco Pappalardo [Italy, ~2017/8/31]			Wei FC	Wei FC	Lin YT	Lin YT	Cheng MH	Cheng MH	Hsu CC	Hsu CC	Lin CH	Lin CH	Huang JJ	Huang JJ

2017-2018

Rotation course for International Microsurgical Fellows

Updated: 2017/7/19

	2017	2017	2017	2017	2017	2017	2018	2018	2018	2018	2018	2018
Fellow	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb	March	April	May	June
Ahmet Hamdi Sakarya(外) (Turkey, ~2017/6/30)	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC	Chuang DCC
Fahad Khaled Aljindan(外) (Saudi, ~2017/8/31)	Wei FC	Wei FC	Chen SH	Lin Luke								
Yun-Huan Hsieh Barry (Australia, ~2017/9/30)	Lin YT	Lin YT										
Marco Pappalardo (Italy, ~2017/8/31)	Huang JJ	Huang JJ										
Charles Anton Fries(外) (UK, ~2017/9/30)	Chuang DCC	Chuang DCC	Lin YT									
Hubert B. Shih (USA, ~2018/6/30)	Lao William	Lao William	Chuang DCC	Chuang DCC	Lin YT	Lin YT	Lin CH	Lin CH	Wei FC	Wei FC	Cheng MH	Cheng MH
Arash Izadpanah (Canada, ~2018/6/30)	Cheng MH	Cheng MH	Lin CH	Lin CH	Chuang DCC	Chuang DCC	Tsao CK	Tsao CK	Lin Luke	Lin Luke	Wei FC	Wei FC
Frank Hsieh (Australia, ~2018/7/23)	Chang Tommy	Chang Tommy	Tsao CK	Tsao CK	Lin CH	Lin CH	Kao HK	Kao HK	Cheng MH	Cheng MH	Huang JJ	Huang JJ
Nicholas Thu Khoa Do (USA, ~2018/6/30)	Hsu CC	Hsu CC	Cheng MH	Cheng MH	Wei FC	Wei FC	Chuang DCC	Chuang DCC	Lin CH	Lin CH	Tsao CK	Tsao CK
Juan Carlos Ignacio Larsson (Argentina, ~2018/6/30)	Kao HK	Kao HK	Chang Tommy	Chang Tommy	Cheng MH	Cheng MH	Lin Luke	Lin Luke	Lao William	Lao William	Lin YT	Lin YT
Jhonatan Elia (Israel, ~2018/6/30)	Tsao CK	Tsao CK	Hsu CC	Hsu CC	Huang JJ	Huang JJ	Wei FC	Wei FC	Lin YT	Lin YT	Chang Tommy	Chang Tommy
Bassem Wassim Daniel (Germany, ~2018/6/30)	Chen SH	Chen SH	Wei FC	Wei FC	Chang Tommy	Chang Tommy	Cheng MH	Cheng MH	Tsao CK	Tsao CK	Lin CH	Lin CH
Natalia Krzesniak (Poland, ~2018/6/30)	Lin Luke	Lin Luke	Huang JJ	Huang JJ	Chen SH	Chen SH	Lin YT	Lin YT	Chuang DCC	Chuang DCC	Kao HK	Kao HK
Esteban Cardona Gonzalez (Colombia, ~2018/8/14)		Wei FC	Lao William	Lao William	Lin Luke	Lin Luke	Hsu CC	Hsu CC	Kao HK	Kao HK	Cheng MH	Cheng MH

Fellowship Training Opportunities at Chang Gung

- Operation Room
- Outpatient Clinic
- Teaching / Research Activities:
  - Morning meetings including journal club (3/week)
  - M&M (2/month, 1 in the division, 1 in the department)
  - Frequent international visiting professors
  - Preoperative case-based discussions (2/week)
  - Translational (2/month) & clinical research meetings (1/month)
  - Wet lab opportunities
  - External conferences

Final Preoperative Planning

- The best way to ensure quality and safety in surgical patients

- **PowerPoint presentation of patient's profile book:**
  - **Concise, up-to-date patient's information**
  - **Precise description of surgical plan**
  - **Quick review of relevant literature**
- **Invitation for comments, questions and discussion**
- **Surgical plan confirmation**
- **Logistic considerations and tasks assignment**
- **Brain storming for possible research projects**

Category:
Microsurgical Head and Neck Reconstruction

Account:

Professor. Fu-Chan Wei

Additional Users of Different Levels:

Che-Hsiung Lee , Anton Fries, and Nidal F. AL Deek

Date: 2016-12-26

Primary Microsurgical Reconstruction

10799226

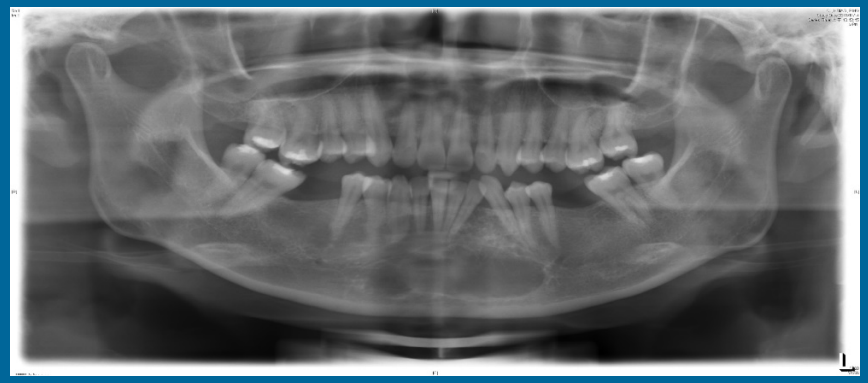
39 year old female

IID: 40mm

Chief Complaint & History

- **Chief Complaint:**
  - Progressive enlarging lower gingival mass noted for 2 years
- **Present Illness:**
  - Lower gum swelling mass, painless, no open wound.
  - Diagnosed at LMD revealed ameloblastoma at 2016/10/25
    - No odynophagia, no dysphagia, no dyspnea, no hoarseness.
- **Past Medical History:**
  - Denied
- **Past Surgical History:**
  - Denied
- **Allergies:**
  - No known allergy.
- **Social History:**
  - Alcohol: Denied
  - Smoking: Denied
  - Betel nut: Denied

Panorex



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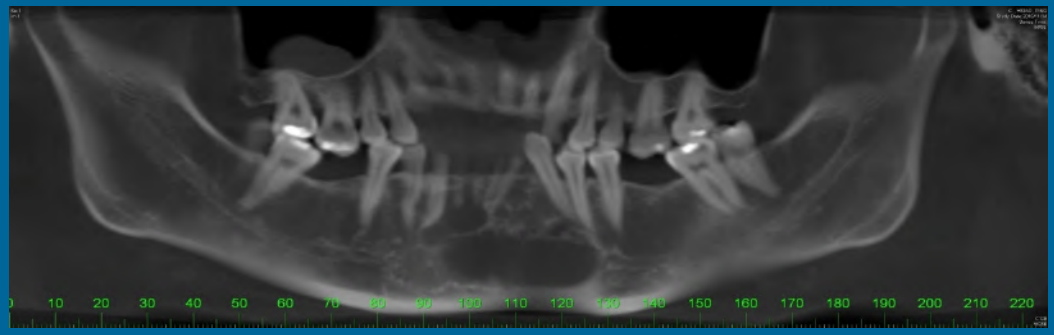
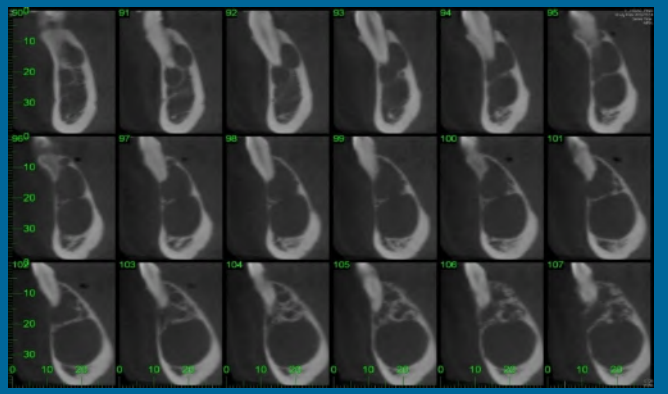




Amelobalstoma over mandibular symphysis and left parasymphysis

2016/11/14

Additional Work-Up(s) & Diagnosis

- Exam:
  - Left PTA & DPA: palpable and audible
- Pathology :
  - 2016/10/25 at LMD
  - Ameloblastoma
- Image Study:
  - CXR:
  - MRA for extremity was not done
- Diagnosis:
  - Anterior lower gum ameloblastoma

Surgical Plan

Two-Team Approach, Combined Case with: Dr. YM Chang

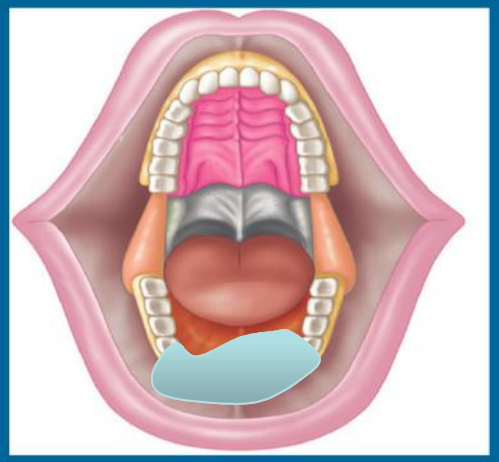
Ablation Team

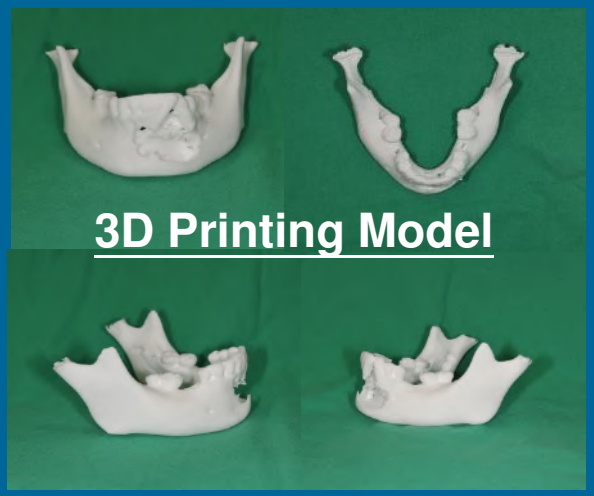
Tracheostomy(-)

Bilateral neck dissection(-)

Tumor wide excision:

- **Segmental mandibulectomy**
  Right to left body : 6-7 cm
- **Mouth floor: limited**
- **Pre-bending plate based on 3D printing model**
- **Dental implantation (?)**





3D Printing Model

Surgical Plan - PRS

Reconstruction of Compound Mandibulectomy, C Type

Flap:

- Flap A : Left fibula OSC flap with small skin paddle
- Flap B : Alternative bony tissue flap.

Double barrel to central mandible?
Nerve graft ?

Recipient vessels:

- No restrictions
- Choice are:
  - Left-sided lingual artery or superior thyroid artery/v

Jaw in a Day: Total Maxillofacial Reconstruction Using Digital Technology

Jamie P. Levine, M.D.
Jin Soo Bae, D.D.S., M.D.
Marc Soares, M.D.
Lawrence E. Brecht, D.D.S.
Pierre B. Saadeh, M.D.
Daniel J. Ceradini, M.D.
David L. Hirsch, D.D.S., M.D.

New York, N.Y.

Background: Tumors of the mandible are complex, often requiring replacement of bone, soft tissue, and teeth. The fibula flap has become a routine procedure in large tumors of the jaw, providing bone and soft tissue at the time of the resection. In current practice, dental reconstruction is delayed for 3 to 6 months, leaving the patient without teeth in the interim. This can be disfiguring and anxiety provoking for the patient.

Methods: In this article, the authors present three patients with benign tumors of the mandible who underwent virtually guided resection, fibula reconstruction, and insertion of an implant-retained dental prosthesis in one operation. In addition, the authors report their early experience using this technique in the maxilla.

Results: The authors present a case series of three patients with benign mandibular tumors and one patient with a benign maxillary tumor who underwent total reconstruction using computer-aided design and computer-aided manufacturing technology in a single stage.

Conclusions: In the right situation, total mandibular reconstruction is possible in a single stage. This is demonstrated by the successful outcomes of these patients. (*Plast. Reconstr. Surg.* 131: 1386, 2013.)

CLINICAL QUESTION/LEVEL OF EVIDENCE: Therapeutic, V.

Discussion and Paper review

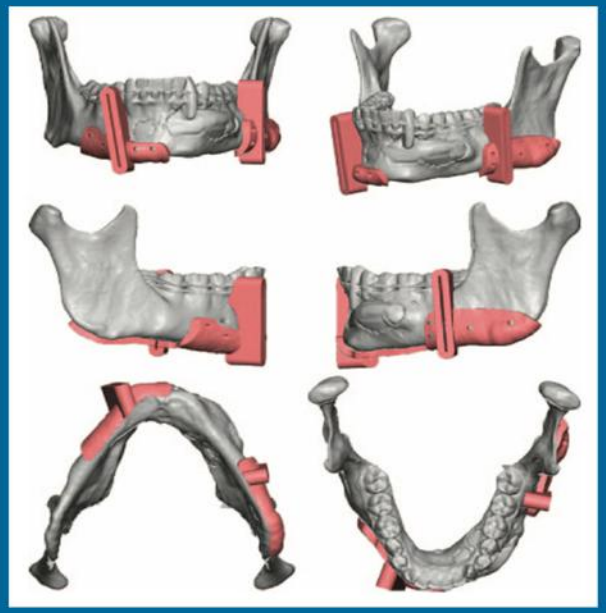
Introduction

Summary

Strengths

Weaknesses

Implications for our practice



- Ameloblastoma is a rare benign tumour of the tooth enamel
- It commonly affects “high demand” patients
- “Immediate reconstruction” is a modern paradigm in breast and limb surgery
- Can we offer a “1-stop” service for these patients?

Introduction

Summary

Strengths

Weaknesses

Implications for our practice

Discussion and Paper review

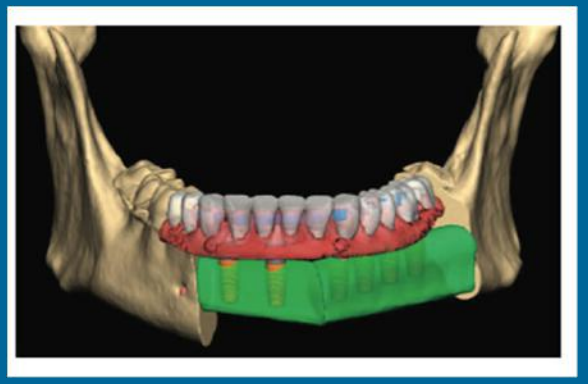
- Case series N=3

  28F – ameloblastoma
  34F – odontogenic myxoma
  20M – ameloblastoma
  (21M AVM to maxilla)

Case	Diagnosis	Location	Length of Stay (days)	No. of Implants	No. of Teeth Restored	Complications	Diet	Months since Discharge
1	Ameloblastoma	Anterior/ left mandible	8	6	12	None	Regular	22
2	Myxoma	Anterior/ left mandible	12	6	10	None	Regular	15
3	Ameloblastoma	Right mandible	29	4	4	Pneumonia	Regular	11
4	Arteriovenous malformation	Right maxilla	8	5	9	None	Regular	10

- Follow-up = 22 months
- NYU
- CAD-CAM

  Osteotomy guides
  Implant guides
  Dental prosthesis



- Complications – none reported

Introduction

Summary

Strengths

Weaknesses

Implications for our practice

Discussion and Paper review

- Novel approach in line with current innovative thinking in plastic surgical practice
- Single stage surgery
- Multidisciplinary working
- Use of technology
- "Reverse planning"

  Start with optimal occlusion
  then work back to fibula design

Introduction

Summary

Strengths

Weaknesses

Implications for our practice

Discussion and Paper review

- Short follow-up, small numbers
- “Suitable for highly motivated patients” Implies that this is currently still a very involved process
- Suitability for oncology patients, adjuvant therapy?
- What if there are complications?
  - Intra-op (CAD-CAM adjustment)
  - Early
  - Late (ameloblastoma recurrence in 15-25%)

Introduction

Summary

Strengths

Weaknesses

Implications for our practice

Discussion and Paper Review

- Depending on long term results this may be a potential treatment option for very select few patients
- Resource requirement would make it difficult to follow
- A modified (hybrid one) jaw-in-a day may be more feasible

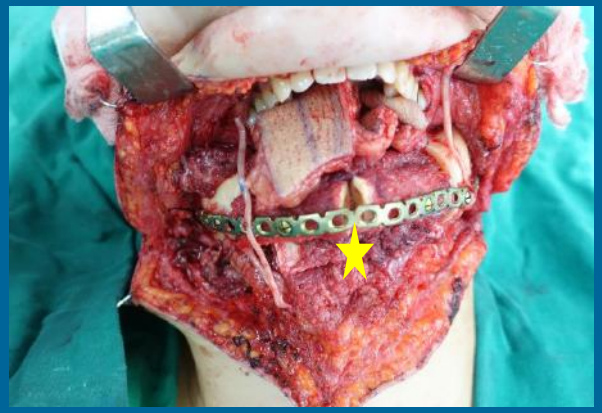
Final Plan

- Use left fibula osteoseptocutaneous flap with small skin flap to allow primary closure of the donor site
- One osteotomy, two struts
- Try to have double barrels in the center of the chin
- Nerve graft to bilateral inferior alveolar nerve
- Operator: Wei, Anton, Ike
- Video: Nidal

Intra-operative Pictures

2016-12-26

Intra-operative Pictures



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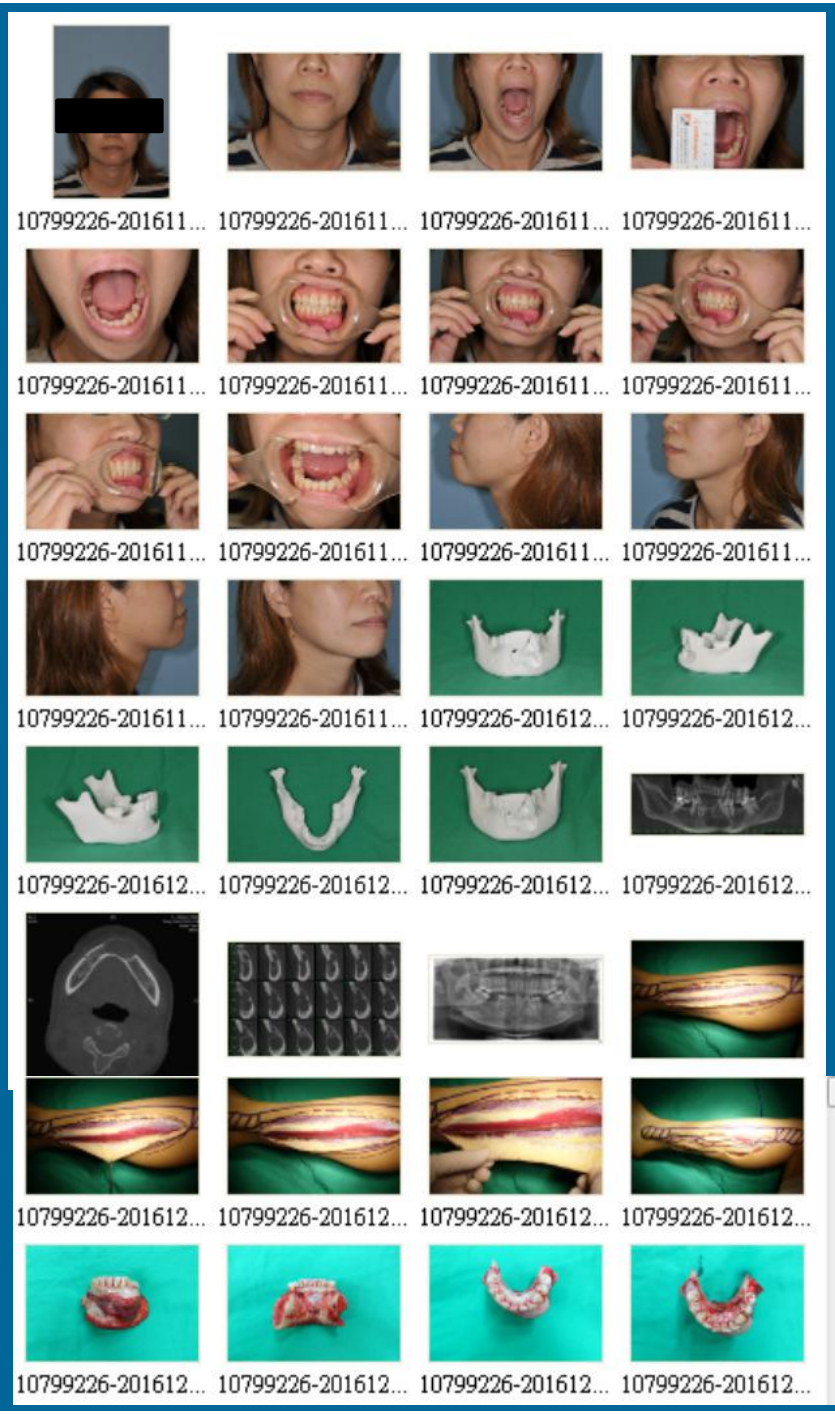
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Patient's database

Name [redacted] Sex F Birthday 1977/12/1 ID No: K[redacted]

Chart. No [redacted] TEL: ([redacted]) Address 苗栗[redacted]97號

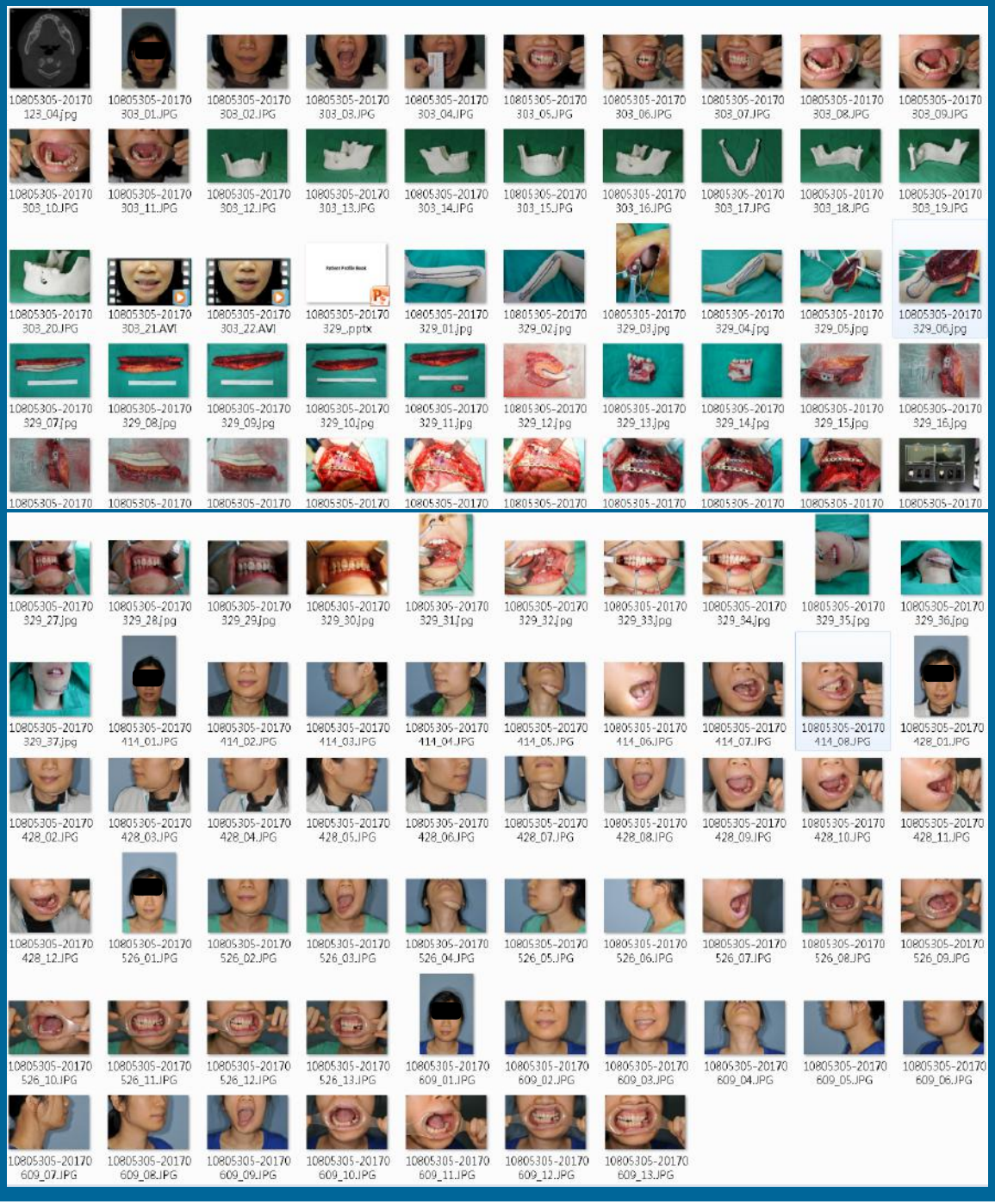
	Date-OP	DX	Excision	FLAPs / Reconstruction
(1)	2016/12/28	Anterior lower gum ameloblastoma (Dr. 張陽明)	compound segmental mandibulectomy	fibula, double barrels, bil nerve grafts to inferior alveolar nerve
(2)				
(3)				
(4)				

Picture: ..\Dr.wei's slide 圖檔\[redacted] Expired Pic.備註:

First Picture Date: 2016/11/25 ☐ Picture published 存檔位置 A-14 Ameloblastoma

Last Picture Date: 2017/6/7

Comment: lithographic model, double barrel, bilateral nerve grafts to inferior alveolar nerve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10805305-20170414_02.JPG
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10805305-20170609_13.JPG

Patients' database

Name [redacted] Sex F Birthday 1978/2/18 ID No: F2[redacted]

Chart. No 10805305 TEL: 0938153730 Address

QOL: 2017/3/3

LE: 2017/3/3

TTH:

	Date-OP	DX	Excision	FLAPs / Reconstruction	Category
(1)	2017/3/29	L't mandible pre-molar to molar region ameloblastoma (Dr. 張陽明)	segmental mandibulectomy	fibula	A-14 Ameloblastoma
(2)					
(3)					
(4)					

Picture: ..\Dr.wei's slide 圖檔\108[redacted]

Expired

Pic.備註:

First Picture Date: 2017/3/3

Picture published

存檔位置 A-14 Ameloblastoma

Last Picture Date: 2017/6/7

Comment: Jaw in a day reconstruction. One reconstruction plate w/ addictional smaller plate.


1717546-19900620.tif
1717546-19900620_.jpg
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1717546-19901106_11.tif
維度: 1863 x 1207
類型: TIF 影像
大小: 6.43 MB
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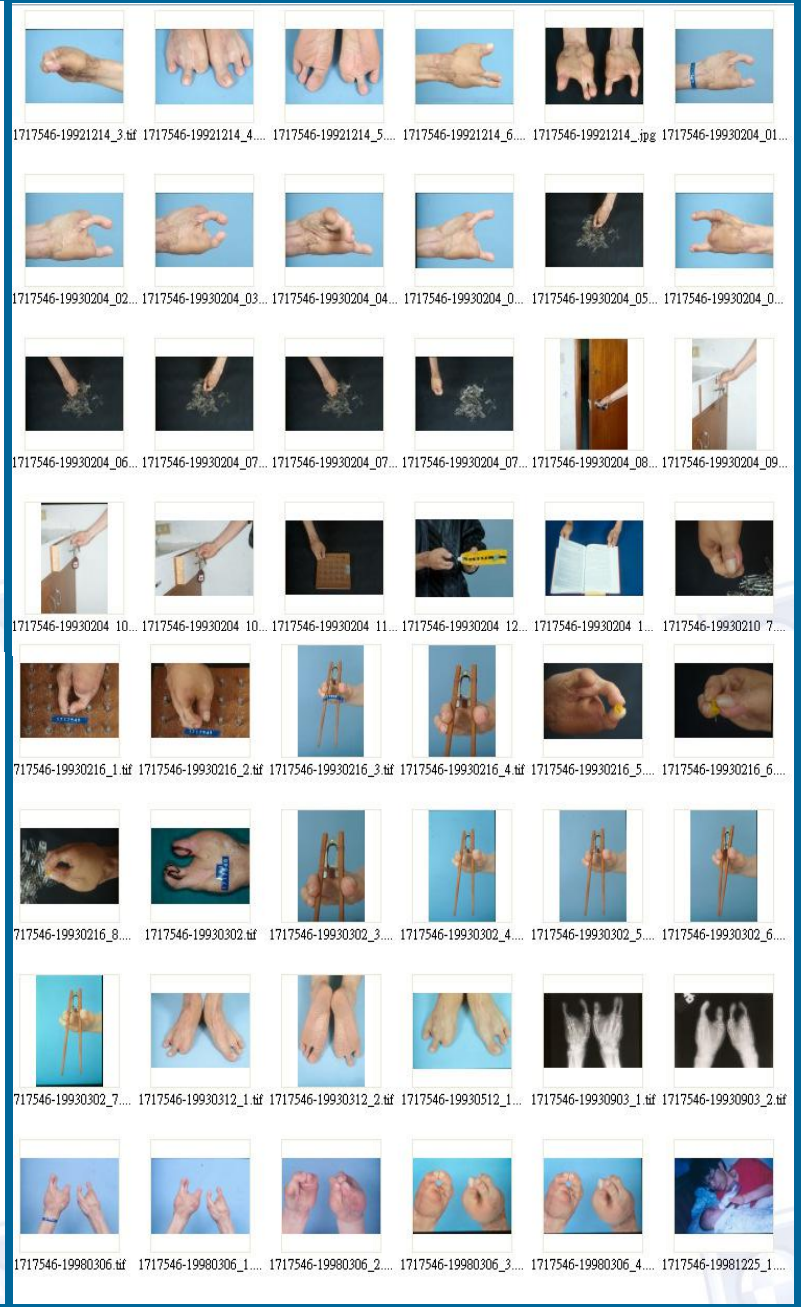
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Patients' database

Name [redacted] Sex M Birthday 1963/4/15 ID No: [redacted]

Chart. No [redacted] TEL: [redacted] Address

	Date-OP	DX	FLAPs / Reconstruction	Category
(1)	1990/10/24	Bilateral metacarpal hand	combined 2nd & 3rd toe to meddle and ring finger	B-2d Finger Reconstr.-Combined 2nd & 3rd toe
(2)	1990/10/24	Bilateral metacarpal hand	modified great toe wrap-around to R't thumb	B-1c Thumb Reconstr.-Great toe wrap-around
(3)	1992/3/9	R't 3rd toe to L't thumb	3rd toe	B-1e Thumb Reconstr.-Others
(4)	1992/8/26	R't 4th toe to L't ring finger	4th toe	B-2b Finger Reconstr.-4th toe

Picture: ..\Dr.wei's slide 圖檔\17[redacted] Expired Pic.備註: lecture

First Picture Date: 1990/6/20 ☐ Picture published 存檔位置 B-3b Metacarpal Hand-Type II

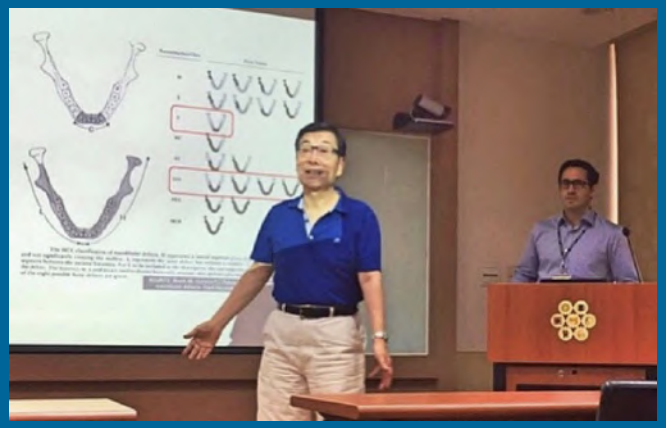
Last Picture Date: 2012/3/8

Comment: 4th toe
Bilateral

錄: 4929 之 844 未篩選 搜

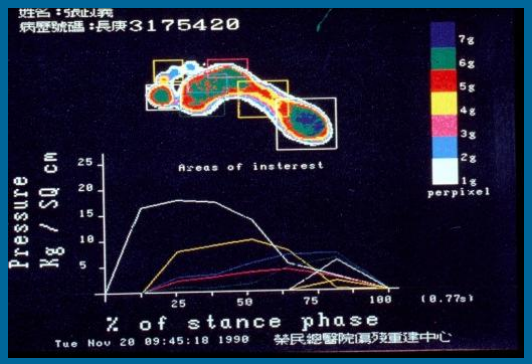
Monthly Clinic Research Meeting

- Individual research proposal presentations
- Individual research progress reports
- Experts discussion and feedback
- Teaching videos

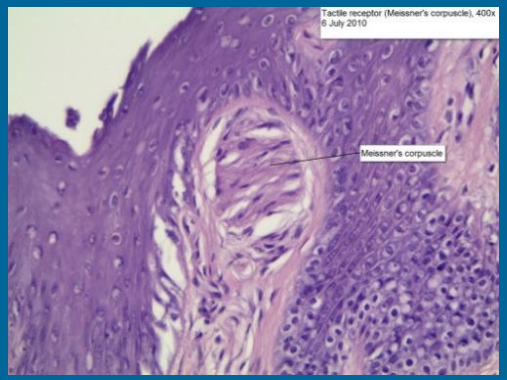


Clinical Research Related to Toe-to-Hand Transfer

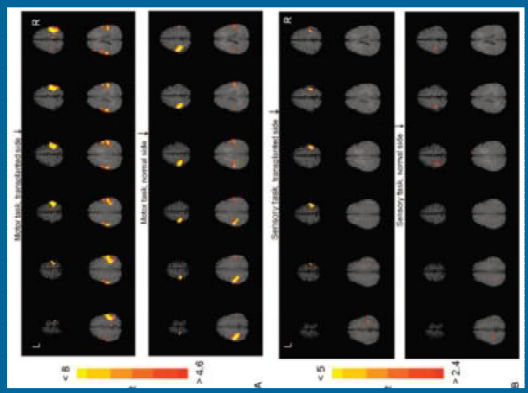
Bio-Mechanic:
Gait Analysis



Histological study:
Meissner corpuscle for sensory recovery in transferred toe



Functional MRI :
sensorimotor cortex after toe-to-hand transfer

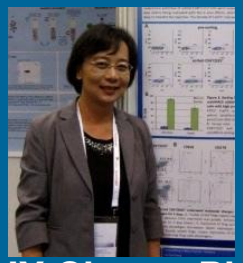


VCA Meeting Twice a Month

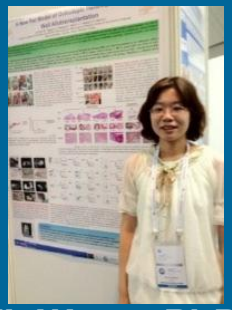
- On going research projects
- Update on clinical VCAs done by our group
- Review & presentation of recent publications on VCA from established groups



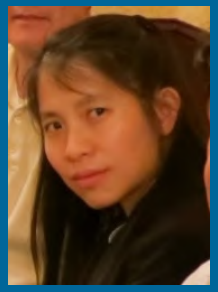
Lab. Research in Vascular Composite Allotransplantation at CGMH/CGU (Since 2000)



HY Cheng, PhD.
鄭惠云博士



YL Wang, PhD
王燕玲博士



CJ Wen, PhD.
溫志仁博士

VCA

- Animal model
- Immunomodulation strategy with Cell therapy (BMSC, ADSC, DC, Treg)
- Vascularized bone marrow

Rejection

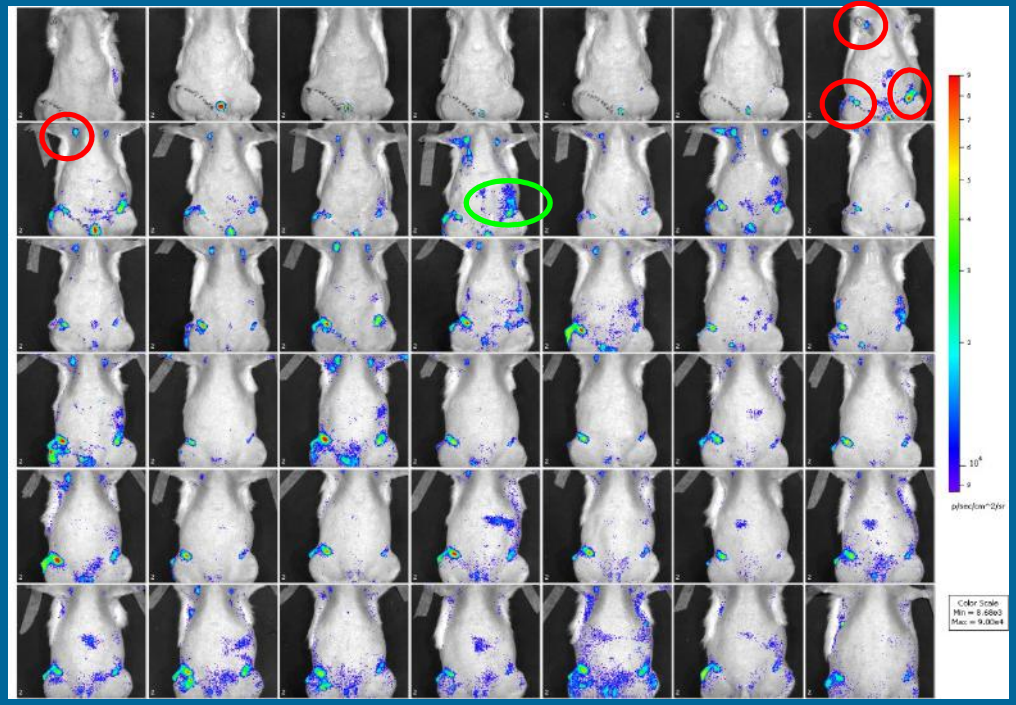
- molecular mechanism
- cell/ cytokine profile

Survival (donor-specific tolerance)

- Functional recovery
- Cell tracking
- Molecular mechanism & cell/cytokine profile

In vivo Bioluminescence Imaging for Cell-tracking of Treg (PID1 = POD11)

Experimental
BN -> Lewis

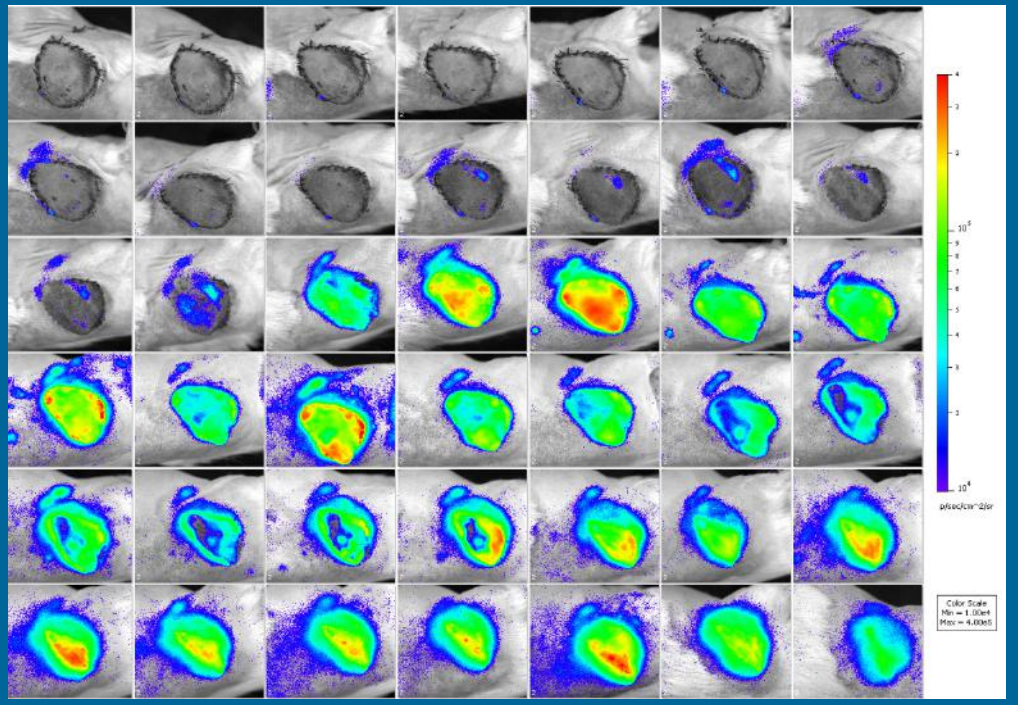


Lymph node

spleen

Recipient

In vivo Bioluminescence Imaging for Cell-tracking of Treg (PID1 = POD11)



Allotransplant

Five Hand Allotransplantations in Four Patients

YR Kuo

Godina Lecture Award, ASRM 2007

2014-09-03




2016-11-30




CH Lin

- The Transplantation Society Travel Award (IHCTAS 2011)
- Young Investigator Award (ATC 2011)
- Young Innovator Award (AST ASE 2011)
- Young Innovator Award (AST CEOT 2014)

2017-03-06

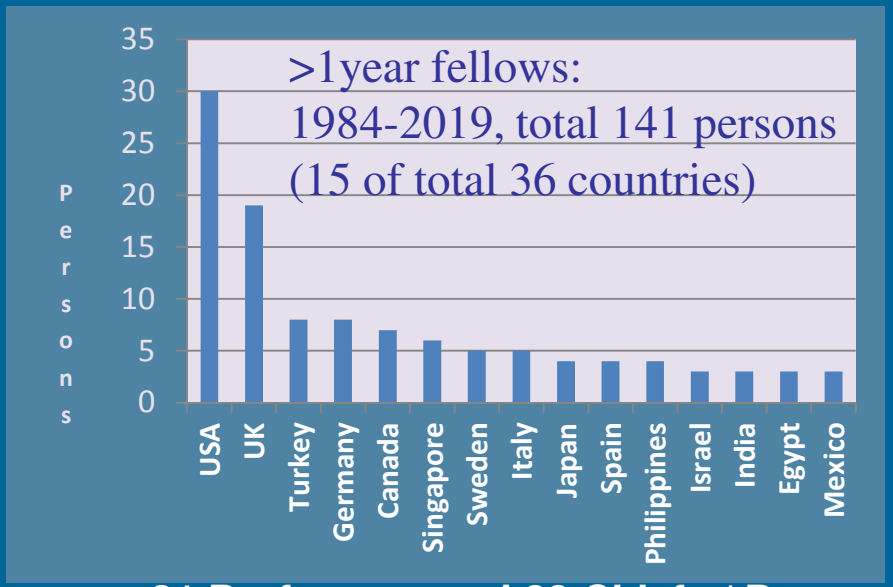




2018-03-14



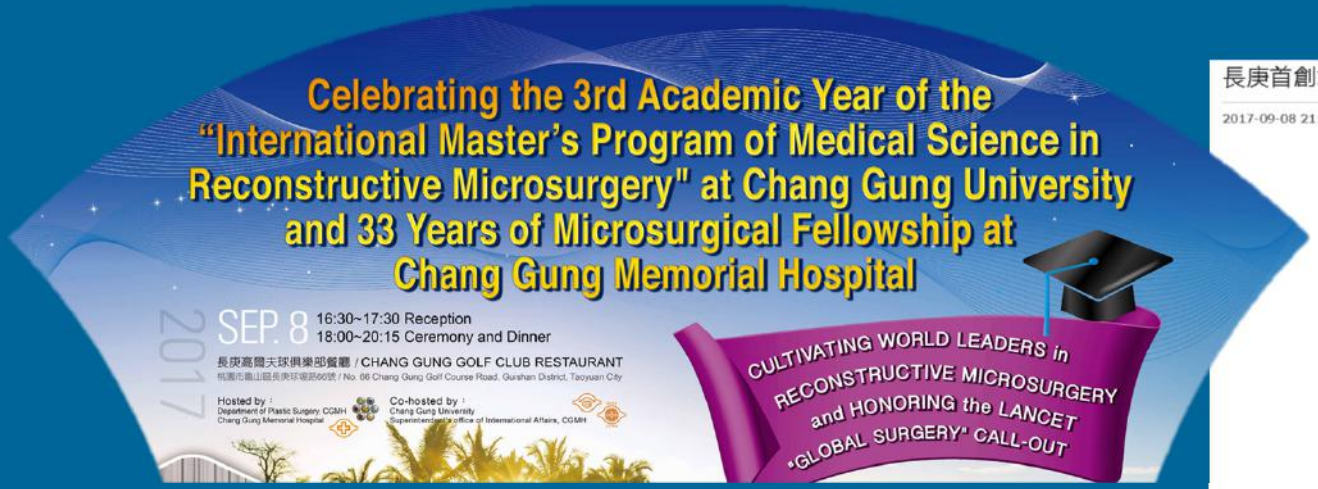

International Fellows and Visiting Scholars of Plastic Surgery, Chang Gung Memorial Hospital



31 Professors and 28 Chiefs / Program Directors (from survey of 90 previous fellows in 2014)

A Combined Program of Fellowship and Master Degree in Science in Reconstructive Microsurgery (since 2014)

- Strengthen and emphasize “train the trainer” philosophy
- Empower critical and scientific thinking to uplift them into an even better future trainers
- Pave the road for a future “surgeon-scientist” hybrid

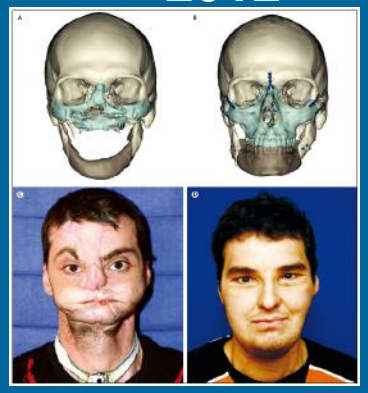


From year Sep. 2014 - Jun. 2019 :
18 graduates / 38 students

Face Allotransplantations

Eduardo Rodriguez

2012

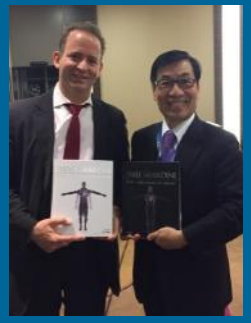


2015

2016 2017

2018

Samir Mardini



2016 2017

Aleksandra McGrath, MD, PhD
Senior Consultant & Lecturer
Department of Hand and Plastic Surgery
Norrland's University Hospital,
Umeå, Sweden

- Free perforator flaps for small finger defects

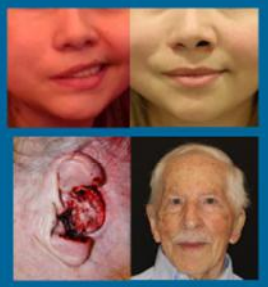
Alexander Cardenas, MD
Department of Plastic Surgery
Professor of Reconstructive Plastic Surgery (Peripheral Nerve Surgery)
Hospital General Dr. Manuel Gea Gonzalez, Mexico City

Facial Reanimation in Möbius Syndrome

Upper limb replantation

Alejandro E. Ramirez. M.D.
Chief of Plastic Surgery and Reconstructive Microsurgery
Florida Metropolitan Hospital Clinic
Director of Reconstructive Plastic Surgery Clinic
Santiago, Chile.

Aesthetic Reconstructive Microsurgery



Shan Shan Qiu MD, PhD
Consultant Plastic Surgery
Department of Plastic Surgery at Maastricht University Medical Center
The Netherlands

Microsurgical Fellow in Chang Gung Memorial Hospital 2013-2014

Dennis S. Kao, MD
Assistant Professor of Plastic Surgery and Orthopedic Surgery (adjunct)
University of Washington

Microsurgical Digit Reconstruction

Dr. Georgios Kolios FACS, MBA

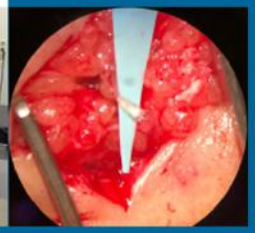
Chair, Department of Plastic and Aesthetic Surgery, Fleetinselklinik, Hamburg
Chair, Plastic and Aesthetic Surgery, Hanse Chirurgie, Hamburg
Chair, Department of Plastic and Aesthetic Surgery, Klinikum Itzehoe

Teaching Hospital University of Hamburg, Kiel, Lübeck

sek. Breastrek.: DIEP, antegrade + retrogr. anastomosis

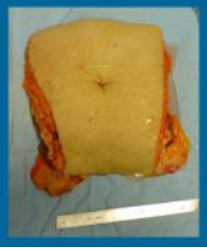
example knee prothesis infection, pedicled, chimaric MSAP Flap

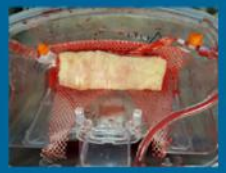
First robotic LVA in lymphedema pati
September 2017



C Anton Fries MB BChir MA (Cantab) FRCS(Plast)
Consultant Plastic Surgeon
Oxford University Hospitals, UK

Abdominal Wall and Sentinel Flap Allo-Transplantation, *ex vivo* Perfusion





Prof. Dr. Leila Harhaus

- Senior Consultant, Chair of peripheral nerve surgery,
- Dpt. of Hand-, Plastic and Reconstructive Surgery, Burn Center, Dpt. of Hand- and Plastic Surgery of Heidelberg University,
- BG Trauma Center Ludwigshafen
- Germany

Nerve-transfers

4 months after NIA-transfer

Perry Liu, MD, FACS

- Board Certified Plastic Surgeon
- American Society of Plastic Surgeons
- Duke University, Emory University, New York Medical College, Tulane University, Harvard Medical School
- CEO of Avant Aesthetics and Plastic Surgery

Breast Cancer Reconstruction

Transgender

Calf Reduction

Derrick C. Wan, MD

Associate Professor, Department of Surgery
Director of Maxillofacial Surgery, Lucile Packard Children's Hospital
Endowed Faculty Scholar, Child Health Research Institute
Hagey Family Faculty Scholar in Stem Cell Research
Stanford University School of Medicine

Craniofacial Reconstruction

2014

2018

Thorir Audolfsson, MD

National University Hospital of Iceland
Oslo University Hospital, Norway

Microsurgery

Ricardo Fernández Riera, MD, MSc.

- Microsurgery Program Coordinator, Department of Plastic Surgery, Rubén Leñero General Hospital, Mexico City.
- Associate Professor of Plastic and Reconstructive Surgery Medical Specialty, Rubén Leñero General Hospital, Mexico City
- Professor of Medical Propaedeutics, Faculty of Medicine, Saint Luke University, Mexico City.
- "Dr. Mario González Ulloa" Prize Laureate 2017. Mexican Association of Plastic and Reconstructive Surgery (AMCPER)

Post-trauma microsurgical reconstruction

Preop: two years of failed treatment for open tibial fracture and osteomyelitis

2 months postop: bone debridement + free tibialized fibula flap + ALT flap + STSG

UNIVERSITY OF EXETER

NHS 70 YEARS OF THE NHS 1948 - 2018
Royal Devon and Exeter NHS Foundation Trust

Mr. Chris G. Wallace, MD, MS, FRCS(Plast)

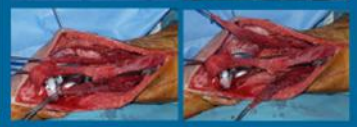
Consultant Plastic Surgeon, Royal Devon & Exeter Hospital
Honorary Senior Clinical Lecturer, University of Exeter
United Kingdom

Principle Subspecialties:

- Complex Head and Neck Reconstruction
- General Microsurgery
- Melanoma Skin Cancer Surgical Oncology
- General Trauma Reconstruction

Steven Lo

Consultant Plastic Surgeon
Canniesburn Plastic Surgery Unit, Glasgow, Scotland

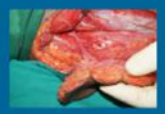


Functional Limb Reconstruction in Sarcoma

The pictures are of an extra-articular knee resection for sarcoma with a quadriceps reconstruction with hamstring and sartorius transfer. The picture at the top is the Motek environmental gait analysis which is used to assess restoration of normal gait and function.

Hattan Aljaaly, MD, MRM, FRCS(C)
Chair, Division of plastic surgery
Assistant Professor of Surgery.
King Abdulaziz University Hospital
Jeddah, Saudi Arabia

Reconstructive Microsurgery
Breast Reconstruction



Vessels Diameter: 0.8 mm

WEI F. CHEN, MD, FACS

ASSOCIATE PROFESSOR OF PLASTIC AND RECONSTRUCTIVE SURGERY
UNIVERSITY OF IOWA HOSPITALS AND CLINICS
DIRECTOR, CENTER FOR LYMPHEDEMA RESEARCH AND RECONSTRUCTION
PRESIDENT, MIDWESTERN ASSOCIATION OF PLASTIC SURGEONS

IMAGE-GUIDED PRECISION LYMPHATICOVENULAR ANASTOMOSIS

"OCTOPUS" LYMPHATICOVENULAR ANASTOMOSIS

ULTRA-THIN FLAPS & VASCULARIZED LYMPH VESSEL TRASNFERS

Holger Engel, MD, PhD, FACS

Vice-Chair, Department of Plastic-, Reconstructive-, Aesthetic and Handsurgery, Kassel, Germany
Associate Professor of Plastic Surgery
Ruprecht-Karls University Heidelberg

Lymphatic Surgery

First Double Lymphnode Tx jejunal mesenterium 2016

Gisela Tirpitz

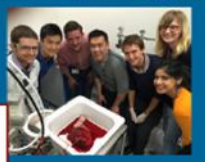
No pain / No infections

2-year anniversary

Jason Wong
Academic Consultant Plastic Surgeon & Senior Lecturer University of Manchester
CGMH Fellow 2013

Major Trauma Lead for Plastic Surgery in Greater Manchester.
Key Role in Manchester Terror Attack

Research Interests since CGMH:
Microsurgery research
3D bioprinting of vascular networks
Ex vivo perfusion
Vascularised Composite Tissue allotransplantation



Humanitarian Work
First ALT free flap in Zimbabwe

BFIRST

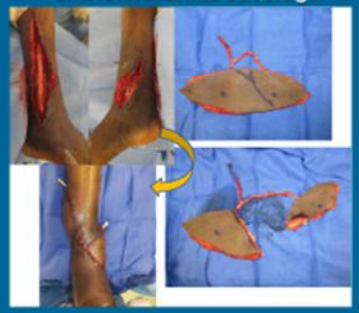
- Duretti Fufa, MD
- Assistant Professor of Orthopaedic Surgery
- Residency Program Director
- New York Presbyterian Hospital-Weill Cornell Medical School
- Hospital for Special Surgery
- New York, NY

Hand and Extremity Reconstructive Surgery

Toe-to-Thumb Transfer

Preop Post-op

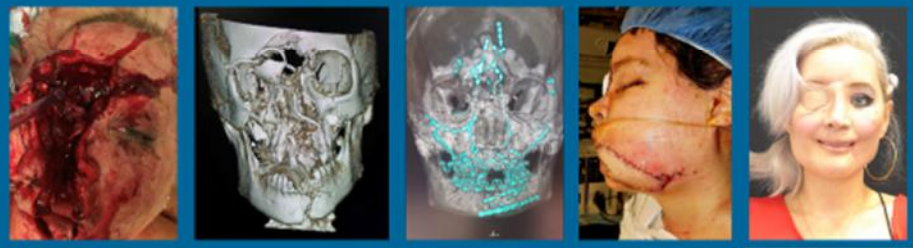
Two-paddle ALT for medial and lateral ankle coverage



Jonathan Zelken, M.D.

1. CEO and Founder, Zelken Institute for Aesthetic Medicine
2. Newport Beach, CA, USA

POST-TRAUMATIC CRANIOFACIAL RECONSTRUCTION



Free supra-fascial groin flap
For alveolar reconstruction

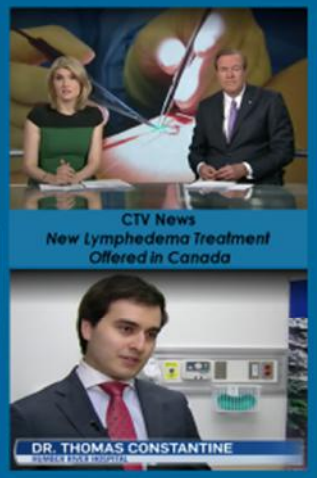
zelken institute

Thomas Constantine, MD, CM, FRCSC.
is a board certified plastic surgeon practicing in Toronto, Canada.

He is a graduate of both McGill University's Medical School and Plastic Surgery Residency Program, where he trained under Dr. H. Bruce Williams.

Dr. Constantine fellowship trained under world-renowned surgeons. He completed a coveled fellowship in reconstructive microsurgery (Fu-Chan Wei, Taiwan), furthering his training with a lymphatic and advanced microsurgery fellowship (Hung-Chi Chen, Taiwan), and an aesthetic surgery fellowship (Eric Auclair, France).

He currently works in Toronto, where he practices privately, and also leads the Breast Reconstruction Program at Humber River Hospital.



CTV News
New Lymphedema Treatment Offered in Canada

Paolo M. Fanzio, MD
Medical Affairs - Dompé US
Boston, MA – USA

Dompé

Lymphedema: Lymph node transplantation

The Chang Gung Memorial Hospital Microsurgery Fellowship: A Review of 1 Year of Experience

Hattan A. Aljaaly, MD, FRCSC*†

Sir:

The microsurgery fellowship at the Chang Gung Memorial Hospital in Taiwan was founded in 1984 by Professor Fu Chan Wei.[1] The Department of Plastic and Reconstructive Surgery offers a 1-year fellowship in microsurgery. The fellowship setup, diversity and number of cases, and high success rate make it a sought target for training. In this article, I share my personal experience from a 1-year fellowship as a guide tool for those considering microsurgery training at this prestigious institution.

FELLOWSHIP SETUP

This fellowship is provided by the Division of Microsurgery at the Department of Plastic and Reconstructive Surgery. In total, 6 to 8 fellows are selected annually for duration of 1 year. Different areas of reconstruction are covered during the fellowship, and rotations can be customized based on the need and interest of the fellows, and these areas include head and neck reconstruction, breast reconstruction and lymphedema surgery, upper limb reconstruction, lower limb and trauma reconstruction, peripheral nerve, and facial reanimation. The fellowship is based on the principle of mentorship, and the year is composed of six 2-month rotations, where in each rotation, the team is composed of the professor, the fellow, and 1 resident. The fellow is engaged actively in the clinical and operative activity including the preoperative planning and postoperative care. There is no assigned on-call schedule for the fellow; however, he/she is expected to be in any flap takeback for the team as part of the learning experience. Table 1 summarizes the structure of the fellowship.

EDUCATION

Activities that emphasize educational value to enrich the theoretical knowledge and surgical judgment skills are as follows:

1. Biweekly plastic surgery grand rounds: Valuable review of topics in plastic surgery, updates, and new researches are discussed.
2. Weekly microsurgery teaching rounds: During this meeting, a review of scientific microsurgery articles, book chapters, and all cases mandates exploration during that week. Thirty-four scientific articles and 8 book chapters were reviewed this year.
3. Operative education: Formal teaching about surgical cases is done at the day of surgery where there will be a full presentation of the cases followed by relevant literature review.

SURGICAL CASES AND WORKLOAD

There was an average of 3 operative days, with 2 rooms running simultaneously, and 1½ clinic days each week. The cases included microsurgical cases (free flaps, peripheral nerve surgery, and lymphatic surgery), pedicle flap, and secondary revision for all procedures. I was involved in a total of 164 cases: 101 microsurgical cases, 4 pedicled flaps, and 59 nonmicrosurgical cases. Table 2 summarizes the areas and flaps for reconstruction.

Table 1. Fellowship Structure

Fellowship title	Microsurgery Fellowship
Fellowship supervisor	Fu Chan Wei
Location: city, hospital	Chang Gung Memorial Hospital, Linkou, Taiwan
Length of fellowship	12 mo
Start date	July 1
Number of fellows	6–8 fellows selected following same general guidelines for residency selection[2] (1–2 fellows from the 2-yr program after completing the first research year in vascularized composite allotransplantation laboratory)[3]
Resident support	Available
Accommodation	Complimentary accommodation is provided at the dorms of the Chang Gung Hospital
Salary	Payment cannot be promised (usually stipend provided to 4–5 of the selected fellows depending on the funding they receive from different sources in that particular year)
Requirement/experience	Completed a residency/training of plastic and reconstructive surgery
What was particularly good?	Educational fellowship with high volume and diversity of cases
Suggestion for future improvement	To be able to have an academic degree during the fellowship (already implemented this year)
Conference	One conference (not paid)
Vacation	2 wk

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Plast Reconstr Surg Glob Open 2016;4:e859; doi10.1097/GOX.0000000000000845 Published online 12 September 2016.

www.microsurgeon.org

Rating ****

Strong points

- Free
- Concise
- Good illustrations
- Easily accessible on Internet using computer or iPhone/ iPod Touch (Apple, Cupertino, CA)

Weaknesses

- Illegible text in some illustrations
- Occasional typographic errors

Combined Research and Clinical Microsurgical Fellowship at Chang Gung Memorial Hospital and Chang Gung University in Taiwan

Between June 2005 and March 2008, a period of almost 3 years, I undertook a combined microsurgical research and clinical fellowship at Chang Gung Memorial Hospital (CGMH) and Chang Gung University (CGU) in Taiwan. The combined fellowship is a recent addition to the traditional pure clinical fellowships available at this microsurgical center and was introduced to encourage fellows to undertake basic sciences research. During the first year, I conducted full-time laboratory- and university-based research. During the second year I undertook the traditional clinical fellowship, as reviewed elsewhere, but spent free evenings and weekends in the laboratories continuing my research projects. The principle investigator for all my projects, experimental and clinical, was Professor Fu-Chan Wei.

The microsurgical laboratories of the Department of Plastic Surgery at CGMH have a strong track record in the fields of microvascular sciences (particularly ischemia-reperfusion injury) and composite tissue allotransplantation (CTA) in animals. The main laboratory and animal house are both located on the CGMH site, which is ideal for monitoring the progress of one's experiments during the clinical phase of the fellowship. There is a preponderance of well-maintained research facilities that would satisfy most project proposals in these fields. These are supplemented by access to expertise and facilities in numerous other professorial laboratories at CGU and CGMH, which allows one to propose and complete truly multidisciplinary and collaborative research proposals. In addition, the laboratory has forged close ties with CTA research centers in North America and Europe, and is frequently visited by academic visiting professors.

Currently, there are up to 2 combined research and clinical fellowships available annually, usually commencing in July or August, which are heavily competed for by an international field. The basic commitment is to a minimum of 1 year full-time laboratory research and an additional 1 year of clinical microsurgery; there exists some scope to modify the clinical commitment or to prolong the overall duration of the fellowship according to one's progress and interests. Having completed the two 12-month commitments, I elected to prolong my fellowship to complete various journal publications and book chapters, complete, submit, and successfully viva for my Master of Surgery degree and to continue gaining clinical microsurgical experience.

Although I conducted collaborative projects with other disciplines, my main basic research was in the field of immunologic tolerance induction for CTA. My proposal involved investigating a system of mucosal tolerance that had not been assessed previously for CTA. The project entailed performing numerous microsurgical vascularized allotransplants (such as of hindlimb, auricle, and of various cutaneous flaps) between rat strains and conducting investigative mechanistic laboratory studies. These included mixed lymphocyte reactions, suppressor lymphocyte culture assays, splenocyte purification, ELISA, histopathology, immunostaining, flow cytometry, bead arrays, and several others. All optimization and troubleshooting was overseen and guided by the laboratory postdoctorate, principle investigator and experts in other laboratories at CGMH and CGU. Funding for all research projects that I conducted, of which the above was one, was provided for by established laboratory funds when I started and supplemented by additional successful national grant applications that I wrote or cowrote. Funds are generally available for international conference presentations and a small stipend is provided when possible to help cover basic living expenses (which are generally less expensive than in the United States or United Kingdom). Guidance and supervised training was available at all stages of my research. Progress meetings were conducted weekly and, more formally, monthly. The working atmosphere was tireless, enthusiastic, friendly, and welcoming while productive and efficient. The working language is English in the laboratory as well as the hospital and university, but an enthusiasm to pick up a little Mandarin is warmly welcomed!

Particular highlights of the combined microsurgical fellowship are 1) research projects are not prescribed, and freedom and reasonable funds are granted to pursue initial feasibility studies for one's research ideas/proposals before settling on a final project; 2) one will gain wide *clinical* microsurgical experience in the second year and this will be predated by extensive laboratory microsurgical experience; and 3) there is scope for collaborative research projects with many other basic sciences and clinical subspecialists. While the provision of initial research funds is generous, longer term funding can be more difficult to establish and thus applications should still be submitted early. It should be noted that this laboratory prefers to submit their more substantial research projects to higher impact factor periodicals.

When applying for the combined microsurgical fellowship one would preferably have completed and published basic sciences laboratory research previously. The fundamental requirements are a sincere interest in microsurgical basic research, enthusiasm, stamina, some proof of microsurgical dexterity (a microsurgical course with an evaluative component is one option), and a disposition for teamwork. While most applicants are from plastic surgery, orthopaedic, and trauma backgrounds, applicants from other surgical specialties are encouraged. Visits to the laboratory and department of plastic surgery prior to application are recommended and can be arranged directly through Professor Wei's secretary.

Peer-Reviewed Journal Publications

In Press **Further esthetic refinement for great toe transfers.** CG Wallace, FC Wei. *J Plast Reconstr Aesthet Surg.*

In Press **Two small flaps from one anterolateral thigh donor site for bilateral buccal mucosa reconstruction after release of submucous fibrosis and/or contracture.** JJ Huang, CG Wallace, JY Lin, CK Tsao, HK Kao, WC Huang, MH Cheng, FC Wei. *J Plast Aesth Reconstr Surg.*

In Press **Current status, evolution and future of facial reconstruction.** CG Wallace, FC Wei. *Chang Gung Med J.*

Note from the editors: We welcome submissions of fellowship reviews initially via a presubmission enquiry to both: kshokrollahi@hotmail.com and iainwhitaker@fastmail.com.

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OPEN

SPECIAL TOPIC

The Microsurgery Fellowship at Chang Gung Memorial Hospital: Blossom of Caterpillars

Mohamed Abdelrahman, MD*†

Summary: Against a background of globalization and medical migration, issues have been raised regarding training outside the clinician's own context. Fellowship was not commonly used as a career step, or a means of migration, but as a process of professional and personal development. Taking Chang Gung Memorial Hospital Microsurgery Fellowship as the case study, I would like to highlight an example of a long-running successful training program in a special field such as plastic surgery. *(Plast Reconstr Surg Glob Open 2015;3:e376; doi: 10.1097/GOX.0000000000000255; Published online 16 April 2015.)*

International elective training in medicine at the postgraduate level is becoming increasingly sought.[1] Yet this is almost exclusively in the context of "global health"[2] rather than recognizing that international electives can offer excellent technical training in absolute terms. Plastic surgery is a case in point.

Reflections on training in plastic surgery have primarily focused on the structure and process of formal postgraduate or residency training programs. Technical issues, such as the use of simulation[3] and training models, or process issues, such as selection,[4] are readily discussed. However, more fundamental questions of the nature of learning and skills acquisition are also being added to the debate,[5] and this widens the notion of what constitutes effective and safe training.

Given this widening discourse, I describe an established program that has been innovative in placing itself outside the traditional formal training structures as well as having offered excellent technical training with the intention of this being returned to the country of origin of its trainees. In addition, this training model demonstrates effective education and training processes in incorporating some of the best features of appropriate pedagogy for specialty training, which only relatively recently have been discussed in the published literature.[6]

THE MICROSURGERY FELLOWSHIP AT CHANG GUNG MEMORIAL HOSPITAL, TAIWAN

This sentinel program is the Microsurgery Fellowship at Chang Gung Memorial Hospital (CGMH) in Taiwan that was established almost 3 decades ago. During this time, the plastic and reconstructive surgery department at the CGMH has been the main destination for many surgeons seeking highly specialized training in reconstructive microsurgery outside the traditional structures.

CGMH was founded in 1976. From a modest start, it has grown into 6 branches in Taiwan and 1 branch in China, with an overall capacity of more than 9000 beds. The hospital established a new era of medicine in Taiwan by making an affordable high-quality service widely available.

The Microsurgery Division is located in Linkou and is the largest branch with 3800 beds and more than 90 operating rooms. The division comprises 14 full-time staff, with very busy schedules throughout

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EDITORIAL

MICROSURGERY 32:168–170 2012

CLINICAL ELECTIVE REVIEW AT CHANG GUNG MEMORIAL HOSPITAL, TAIWAN, UNDER THE SUPERVISION OF PROF. DR. FU-CHAN WEI

Plastic and reconstructive surgery is my passion. I knew it from the very beginning of my medical education. The creativity of the reconstructive surgery, the variety of possibilities, and the surgical precision in the complex reconstructive microsurgery fascinate me. That is the reason I went to my professor in The Netherlands and asked him somewhat in a childish manner: "Who is the greatest reconstructive surgeon of the world? I want to visit him." After his answer, I searched on internet, mailed and contacted several persons. Within 1 week I got a reply. I could not believe it, it was him personally: "I'm most pleased to host your elective at Chang Gung. Best regards. Fu-Chan Wei."

MICROSURGERY

The first Chang Gung Memorial Hospital was established in 1976 and has six different branches in Taiwan now. The division of reconstructive microsurgery is located at the main branch in Linkou. This branch has 3,700 beds, 87 operating theaters, and 24 specialized beds dedicated to the Microsurgical Intensive Care Unit, which is one of the most sophisticated and extensive microsurgical centers in the world. The microsurgical staff comprises 10 microsurgeons, four of which are professors (Table 1), 15 residents, and 6 international fellows. This division receives around 100 visiting fellows per year from all around the world (Fig. 1). The number of cases is phenomenal; ~ 1,000 free flaps a year, 90 brachial plexus procedures, and 125 cases of replantation (Fig. 2). It was impossible for me to follow all the high-skilled surgeons, so I decided to use my time effectively and spend the majority of my elective with Prof. Fu-Chan Wei.

PROF. FU-CHAN WEI

Prof. Fu-Chan Wei is considered as one of the world's most famous microsurgeons of this moment. He is internationally recognized for his contributions to plastic surgery in the areas of microvascular tissue transfer, hand surgery, and perforator flaps. The bulk of his operations consist of head and neck reconstructions. Nowadays, the tumor removal is performed by ENT surgeons, proceeded by reconstruction by his team. Half an hour discussions are generally held prior to the surgery, with the ENT surgeon, fellows, residents, and the visitors. These discussions were always very useful and informative. He explains everything clearly and is very approachable for questions. Besides, Prof. Wei always takes everyone seriously. Even though I was a medical student at that time, I have been involved in his team and had several times the honor of assisting Prof. Fu-Chan Wei. Even if I only had to hold the hook, my day could not get any better (Figs. 3 and 4). Three free flaps in 1 day were not uncommon, but despite this fact the atmosphere in the operating theatre was always positive and uplifting. Everybody worked very hard and nobody seemed to mind if they had to work until late at night. I was also granted the opportunity to spend parts of my free time writing articles and learning the fundamentals of microsurgical techniques in the animal lab. He was very generous even outside the hospital. Every Friday, he took the staff, fellows, and visitors to wonderful restaurants for lunch with authentic cuisine from the various regions.

Published online 17 October 2011 in Wiley Online Library (wileyonlinelibrary.com). DOI 10.1002/micr.20954

OPEN

PRS GLOBAL OPEN SPECIAL TOPIC

Fu-Chan Wei—Surgeon, Innovator, and Leader of the Legendary Chang Gung Microsurgery Center

Nidal Farhan AL Deek, MD*
Donald H. Lalonde, MD†

Abstract: Fu-Chan Wei is a world-renowned plastic and reconstructive surgeon. He is clearly one of the most influential and innovative surgeons in the history of plastic surgery. The Taiwanese legend is the innovator of the osteoseptocutaneous fibula flap, which revolutionized the reconstruction of composite bone and soft tissue defects in the jaw and extremities. He has pioneered several perforator flaps, including the free style variety. He has taken toe-to-hand microsurgical transplantation to a whole new level. He is not only recognized for his surgical skills and clinical innovations, but also for his vision, leadership, and teaching. The establishment and development of the famous Microsurgery Center at Chang Gung Memorial Hospital is unparalleled anywhere. The international fellowship program in microsurgery there remains the envy of all microsurgical trainees. Dr. Wei and his colleagues have trained and influenced more than 1,500 surgeons from all over the world. The aim of this video article is to share what we learned by interviewing Fu-Chan Wei at Chang Gung. The story of Fu Chan Wei, his colleagues, and the development of the Microsurgery Center in Taiwan is worth knowing. *(Plast Reconstr Surg Glob Open 2016;4:e1042; doi: 10.1097/GOX.0000000000001042; Published online 27 September 2016.)*

In the 75th anniversary of the founding of the American Society of Plastic Surgery, a list of 20 top true innovators and pioneers of plastic surgery was suggested.[1] Dr. Fu-Chan Wei was one of them. He has been a national and international founder and leader. Inspired by the heroes of his time, such as Samuel Noordhoff, Fu-Chan Wei and his colleagues established a center for plastic and reconstructive surgery and successfully led that center to become a legendary institute.

Thinking big, aiming high, and reaching out toward others have made Fu-Chan Wei more than a microsurgery wizard and Chang Gung more than a 'Disney Land' for plastic and microsurgeons.[2] Everyone who visits Chang Gung and Fu-Chan Wei feels the energy of this man and this center. They hear and witness the stories of ordinary men who become heroes and make history. This article tells the story both in print and in a comprehensive video interview with Fu Chan Wei.

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ON THE WAY TO BECOMING A MICROSURGEON

When Fu-Chan Wei got in to medical school in Taiwan, he had no idea what plans the future might have for him. It was his destiny and good fortune to meet Dr. Samuel Nordhoff. Sam had come to Taiwan in 1959 as a missionary doctor. He later became the first superintendent of Chang Gung Memorial Hospital.

Fu-Chan Wei and his colleagues were all touched by Dr. Nordhoff's gracious attitude toward patients. He considered serving patients an act of honoring God. Dr. Nordhoff assigned Dr. Wei, the newly minted plastic surgeon, to 'go abroad to bring home something new.' To young Dr. Wei's mind, that new thing was not clear, but he was determined to honor his mentor.

Following the footsteps of Dr. Nordhoff, Dr. Wei did a fellowship at the University of Toronto from 1979 to 1981. In that setting, everything was interesting to the ambitious Dr. Wei. However, he fell in love with the new field of microvascular surgery. He imagined its potential application in so many areas. This was his birth as a microsurgeon. He then did a hand and microsurgery fellowship at the

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Supplemental digital content is available for this article. Clickable URL citations appear in the text.

Gente UdeA

Egresado UdeA, con los mejores cirujanos en Taiwán

21/04/2017

Por: Esteban Cardona González – Egresado Facultad de Medicina

Esteban Cardona Gonzalez realiza estudios de microcirugía reconstructiva junto a uno de los mejores cirujanos del mundo, un sueño realizado de formarse en uno de los centros de referencia a nivel mundial en cirugía plástica. Desde Taiwán cuenta su historia.

Foto: Esteban Cardona junto a Fu-Chan Wèi.

Rápidamente en mi formación como cirujano plásticos entí interés por la microcirugía reconstructiva, campo quirúrgico que se especializa en reparar anomalías con la ayuda de un microscopio e instrumental fino, tanto que se puede realizar la unión de vasos sanguíneos, nervios y vasos linfáticos.

Un microcirujano puede restaurar los defectos más complejos después del tratamiento de un tumor o de un trauma, por ello se requiere utilizar, en diversas ocasiones, tejidos cutáneos, musculares, óseos y unir los vasos sanguíneos que los nutren. Usualmente estos tejidos son tomados de sitios anatómicos prescindibles del mismo paciente, pero teniendo en cuenta los últimos desarrollos en el área es posible la transferencia de tejidos de otros seres humanos. El trasplante de mano y de cara, también conocidos como trasplantes de tejidos compuestos es un ejemplo de ello, y son pocos los centros pioneros en el mundo que practican estos procedimientos reconstructivos.

VOL 12 ISSUE 1 NEWSLETTER MARCH 2013

Overseas Training in Microsurgery and Hand/Wrist Management

By Dr Margaret FOK

Photo with Professor DL Fernandez

It was a privilege to go for a 6-month overseas training in 2012. It comprised of attachments to 3 different internationally renowned centres in Switzerland and Taiwan, following the world masters in the field of Microsurgery, and Hand and Wrist pathology.

I started off this training with the AOTrauma fellowship in June, 2012, attached to Professor Diego L Fernandez 's unit in the Department of Orthopaedic Surgery, Lindenhof Hospital, Berne, Switzerland.

Throughout the attachment period, I participated in both operations and out-patient clinics, learning from the master ways of operating with the newest implants as well as improving my surgical techniques. As Professor Diego Fernandez's department is a renowned referral centre for hand surgery in Switzerland for years, I was able to observe and take part in a sizable number of cases involving a wide variety of management. The cases were explained to me patiently and the rationale for each specific management was discussed in detail. I am very grateful to the unreserved teaching which I have received not only from Professor Fernandez but also from the staff members of his team. This has made my stay most fruitful and enjoyable.

Besides practical skills, I was also drawn into some research projects, one of which is in preparation for publication. These ventures have opened up my horizon to explore new approaches in hand surgery and I shall definitely follow them up on return to Hong Kong.

Photo with Professor YKTU

My next stop was Taiwan. I started my orthopaedic training in the Department of Orthopaedic Surgery, Ede-Hospital, Kaohsuing (from 16th July to 31st August, 2013). Professor Yuen- Kuan Tu is a well recognized expert in microsurgical skills in orthopaedics as well as brachial plexus reconstruction.

Over the 7 weeks period, I was intrigued by Professor Tu's energy and resourcefulness. Every day, the ward round started at 6:30a.m. – ON TIME and was immediately followed by either operations, or morning meetings. A normal operation day meant a few spine cases and/or joint replacement surgeries, plus a complicated microsurgical case (of which it could be a brachial plexus reconstruction or free flap surgery). Professor Tu would run between 2-3 theatres to make good use of every minute of his operation time. The operation day usually finished late at around 9-10pm, if not later. On the other hand, the workload in the outpatient clinic was not light. It was common to have over 250 patients for every outpatient day. The clinic usually ran from early morning till late without a proper lunch break. Even so, he was still able to be patient to the sick, listening in detail to their problems, which patients with e.g. brachial plexus injury, had encountered in their daily lives. Following Professor Tu's tight schedule, I was opened up to a wide variety of cases and have learnt quite a number of different microsurgical management techniques.

I am very grateful to the entire department, as both the doctors and the nursing staff welcomed me with open arms. It reflected the good natured and hospitable characters of the people in the southern part of Taiwan. I was always well looked after and was included in many of their social departmental events.

Photo with Professor FC Wei

Finally, I finished my oversees training in the Department of Plastic and Reconstructive surgery, in Chang Gung Memorial Hospital (CGMH), a place which has nourished so many world known plastic and hand surgeons. I was there from September to November, 2012. I had the honor to learn from the 2 great masters, i.e. Professor Fu-Chan Wei and Professor David Chuang over my 3-month stay.

Photo of Professor Cheung

CGMH, itself, is a huge private hospital complex with many different branches in Taiwan and even China. The Linkou branch, its headquarter, houses more than 3000 beds. Under the leadership of Professor Wei and Professor CH Lin (the currently Chief of Service), the Department of Plastic and Reconstructive surgery has been known to be a "sacred" place to train soft tissue reconstruction and microsurgery, attracting many visiting fellows from all around the world. It is normal to have seven to eight operating theatres with microsurgical cases scheduled each day, ranging from free flaps, toe to hand transfer to brachial plexus reconstruction. The case load was enormous. In fact, I had the opportunity to see how a flap could be harvested in different ways tailored to patients' needs and surgeon's preference.

Cont...

World Society for Reconstructive Microsurgery (WSRM)

Fu-Chan Wei Club

"Fu-Chan Wei Lectureship Award". The aim is to select one who has great contribution to the reconstructive microsurgery specialty a s a role model for all reconstructive surgeons to follow.

2017

2019

A Comprehensive Reconstructive Microsurgery Center at CGMH / CGU

- Service Center
  - Trauma
  - Cancer
  - Congenital, developemental
  - Difficult wounds
- Education, training Center
- Research Center

Conclusions

- "Train the trainer" is the most cost-, time-, source-effective way of spreading knowledge and skill in highly specialized surgical fields
- Success of "train the trainer" depends on:
  - Appropriate faculty with adequate support
  - Setting appropriate goals of fellowship
  - Selecting suitable fellow candidates
- Combined clinical fellowship and Master (PhD) degree of Science may help obtain even better result in the goals of "Train the Trainer"

"Train the Trainers" in Highly Specialized Surgical Field - Reconstructive Microsurgery

Fu-Chan Wei M. D.

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