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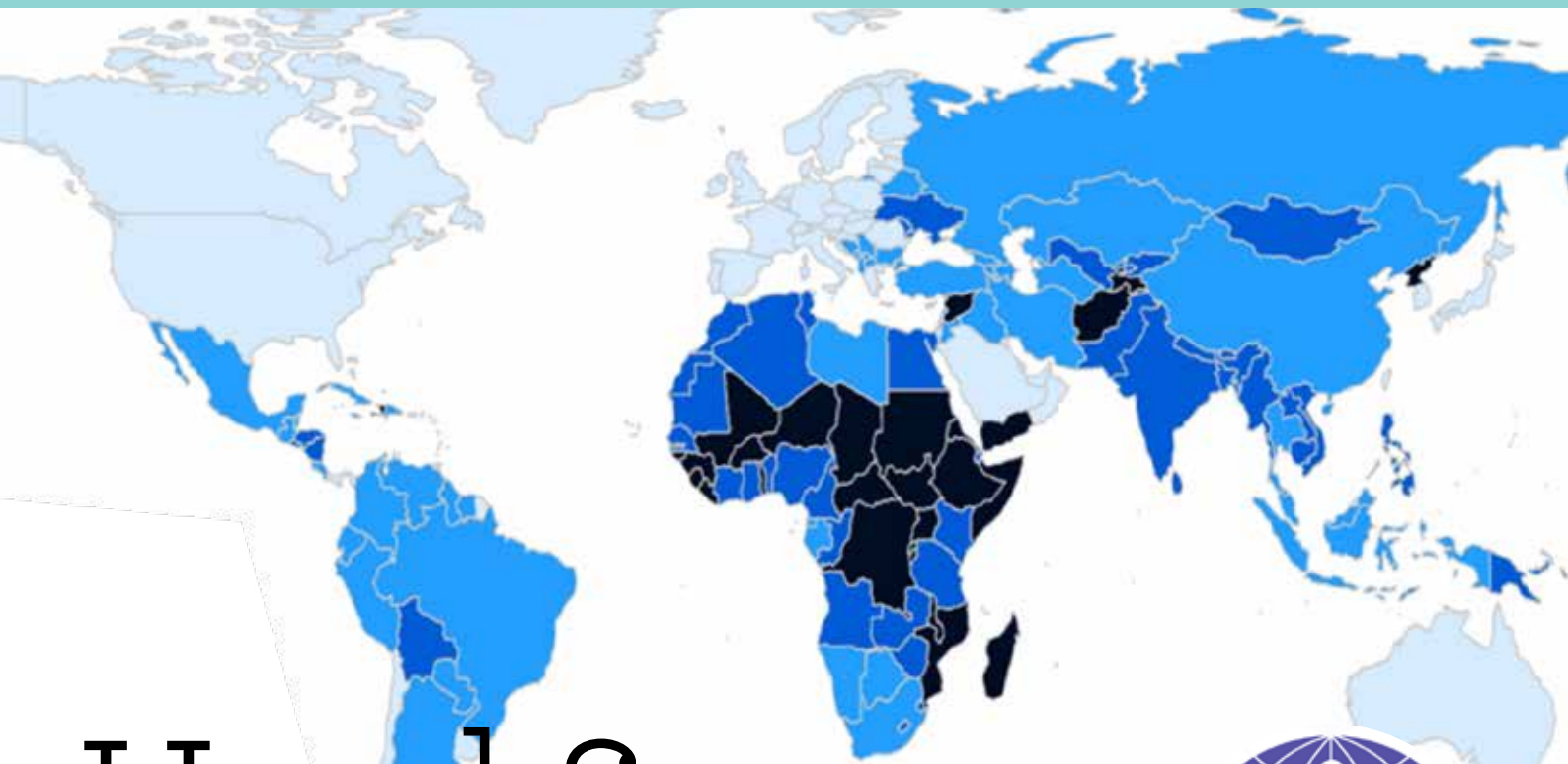
ezine ifssh

CONNECTING OUR GLOBAL HAND SURGERY FAMILY

UPDATE: OMT CLASSIFICATION

RESEARCH ROUNDUP
EXTREME THUMB LOSSES: RECONSTRUCTIVE STRATEGIES

REFLECTIONS
HAND SURGERY. A PHILOSOPHY



Hand Surgery Worldwide: Global Perspective

HAND THERAPY: A FREE ONLINE TRAINING RESOURCE TO DELIVER AN EVIDENCE-BASED HAND EXERCISE PROGRAMME FOR PEOPLE WITH RHEUMATOID ARTHRITIS

IFSSH-IFSHT CONGRESS LONDON, UK JUNE 2022

contents

Celebrating 10 years

"For the Members by the Members"
The first IFSSH Ezine was published in February 2011.
This 41st Ezine heralds the beginning of the next decade of our electronic magazine.

First of all, we owe a great deal of thanks and gratitude to the following persons who made it all possible: Michael Tonkin for his proof reading and advice, Belinda Smith for her enthusiasm and dedicated administrative excellence, for Raja Sabapathy our highly efficient webmaster, Tammy Hansen for her professional and eye-catching graphic designs, and of course, all the many willing contributors for their interesting and informative submissions.

Secondly, it is prudent to revisit the **aim and mission of the IFSSH Ezine**:

1. It is the **official communication** medium of the IFSSH.
2. It is intended for **distribution to each individual member** of all the Member National Hand Surgery and Therapy Societies.
3. It is a platform to **freely share knowledge** by the members for the members.
4. It is regularly **distributed free of charge** to all who want to stay connected, and therefore reaches all corners of the world.
5. It also acts as a **record of the history** of Hand Surgery and Therapy internationally.

Each and every Member is again invited and encouraged to make use of this communication vehicle, to share and dialogue any aspect of our common chosen activity which we love so dearly.

Sincere regards,
ULRICH MENNEN
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CONNECTING OUR GLOBAL HAND SURGERY FAMILY

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President's Report

Dear friends,

I wish I could send the right words to those whose lives have been shattered by this pandemic. I wish I could discover new ways to send a helping hand to our colleagues in need. If a friend in need is a friend indeed, I wish I could be that friend. But I can't. As most of you, as frontline workers we are all overworked. And on top of this, I can expect a call from the OR Supervisor to, once again, return and help out in theatre. Should I be surprised to hear in the background when the call comes, that sad, old song by Stephen Foster: "Hard times come again no more"?

Last week, Antonio Guterres, the Secretary General of the United Nations, emphasized the need of working together to solve this global crisis. Unity and solidarity: the two most important key words to shed some hope for the suffering. "Let's make peace among ourselves and with nature", he said. "Let's tackle the climate crisis, let's together stop the spread of COVID-19 and make 2021 a year of healing". Indeed, the best New Year's resolution for 2021 is to heal the planet.

"Together": that's the third key word. We do not need pessimists. We need scientists. We need biological, medical, epidemiological, and social researchers to find effective solutions to this global problem. And of course, we need to protect the entire population of the planet. It is the scientists' opinions that one has to listen to, not the denialists. It is not that long that they were denying the alarm of Covid19. Populist speculators, shut up!!

After this type of world-wide crises, including plagues and wars, the fourth key word is obviously "global reconstruction". It is important to leave no one behind. Solidarity must include all countries, ie. all developing areas of our planet. Of course, the challenge now is to minimize the pandemic effects in terms of health. Let's keep an eye on countries where health systems are minimal. Let's not forget that they will also need access to clean water, protection equipment and tests. This is a silent global problem that cannot be ignored. Like other tropical endemic diseases, the final answer is an effective and safe vaccine; let's make sure that these vaccines also reach all territories in an affordable and safe way.

Let's hope that these "hard times" do not come again!

MARC GARCIA-ELIAS
President: IFSSH

SECRETARY-GENERAL REPORT

IFSSH Secretary-General Report

The New Year 2021 has dawned with the silver lining in the dark cloud of Covid-19 pandemic.

Most of the people on earth have suffered from fear, frustration and exhaustion caused by the uncontrollable dissemination of the virus. However we need to be strong because things will get better.

It might be stormy now, but it can't rain forever. As Baruch Spinoza said, 'Fear cannot be without hope, nor hope without fear'.
Better and more careful consideration for our patients as well as for our family and friends even in this bad situation, is our vocation.

The Executive Committee will keep on trying to find a way to support educational programmes especially for young hand surgeons, and to prepare 15th IFSSH Congress and 12th IFSHT Congress which will be held in London in 2022.

Scientific Updates: Congenital Conditions

Further work continues to be undertaken on the OMT Classification of Congenital Anomalies of the Hand and Upper Limb, with an update recently submitted to the IFSSH. The full updated version can be found in this Ezine issue.

Historically, the Swanson Classification was proposed in the 1960s and adopted by the IFSSH Committee on Congenital Conditions. In 2014 the Committee recommended adoption of a revised classification system for Congenital Anomalies of the Hand and Upper Limb, as proposed by Drs. Oberg, Manske and Tonkin, popularly known as the 'OMT' (https://ifssh.info/pdf/2014_Congenital_conditions.pdf). (https://ifssh.info/pdf/2015_OMT_Classifiction_Congenital_Report.pdf)

The Committee recommended ongoing review of the 'OMT' Classification according to responses from the hand surgery community. The refinements incorporated in 2015 were adopted (https://ifssh.info/pdf/2015_OMT_Classifiction_Congenital_Report.pdf). The Committee invited comments and advice based on improvements in knowledge.

In 2020, an update was chaired by Dr. Charles Goldfarb. The 2015 OMT was examined to address comments given by others through different publications and also through the committee's own experience when using the OMT. A number of changes were recommended and the final report is available on the IFSSH website: https://ifssh.info/pdf/Congenital-Update-2020-10-05-with-OMT-extended.pdf

To complement the classification system, an app has been developed, led by Dr. Wee Lam and colleagues. The purpose of the 'OMT App" is to create a mobile platform where the classification can be easily accessed, for example, in the busy outpatient setting. The App is regularly updated to mirror any changes to the OMT classification, new knowledge of etiologies, as well as add to the growing collection of images. These updates will automatically be refreshed for all those who have downloaded the App. Further information is available on the IFSSH website: https://ifssh.info/OMT-Classification-App.php

Educational Sponsorship

We have been impressed with the adaptation and creativity shown in continuing education programs throughout 2020. Please remember that if your Society is planning education programmes and needs financial support to fulfil the goals, please consider a request to the IFSSH. The full guidelines and reports of sponsored programmes are available via https://ifssh.info/educational_sponsorship.php.

Future Meetings

A detailed list of national and regional hand surgery meetings is available on the IFSSH website.

The triennial IFSSH Congresses are as follows:

XVth IFSSH – XIIth IFSHT Congress – London, United Kingdom
6th - 10th June, 2022

XVIth IFSSH – XIIIth IFSHT Congress – Washington D.C., USA
29th March - 3rd April, 2025

I wish all of you and your family a happy and healthy New Year.
Best regards to all,
Goo Hyun

GOO HYUN BAEK
Secretary-General, IFSSH
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Published Review Article

Further Knowledge on Featured Topics

JHS(E)

Journal of Hand Surgery
(European Volume)
2020, Vol. 45(10) 1117–1119

DOI: 10.1177/1753193420964335
journals.sagepub.com/home/jhs
SAGE

The 2020 Oberg–Manske–Tonkin classification of congenital upper limb differences: updates and challenges

In 2013, the older Swanson classification for congenital hand differences was replaced by a new system, proposed by Oberg, Manske and Tonkin (OMT) at the recommendation of the International Federation of Society for Surgery of the Hand (IFSSH) Committee for Congenital Conditions (Ezaki et al., 2014). There were multiple reasons for this change. With the rapid progression of knowledge in limb development and clinical genetics, the limitations of Swanson classification in combining aetiology and morphology had become more evident. Moreover, there was growing dissatisfaction with the older classification's inability to classify certain conditions, such as symbrachydactyly and cleft hand.

Strengths of the OMT Classification

The OMT classification has several advantages: first, its simplicity – using common terms of dysmorphology with a focus on aetiology, the OMT is a radical shift away from the mixture of terms used in prior classifications. Second, its flexibility – the OMT classification allows changes to be accommodated following discovery of new knowledge in the fields of developmental biology or genetics. Third, its comprehensiveness – the goal is designed to group every known condition under its rightful category. Fourth, its logic – at first, the OMT classification may seem like an endless list, but with regular usage it begins to make sense where conditions are grouped and why, mostly corresponding to extent of involvement (e.g. entire upper limb versus hand plate only), timing of insult (e.g. malformation versus deformation) or tissues involved (e.g. soft tissue versus skeletal). Last, it has educational benefits – regular users develop a knowledge of path-embryology and consequently a deeper appreciation of the conditions being treated.

Updates in the 2020 Classification

The classification is not perfect; indeed, its limitations were immediately highlighted in the 2013 review by the IFSSH committee with recommendations of 3-yearly review to allow updates of knowledge, changes in groupings and additions of new categories (Ezaki et al., 2014). Recently, an international multidisciplinary group carefully reviewed the existing 2015 OMT classification and provided an update (Goldfarb et al., 2020). The group took into consideration reports from groups that had previously raised concerns (Al-Qattan, 2013; Lowry et al., 2017), as well as drawing from their own experience of using the classification in clinical practice and national databases.

The updated classification and its various rationales for changes are as detailed by Goldfarb et al. (2020) and the IFSSH (https://ifssh.info/scientific_committee_reports). The most significant changes relate to improved terminology and streamlining of the classification from the 2015 version for the clinician. For example, transverse deficiency of the entire upper limb was previously divided into seven categories, with the wrist and fingers further subdivided into their respective components. Such a division was unnecessary as well as impractical; the congenital hand surgeon sees only a few patients a year with this condition and it is entirely sufficient to classify the myriad of cases under 'segmental (various levels: humeral to phalangeal) as the aetiology is the same for all levels. This subdivision has also been added to 'symbrachydactyly – (b) whole limb excluding Poland syndrome'. These changes, as well as others highlighted in the full article, represent a clinician's pragmatic perspective of the OMT and attempts to make it more intuitive and user-friendly in the clinic setting.

Another significant update worth mentioning relates to the movement of arthrogryposis into its own category. Previously, the condition sat uncomfortably under 'unspecified axis – entire upper limb' for amyloplasia and 'unspecified axis – hand plate only' for distal arthrogryposis. The consensus was that for these conditions, normal limb patterning occurred initially but abnormalities developed

subsequently, namely the definition of 'dysplasia': 'an abnormality in growth and development'. In the 2020 update, therefore, the decision was made to group the spectrum of arthrogryposis, as well as other contracture conditions, such as camptodactyly and thumb in palm deformity, under its own category: 'dysplasias – congenital contracture'.

One of the criticisms of Lowry et al. (2017) relates to whether the OMT classification 'actually provides information about aetiology, except in many of the syndromes'. It is possible that Lowry and colleagues consider only gene mutations as an 'aetiology'. In our opinion, recognizing which developmental pathway is likely disrupted, contributes valuable information towards the understanding the dysmorphology. Furthermore, linking a dysmorphology to a developmental pathway provides clues as to where to search for genetic mutations or variations. In the future, it may be possible to trace every abnormal phenotype to a mutation, until then, recognizing the developmental pathways involved is an excellent alternative, especially for spontaneous de novo mutations. We do agree, however, that adding the Mendelian Inheritance of Man (MIM) codes would be useful, to enhance collaborations between developmental biologists and geneticists. In the 2020 version, we have added the Online Mendelian Inheritance of Man (OMIM) links to 'syndromes' for easy referencing.

Future perspectives and challenges

The OMT classification that can be further developed based on improved understanding of limb development, is expected (and encouraged) in the future. Unlike the Swanson's, however, the flexibility of the OMT does allow meaningful changes to be made. For example, there are, at present, several 'others' categories; these are akin to category VII in the Swanson's (miscellaneous), where unclear diagnoses or new conditions are placed. There is currently an international coalition of surgeons who meets with the aim of reducing the number of conditions in these categories and to move them into existing ones, or to create new ones. We also eagerly await new knowledge from our scientific colleagues that allow us to move conditions from 'unspecified axis' into defined ones. A good example is the cleft hand, which has been moved into its rightful place under the 'proximal-distal' axis, following defining work by various groups (Kantaputra and Carlson, 2019).

The OMT Classification Mobile App

A classification needs to be informative, but sufficiently concise for use in the busy outpatient setting. More information, if necessary, can be included in an electronic version. Through collaboration within an international congenital hand surgery working group, a mobile app has been developed (Lam, 2019a; 2019b), freely available for iOS or Android users with a layout that is identical to the 2020 OMT update by Lam, shown in IFSSH website under educational resources. Herein lies the advantage of a mobile platform; any changes can be easily updated and automatically refreshed in the devices of all who have downloaded the app, in an instant. The classification of each condition is easily accessed when needed, for example, during entry into databases. Without the constraints of the printed page, the app can contain (and update) information, including details of our current knowledge about aetiologies, both developmental errors and known genetic mutations, where known. The use of the photographs and keyword search function using layman terms, such as 'fused digits' or 'short digits' or 'thumb', allow different specialities to use the classification more efficiently. Regular use of the app should result in increased familiarity with the OMT classification itself and improve communication between disciplines.

Acknowledgements We would like to thank Charayaphan Nakorn Boon Han, Lewis Dingle and Huai Ling Tan for technical assistance in the development of the OMT app. Various international colleagues have also donated photographs and shared knowledge of aetiologies of hand conditions. We are grateful for their contribution.

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- **The OMT Congenital Anomalies Classification is a versatile and responsive classification system, providing a common language for the international scientific community of hand surgeons, geneticists, developmental biologists and other disciplines.**
- **In 2014 the IFSSH Committee on Congenital Conditions recommended the adoption of the OMT classification with periodic reviews at 3-year intervals, to incorporate responses from the hand surgery community, as well as advances in knowledge of developmental biology, genetics and clinical observations.**
- **In the OMT 2020 update, some of the classifications were simplified, removed, or moved to accommodate new knowledge in the categories of malformation, deformation and dysplasia.**
- **The Online Mendelian Inheritance of Men (OMIM) link has been included to provide more information for each syndrome.**
- **With each update, the classification is refined to facilitate its usefulness. These modifications need to be incorporated into national and international databases.**
- **The Committee anticipates and welcomes further updates as our knowledge in this field grows.**
- **The 'OMT App' (under 'Educational Resources' on the IFSSH website) is a free tool that allows easy reference to the system, and gives additional information on etiologies, photographs, easy keyword search function and OMIM links.**

OMT CLASSIFICATION OF CONGENITAL HAND AND UPPER LIMB ANOMALIES

I. MALFORMATIONS

A. Entire upper limb - Abnormal axis formation (early limb patterning)

1. Proximal-distal axis

I. Brachymelia
II. Symbrachydactyly Spectrum (with ectodermal elements)
  a) Poland syndrome
  b) Whole limb excluding Poland syndrome (various levels - clavicular to phalangeal)
III. Transverse deficiency (without ectodermal elements)
  a) Amelia
  b) Segmental (various levels - clavicular to phalangeal)
IV. Intersegmental deficiency (Phocomelia)
  a) Proximal (missing or shortened humerus – rhizomelic)
  b) Distal (missing or shortened forearm – mesomelic)
  c) Proximal + Distal (hand to thorax)
V. Whole limb duplication/triplication

2. Radial-ulnar (anterior-posterior) axis

I. Radial longitudinal deficiency
II. Ulnar longitudinal deficiency
III. Ulnar dimelia
IV. Radiohumeral synostosis
V. Radioulnar synostosis
VI. Congenital dislocation of the radial head
VII. Forearm hemi-physeal dysplasia, radial (Madelung Deformity), or ulnar

3. Dorsal-ventral axis

I. Ventral dimelia
II. Dorsal dimelia

4. Unspecified axis

I. Shoulder
  a) Undescended (Sprengel)
  b) Abnormal shoulder muscles
II. Upper to Lower limb transformation

B. Hand plate - Abnormal axis differentiation (late limb patterning/differentiation)

1. Proximal-distal axis

I. Brachydactyly
II. Symbrachydactyly (with ectodermal elements)
III. Transverse deficiency (without ectodermal elements)
IV. Cleft hand (Split Hand Foot Malformation)

2. Radial-ulnar (anterior-posterior) axis

I. Radial longitudinal deficiency, hypoplastic thumb
II. Ulnar longitudinal deficiency, hypoplastic ulnar ray
III. Radial polydactyly
IV. Triphalangeal thumb
  a) Five finger hand
V. Ulnar dimelia (mirror hand)
VI. Ulnar polydactyly

3. Dorsal-ventral axis

I. Dorsal dimelia (palmar nail)
II. Ventral dimelia (hypoplastic/ aplastic nail)

4. Unspecified axis

I. Soft tissue
  a) Cutaneous (simple) syndactyly
II. Skeletal
  a) Osseous (complex) syndactyly
  b) Clinodactyly
  c) Kirner deformity
  d) Synostosis/symphalangism
III. Complex
  a) Syndromic syndactyly (e.g., Apert hand)
  b) Synpolydactyly
  c) Not otherwise specified

II. DEFORMATIONS

A. Constriction ring sequence
B. Not otherwise specified

III. DYSPLASIAS

A. Variant Growth

1. Diffuse (Whole limb)

I. Hemihypertrophy
II. Aberrant flexor/extensor/intrinsic muscle

2. Isolated

I. Macrodactyly
II. Aberrant intrinsic muscles of hand

OMT CLASSIFICATION OF CONGENITAL HAND AND UPPER LIMB ANOMALIES

B. Tumorous conditions

1. Vascular

I. Hemangioma
II. Malformation
III. Others

2. Neurological

I. Neurofibromatosis
II. Others

3. Connective tissue

I. Juvenile aponeurotic fibroma
II. Infantile digital fibroma
III. Others

4. Skeletal

I. Osteochondromatosis
II. Enchondromatosis
III. Fibrous dysplasia
IV. Epiphyseal abnormalities
V. Pseudoarthrosis
VI. Other

C. Congenital Contracture

1. Arthrogryposis Multiplex Congenita

I. Amyoplasia
II. Distal arthrogryposis
III. Other

2. Isolated

I. Camptodactyly
II. Thumb in palm deformity
III. Other

IV. SYNDROMES*

A. Specified

1. Acrofacial Dysostosis 1 (Nager type) (MIM #154400)
2. Apert (MIM #101200)
3. Al-Awadi/Raas-Rothschild/Schinzel phocomelia (MIM #276820)
4. Baller-Gerold (MIM #218600)
5. Bardet-Biedl (21 types)
  Type 1) (MIM #209900)
  Type 2) (MIM #615981)
  Type 3) (MIM #600151)
  Type 4) (MIM #615982)
  Type 5) (MIM #615983)
  Type 6) (MIM #605231)
  Type 7) (MIM #615984)
  Type 8) (MIM #615985)
  Type 9) (MIM #615986)
  Type 10) (MIM #615987)
  Type 11) (MIM #615988)
  Type 12) (MIM #615989)
  Type 13) (MIM #615990)
  Type 14) (MIM #615991)
  Type 15) (MIM #615992)
  Type 16) (MIM #615993)
  Type 17) (MIM #615994)
  Type 18) (MIM #615995)
  Type 19) (MIM #615996)
  Type 20) (MIM #617119)
  Type 21) (MIM #617406)
6. Carpenter (MIM #201000)
7. Catel-Manzke (MIM #616145)
8. Cornelia de Lange (5 types)
  Type 1) (MIM #122470)

Type 2) (MIM #300590)
Type 3) (MIM #610759)
Type 4) (MIM #614701)
Type 5) (MIM #300882)

9. Beals (MIM#121050)
10. CLOVE (MIM #612918)
11. Crouzon (MIM #123500)
12. Down (MIM #190685)
13. Ectrodactyly-Ectodermal Dysplasia-Clefting (MIM #129900)
14. Fanconi Pancytopenia (MIM #227650)
15. Freeman Sheldon (#MIM 193700)
16. Fuhrmann (MIM #228930)
17. Goltz (Focal Dermal Hypoplasia - FDH) (MIM #305600)
18. Gorlin (Basal Cell Nevus Syndrome – BCNS) (MIM #109400)
19. Greig Cephalopolysyndactyly (MIM #175700)
20. Hajdu-Cheney (MIM #102500)
21. Hemifacial Microsomia (Goldenhar syndrome) (MIM #164210)
22. Holt-Oram (MIM #142900)
23. Lacrimoauriculodentodigital (Levy-Hollister) (MIM #149730)
24. Larsen (MIM #150250)
25. Laurin-Sandrow (MIM #135750)
26. Leri-Weill Dyschondrosteosis (MIM #127300)
27. Liebenberg Syndrome (MIM #186550)
28. Moebius sequence (MIM #157900)
29. Multiple Synostoses (4 types)
    Type 1) (MIM #186500)
    Type 2) (MIM #610017)
    Type 3) (MIM #612961)
    Type 4) (MIM #617898)
30. Nail-Patella (MIM #161200)
31. Noonan (2 types
    Type 1) (MIM #163950)
    Type 2) (MIM #605275)
32. Oculodentodigital dysplasia AD (MIM #164200); AR (MIM #257850)
33. Orofaciodigital (18 types)
    Type 1) (MIM #311200)
    Type 2) (MIM #252100)
    Type 3) (MIM #258850)
    Type 4) (MIM #258860)
    Type 5) (MIM #174300)
    Type 6) (MIM #277170)
    Type 7) (MIM #608518)
    Type 8) (MIM #300484)
    Type 9) (MIM #258865)
    Type 10) (MIM #165590)
    Type 11) (MIM #612913)
    Type 12) (No MIM yet (Moran-Barroso et al., 1998))
    Type 13) (No MIM yet (Degner et al., 1999))
    Type 14) (MIM #615948
    Type 15) (MIM #617127)
    Type 16) (MIM #617563)
    Type 17) (MIM #617926)
    Type 18) (MIM #617927)
34. Otopalatodigital Spectrum (FILAMIN A – FLNA)
    Type 1) Otopalatodigital Type 1 (Gain of function) (MIM #311300)
    Type 2) Otopalatodigital Type 2 (Disruption) (MIM #304120)
    Type 3) Frontometaphyseal dysplasia (MIM #305620)
    Type 4) Melnick-Needless (MIM #309350)
35. Pallister-Hall (MIM #146510)
36. Pfeiffer (MIM #101600)
37. Pierre Robin (4 subtypes)
    Type 1) Pierre Robin (MIM #261800)
    Type 2) Pierre Robin with campomelic dysplasia (MIM #602196)
    Type 3) Pierre Robin with oligodactyly (MIM #172880)
    Type 4) Pierre Robin with facial and digital anomalies (MIM #311895)
38. Poland (MIM #173800)
39. Proteus (MIM #176920)
40. Roberts (MIM #268300)
41. SC Phocomelia (MIM #26900)
42. Rothmund-Thomson (MIM #268400)
43. Rubinstein-Taybi (2 types)
    Type 1) (MIM #180849)
    Type 2) (MIM #613684)
44. Saethre-Chotzen (MIM #101400)
45. Split-hand-foot malformation (7 types)
    Type 1) (MIM #183600)
    Type 2) (MIM #313350)
    Type 3) (MIM #246560)
    Type 4) (MIM #605289)
    Type 5) (MIM #606708)
    Type 6) (MIM #225300)
    Type 7) (MIM #220600)
46. Thrombocytopenia Absent Radius (MIM #274000)
47. Townes-Brock (2 types)
    Type 1) (MIM #107480)
    Type 2) (MIM #617466)

48. Trichorhinophalangeal (3 types)
    Type 1) (MIM #190350)
    Type 2) (MIM #150230)
    Type 3) (MIM #190351)
49. Ulnar-Mammary (MIM #181450)
50. VACTERLS association (3 types)
    Type 1) VACTERL (MIM #192350)
    Type 2) VACTERL X-Linked (MIM #314390)
    Type 3) VACTERLH (with hydrocephalus) (MIM #276950)

B. Others

*The specified syndromes are those considered most relevant; however, many other syndromes have a limb component categorized under "B. Others".

Tadao Kojima

Tadao Kodima was born on the 31 January 1932 in Tokyo, Japan. He grew up and received his schooling in Kumamoto on the island of Kyushu. He completed his medical training in 1957 at the Jikei University School of Medicine in Tokyo. From 1958 until 1967 he worked and completed his training in the Department of Orthopaedic Surgery, and another similar stint from 1968 till 1975 in the Department of Plastic and Reconstructive Surgery at the Jikei University School of Medicine. In 1976 he studied Hand Surgery with Dieter Buck-Gramcko in Hamburg, Germany. He became fluent in German, so much so, that he was appointed Corresponding Editor of the journal: 'Handchirurgie – Mikrochirurgie - Plastische Chirurgie' in 1988. In the same year he became Professor of the Department of Plastic and Reconstructive Surgery at his alma mater. He was elected Corresponding Member of the American Society of Plastic and Reconstructive Surgery in 1991.

In 1994 he was elected President at the 37th Annual Meeting of the Japan Society of Plastic and Reconstructive Surgery. In the following year he was also elected President of two further Societies, at the 38th Annual Meeting of the Japanese Society for Surgery of the Hand as well as at the 35th Annual Meeting of the Japanese Teratology Society. Kojima was elected Honorary Member of all three Societies, as well as from the Japanese Society for Surgery of the Elbow.

Prof. Kojima retired from the Jikei University in 1997, and then founded the Higashimatsugama Hand Institute in Saitama some 70 km north of Tokyo.

Prof. Tadao Kojima contributed widely to the management of upper limb conditions through his research and their clinical application. He is especially known for his contribution in pedicle and local flaps for skin defects, management of congenital dysplasias and tumours. His publication list includes 143 scientific articles, 41 book chapters and 3 books. As co-author he published an additional 312 articles. He established a well-known Museum for the Hand with a wide variety of artefacts related to the upper limb.

Tadao Kojima married Tomoko. They have two daughters and one son.

In 2004 at the 9th International Congress of the IFSSH in Budapest, Hungary, Tadao Kojima was honoured with the title: "Pioneer of Hand Surgery"

Antal Renner

Antal Renner was born on 8 January 1933 in Peastszenterzsébet, near Budapest, Hungary. He completed his schooling in Budapest in 1952, and his basic medical qualification in 1958. In 1959 he became Senior House Officer in Traumatology at the Central Traumatology Institute in Budapest. He would be working at this Institute for 43 years in various positions. He qualified as a General Surgeon in 1963 and two years later as Trauma Surgeon. He obtained his PhD in 1976. Renner was promoted to Senior Specialist Surgeon in 1977 and in 1978 became the Head of the Hand Surgery Department. In 1979 he became Associate Professor and full Professor in 1982 at the Haynal Imre University. In addition he was also tasked as Director of the Institute of Traumatology in 1989, until his retirement in 2002.

Prof. Renner introduced Hand Surgery as a surgical speciality in Hungary. He has published more than 360 articles, contributed 49 book chapters and 8 textbooks. He made over 350 presentations nationally and internationally. Renner organised many congresses, workshops and seminars, and presided over the 9th IFSSH Congress in Budapest in 2004. He was the founding member of the Hungarian Society for Surgery of the Hand and was elected its first President in 1992. He was also the President of the Hungarian Society of Trauma Surgery from 1994-1995. Antal Renner was on the Editorial board of four major journals, member of numerous medical societies in Hungary and abroad. He was known especially for his teaching abilities having trained 895 surgeons in hand surgery. He has been recognised for his work with 22 prestigious awards, including the Officer's Cross of the Hungarian Order of Merit in March 2020. He is presently writing a book on congenital developmental disorders of the hand.

Antal maried his first wife Dr. Maria nee Joó in 1959. They had a daughter Zsuzanna and a son Gábor. Antal married again, after Maria died in 1986. He married Dr Annamária nee Szentirmai. They have a son Tomás. Antal loved fishing, but now prefers classical music concerts and travel.

At the 9th Congress of the International Federation of Societies for Surgery of the Hand in June 2004 in Budapest, Hungary, Antal Renner was bestowed the honour "Pioneer of Hand Surgery"

Addressing the global need for hand surgery

The hand is an essential part of our body and provides unique expression to our humanity. We use our hands to feed and groom ourselves. We build homes, grow food, play music, create art, communicate with each other, and care for one another with our hands. As hand surgeons and therapists, we are all dedicated to restoring hand function and alleviating pain for our patients with hand maladies, and yet, we must acknowledge that the care we provide is not equally available to all. Too often, a person's health is a product of their wealth, power, or privilege. Worldwide, and in every country, poor and marginalized communities universally suffer the greatest burden of disease and inadequate access to care.[1]

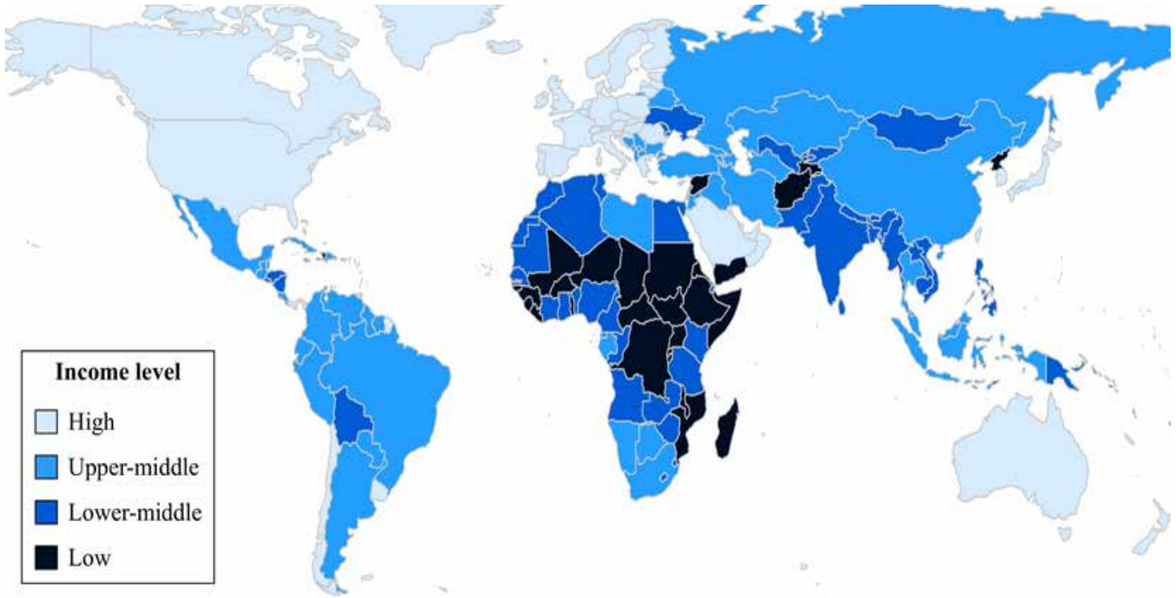

Figure 1: The world map with each country color-coded according to the income level of its economy. High-income countries have a gross national income (GNI) per capita, calculated using the World Bank Atlas method, of $12,536 or more in 2019 - examples include Denmark, Israel, Singapore, and the United States. Upper-middle income countries have a GNI per capita between $4,046 and $12,535 - examples include Brazil, China, Iran, and South Africa.
Lower-middle income countries have a GNI per capita between $1,036 and $4,045 - examples include Bolivia, India, Nigeria, and Vietnam. Low-income countries have a GNI per capita of $1,035 or less - examples include Afghanistan, Democratic Republic of Congo, Ethiopia, and Haiti. The majority of low- and lower-middle income countries are in sub-Saharan Africa and South/Southeast Asia.

Injuries to the hand and upper extremity are common in every community. In the United States, hand maladies account for 6.6% of all Emergency Department visits, with 78% being traumatic injuries.[2] Hand and wrist trauma, including fractures and soft tissue injuries, represent as much as 29% of all unintentional injuries presenting to Emergency Departments in high-income countries (HICs) like Denmark and Holland.[3,4] While the incidence of hand trauma appears to be decreasing slowly in HICs over the last 30 years, it has risen by as much as 25% in middle-income countries like China and India,[5] and unfortunately, data are severely lacking from low-income countries, especially in sub-Saharan Africa.[5] Small studies from Uganda and Ethiopia suggest that hand injuries could account for 5% to 12% of all non-fatal injuries seen by providers in these resource-limited settings.[6,7] Data suggest that especially due to a rising number of road injuries, incidence of musculoskeletal injury in general is increasing in low- and middle-income countries (LMICs) (Figure 1).[8-11]

We may well be witnessing a troubling shift in the burden of hand trauma to LMICs. For example, burns are a leading cause of disability worldwide, with more than 80% involving the upper extremity.[12,13] Burns are often associated with poverty – linked to the use of open cooking fires, exposed electrical wiring, and dangerous working environments – and are unsurprisingly more common in low-income countries in sub-Saharan Africa and South Asia.14 The vast majority of burns now occur in LMICs.[12]

Many people in LMICs rely on the informal economy to make ends meet: occupations like small-scale farming, construction, and manual labor for which the functional use of the hands is essential.[15] Hand injuries can push patients and their families into inescapable cycles of poverty with multigenerational repercussions. Imagine the impact an open forearm fracture could have on the life of a rural farmer in Malawi, and her ability to feed and school her children. Though not often life-threatening, hand injuries can lead to marked reduction in quality of life, decreased ability to work and care for oneself and one's family, with considerable economic ramifications.[16,17] In the next 15 years, an estimated $7.9 trillion of cumulative gross domestic product will be lost due to decreased productivity from trauma as a whole.[18]

Significant injury-related disability can be averted through quality surgical care.[19] Burns, fractures, tendon lacerations, infections, and neurovascular injuries of the hand all benefit greatly from timely surgical evaluation and treatment. Without surgery, patients may suffer from preventable complications such as mal-unions and non-unions, Volkmann's ischemic contracture, and osteomyelitis, which are extremely disabling. Unfortunately, an estimated 5 billion people worldwide lack access to safe, timely, and affordable surgical care.[20] Over 90% of people living in sub-Saharan Africa and South Asia do not have access to safe and affordable surgery, compared to 4% in HICs (Figure 2).[5] Many health systems in LMICs struggle to provide adequate pre-hospital care, treatment, and rehabilitation of the injured.[21-23] LMICs have a fraction of the surgeons and operating rooms per capita compared to HICs, and far fewer essential materials and implants.[24-27]

The capacity to deliver hand surgery in many LMICs remains largely unknown, as are the barriers to care that patients may face. For example, we know little about what happens to a patient with a compartment syndrome in rural Nigeria, or to a patient with a machete injury in Haiti. Long travel distances, poor road and safe transportation infrastructure, fear of surgery and anesthesia, lack of information, cultural barriers, corruption in the health sector, and inaccessibly high costs of care can make it impossible for some patients to seek care even when it is available.[21,28-32] Delayed presentation to hospital is common and can worsen outcomes.[33] Once patients reach a provider, lack of provider knowledge and skills, lack of care standardization, and inadequate follow up present additional challenges.[34,35]

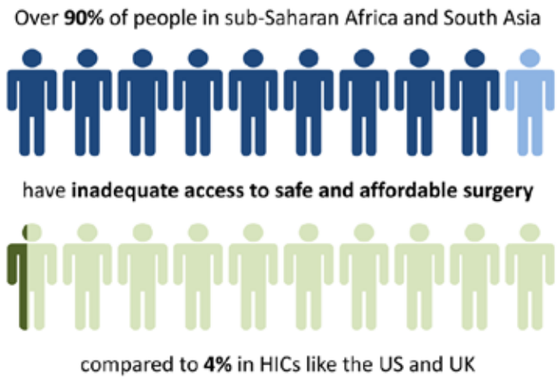

Figure 2: The proportion of people in sub-Saharan Africa and South Asia who are living with inadequate access to safe and affordable surgical care, compared to the proportion in high-income countries (HICs) like the United States (US) and the United Kingdom (UK). Data from Crowe CS, et al. Global Trends of Hand and Wrist Trauma: A Systematic Analysis of Fracture and Digit Amputation Using the Global Burden of Disease 2017 Study. Inj Prev. 2020 Mar 13.

We can surmise that the situation for the world's poor will be even more precarious in the wake of the COVID-19 pandemic, which has strained health systems worldwide, created additional barriers to seeking care, and disproportionately affected poor and marginalized communities.[36-38] It has been estimated that the COVID-19 pandemic could push over half a billion people worldwide into poverty.[39] Preservation of hand function will be increasingly important for more of the world's poorest and most vulnerable people, who exist on the edge of poverty and hunger. As a global community of hand surgeons, therapists, and trainees, we must recognize the need to expand availability of hand surgical care to the poor and marginalized, in our own countries and around the world.

While short-term volunteer surgical "missions" are one well-intentioned strategy that hand surgeons from HICs have used to address the needs of patients in LMICs, these trips can cause more problems than they solve. Surgical missions can burden local providers with expired supplies, failing and irreparable medical equipment, and incompletely treated patients.[40] Inadequate post-operative rehabilitation can lead to suboptimal outcomes despite excellent surgical care.[41] Outcomes from surgical missions are difficult to track and are typically worse than for patients treated in the visiting surgeons' home institutions.[42] Local partners may also be ill-equipped to deal with the complications that often arise. Most importantly, surgical missions disrupt local healthcare economies. By providing free services, missions undermine local surgeons who depend on payments to maintain their practices. This can create dependency on external assistance, which actually reduces access in the long-term.[43]

To build local capacity, surgical missions must be integrated into local care delivery systems.[44] This involves identifying and supporting local champions who can continue to care for patients and train others long after visiting surgeons have left.[45] Education is the most durable gift a visiting hand surgeon can bring, helping host surgeons learn new techniques and teach others, further spreading knowledge, best practices, and systemic – as well as sustainable – change.[46,47] In some cases, shifting certain tasks to non-physician clinicians or non-surgeon physicians may be appropriate to increase access to essential services. This is already being done effectively in several sub-Saharan African countries including Ethiopia, Uganda, and Malawi.[48-53]

With sustainable development in mind, hand surgeons in resource-rich settings should consider fostering truly bilateral partnerships with colleagues practicing in resource-limited settings (Figure 3).[54] Perhaps ironically, the COVID-19 pandemic and the restrictions it places on travel present an opportunity for mission-oriented outreach programs to shift their focus away from directly providing clinical care and toward activities that can be better supported remotely. Even from afar, surgeons in resource-rich settings can meaningfully contribute to provider education, process improvement, and research in resource-limited settings. These are all critically needed to build health systems that can deliver essential hand surgical care. Institutional partnerships can give voice and support to surgeons in LMICs, allowing for meaningful participation in advanced training, research, and innovation.

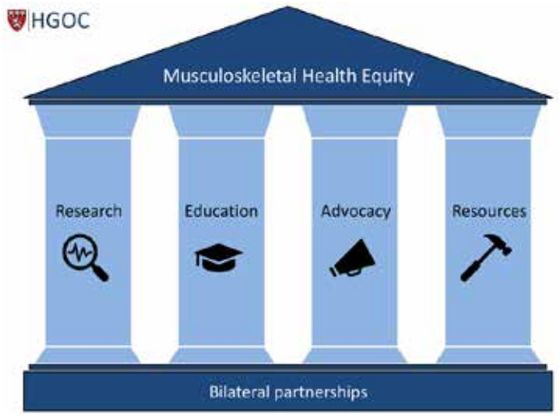

Figure 3: We encourage hand surgeons in resource-rich settings to build truly bilateral partnerships with colleagues practicing in resource-limited settings. These partnerships should serve as the critical foundation for sustainable development activities like research, education, advocacy, and procurement of essential resources. These activities are all essential pillars that build towards musculoskeletal health equity.

Building research capacity in LMICs can nurture a culture of quality improvement and accountability to patient outcomes, as well as empower surgeons in LMICs to guide the sustainable development goals in their own hospitals and countries.[55] Research on the need for hand surgery is also urgently needed in LMICs, and it can be a powerful tool for advocacy. Hand surgeons and therapists in HICs can use their platforms to raise awareness and mobilize resources to address the needs of the poor.

Ultimately, long term sustainable development of hand surgery in LMICs will require major investment in building and maintaining surgical infrastructure and training local providers. It will also require sustainable supplies of safe, durable, and low-cost implants and instruments. In many LMICs, many medical supplies are imported, too costly for widespread use, and designed without application to the resource-limited setting in mind.[56] Implants that are low-cost and manufactured locally could significantly improve access to care for the poor. Moreover, if safety and efficacy is rigorously tested, ensuring that quality is not compromised, low-cost innovations from LMICs could eventually find markets in HICs, with the potential to improve hand surgical care globally.[57] When we improve care for those with the greatest need, we can improve care for everybody.

It is important to remember that there is no "one size fits all" in global hand surgery. From building local manpower to developing cost-cutting innovations, any intervention to improve hand surgical care must exist within a cultural, socioeconomic, political, demographic, and epidemiological context. Despite the great diversity of needs and solutions, there are basic principles of global hand surgery that we believe are universal. First, we must investigate equity of hand surgical care in order to understand existing disparities and their root causes so we may devise effective solutions. Second, collaboration and coordination are paramount at every level of hand surgical care delivery – between healthcare practitioners of different backgrounds, organizations with different approaches, and countries with different economies and challenges. Third, innovation is key, and we must nurture creativity, rigorously test new ideas, and invest in new innovations with potential to have global applications. The development of global hand surgery will require financial investment, research, education, advocacy, and innovation. Hand surgeons and therapists must be encouraged to recognize the critical need to improve hand surgery worldwide, and to take action in meaningful ways.

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iSARAH programme

A FREE ONLINE TRAINING RESOURCE TO DELIVER AN EVIDENCE-BASED HAND EXERCISE PROGRAMME FOR PEOPLE WITH RHEUMATOID ARTHRITIS

Introduction

Rheumatoid arthritis (RA) is a chronic joint disease that commonly affects the joints of the hands and wrists. Clinical features include joint pain, stiffness, inflammation, finger deformities, and reduced grip strength and hand function. People with RA affecting the hands and wrists report limitations in day-to-day tasks such as opening a jar or carrying a shopping bag, and restrictions in their work, leisure, and social activities. Routine therapeutic management for these patients includes joint protection advice, exercise, and splints or assistive devices. Hand exercises are prescribed to improve or maintain joint movements, grip strength and hand function.

The Strengthening And Stretching for the Rheumatoid Arthritis of the Hands (SARAH) programme

The Strengthening And Stretching for Rheumatoid Arthritis of the Hand (SARAH) is a tailored strengthening and stretching hand exercise programme designed for people with RA. It includes 11 exercises and behavioural strategies such as self-monitoring, action planning and goal setting to support home exercise adherence. The programme was compared to usual care in a large multicentre randomised clinical trial [1] in 490 people with RA in England. The SARAH programme was found to improve hand function, was safe to deliver, and was also cost-effective. These findings led to an update of the United Kingdom's (UK) National Institute for Clinical Excellence (NICE) guidelines for treating RA [2].

Online training on SARAH programme for health professionals (iSARAH)

We recognised the need for an implementation tool to facilitate quicker uptake of evidence-based SARAH programme into clinical practice by health professionals who treat people with RA.

Online training platforms use modern telecommunication and information technologies to deliver information and have the capacity to accommodate multi-modal learning formats such as written materials, multimedia, and self-assessments. Additionally, they are flexible, widely reachable and are cost-effective in terms of time, travel and geographical barriers. Taking advantage of the easy accessibility of the Internet and widespread use of smart telecommunication devices, we developed an online training (iSARAH) programme. The training aimed to provide users with the necessary knowledge and skills to deliver the SARAH programme to patients as part of routine clinical care.

How did we develop iSARAH?

The SARAH implementation team led by Professor Sarah E Lamb and Dr Esther Williamson at the Centre for Rehabilitation Research; University of Oxford, UK developed iSARAH in a three-step process [3]. A prototype mapping the content of the original SARAH programme to the online training was first developed. Then, an online survey among therapists from different countries to collect suggestions on iSARAH content, design, and navigation features was conducted. Finally, user-centered design principles were incorporated to construct iSARAH. The preliminary version was tested in 10 therapists to identify and address user issues. The final version of iSARAH is available at https://isarah.octru.ox.ac.uk.

What is in iSARAH?

iSARAH was launched in April 2017. iSARAH has all relevant information of the SARAH programme and patient/therapist documents required to implement the programme in practice. It has four brief modules delivered through text, exercise illustrations, and exercise videos. Other features include self-assessment, frequently asked questions, and a resource library. The course is self-paced and takes 2 to 3 hours to complete. On successful completion of training, users download their training completion certificate.

Impact of iSARAH

We evaluated the impact of iSARAH in terms of reach, user satisfaction, practice change and quality of patient care. As of 10th March 2020, we have reached a large nation-wide audience of 1058 National Health Service (NHS) occupational therapists and physiotherapists in the UK, of which 600 therapists completed the training. Most therapists (99%) were satisfied with the training and nearly 85% therapists intended to use the programme in their practice.

Six months' post training, we asked NHS therapists if they used the SARAH programme in their practice. From the feedback received from 116 therapists, two-thirds reported they were prescribing the programme to their patients. A service evaluation conducted in 118 patients from 16 NHS trusts showed similar improvements in hand function and grip strength as the main clinical trial [1].

iSARAH is now freely available to all health care professionals and students across the world. So far, there are 1318 registered users from 64 countries. The SARAH programme materials have also been translated into Japanese, Tamil and Turkish languages. Two SARAH service evaluation projects are ongoing in India and Turkey.

In summary, we were able to successfully train therapists to deliver the SARAH programme in routine practice and have widened its implementation on a global level.

Tips to develop successful online training platforms in hand therapy

1. Involve end-users and other key stakeholders in the development process
2. Use variety of delivery methods such as text, videos, photographs, interviews, and testimonies
3. Use simple English, font styles and layouts.
4. Produce simple and short videos.
5. Include support facility for technical queries.

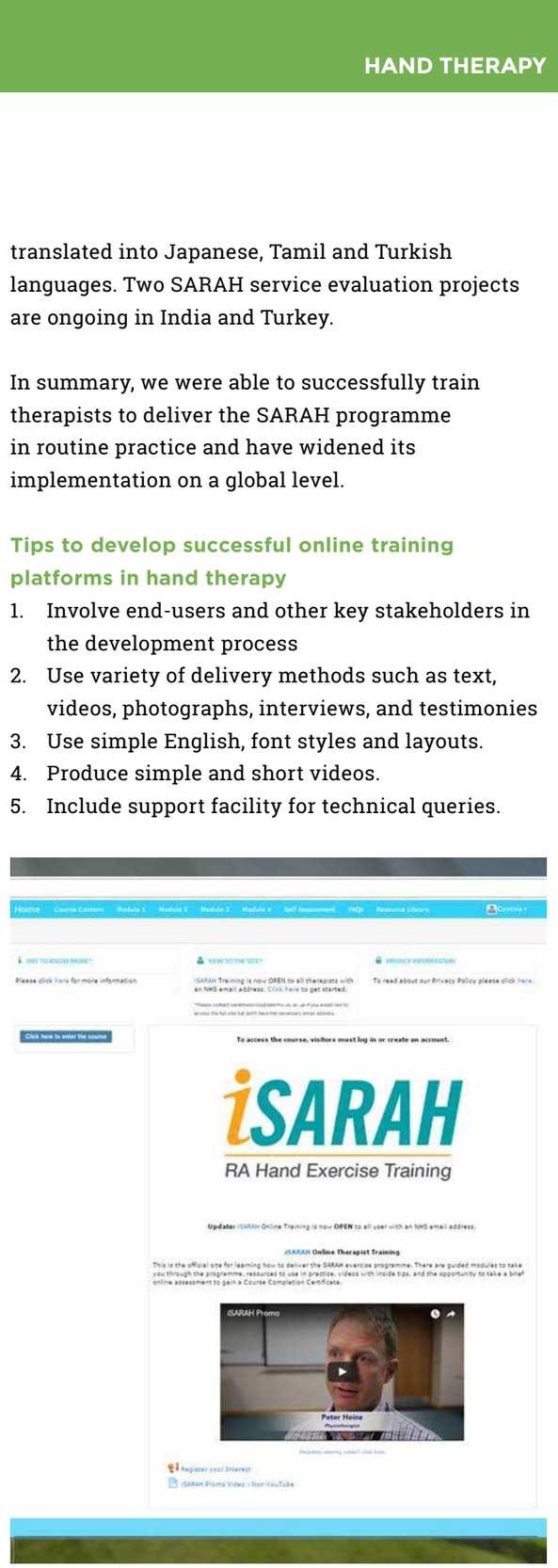

Figure 1: Screenshot of Home page

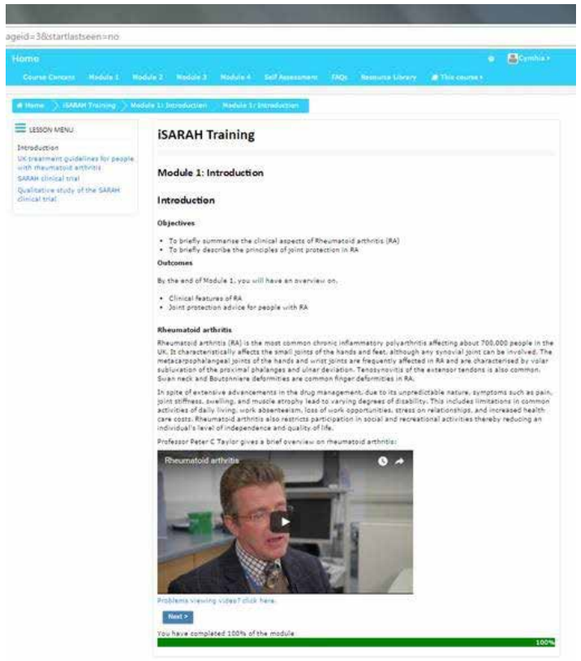

Figure 2: Screenshot of Introduction page

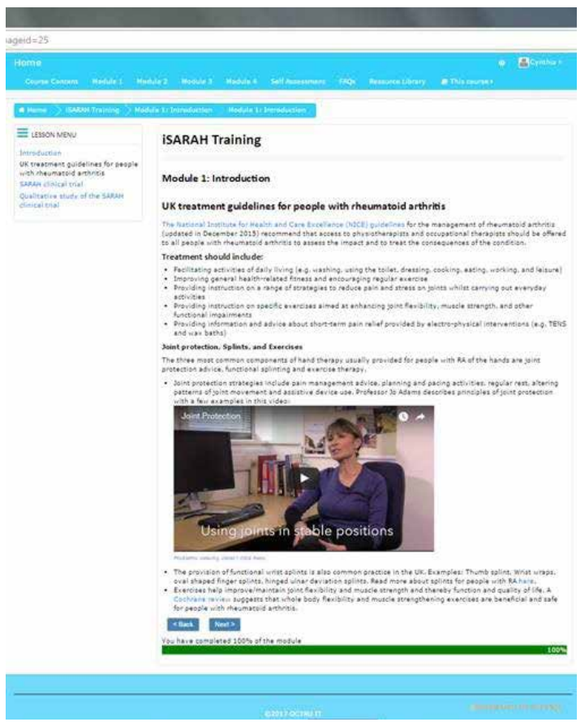

Figure 3: Screenshot of a section on joint protection advice

Figure 4: Screenshots of exercise videos

Figure 5: SARAH exercises

Figure 6: Screenshot of resource library page

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Conflicts of interest: The authors declare no conflicts of interest.

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SARAH implementation team
Left to right: Miss Lucy Eldridge, Dr Cynthia Srikesavan, Mr Tim Cranston, Professor Sarah E Lamb, Mr Peter Heine, Dr Esther Williamson

IFSHT News February 2021

WISHING YOU A HAPPY NEW YEAR – 2021

The IFSHT wishes that the New Year will be filled with hope, joy, love, peace, and happiness. Wishing you a Happy 2021! We are looking forward to continued engagement and opportunities to learn and grow as a global hand therapy community. Please stay safe and stay in touch.

IFSHT Council meeting attendees - Berlin 2019

The IFSHT is excited to announce the launce of the new IFSHT website! The website was redesigned, renewed and rejuvenated! Please visit the new website at www.ifsht.org to see more.

WHAT TO VISIT FIRST ON THE NEW WEBSITE?

IFSHT is pleased to put out this first call for nominations for executive committee members and chairs of standing committees for the next triennial term (3-year: 2022-2025).

IFSHT is accepting nominations for the following IFSHT Executive Committee positions:

- President-elect
- Secretary General
- Treasurer
- Information Officer.

All job descriptions including the roles and responsibilities of IFSHT committee members can be found at: https://ifsht.org/page/ifsht-job-descriptions.

We are also looking for nominations for the following IFSHT Standing Committee positions:

- Chair - Education Committee
- Chair - Bylaws Committee
- Chair - Financial review Committee
- Members - Nomination Committee (three members)

Please review the job descriptions and download and complete the relevant nomination form. Return your completed nomination to Anne Wajon, Chair of the IFSHT (2022-2025) Nominations Committee at pastpresident@ifsht.org.

Member Society

GERMAN SOCIETY FOR SURGERY OF THE HAND (DGH)

As in the rest of the world the corona pandemic has influenced the work of the executive committee of the German Society for Hand Surgery (DGH), as well as of the hand surgeons in Germany. Just prior to the first shut-down in Germany the executive committee of the Society met for the traditional board meeting in the castle of Mickeln, close to Düsseldorf, to plan the activities of the Society. The focus was to establish Hand Surgery as an independent specialty within the German health system. The already established German "Hand Trauma Register" and the public information campaign called "Hand Experts" will be further developed. The Society has decided to establish an accredited personal certificate called "Expert Hand Surgeon" as well as certificates for "Hand Units" and "Hand Trauma Units".

From March 2020 every national or international congress was either cancelled or altered to an online meeting. To a certain degree this did allow us to share our scientific work but everybody experienced the lack of personal interchange. A reduced dialogue in a chat room cannot replace the open face-to-face discussion which is essential for further developing our knowledge. This fact, as well as the then decreasing infection rate of the population during the summer months in Germany, prompted the executive committee of the Society to carry on planning the annual congress of the DGH. Following intense discussions and thanks to our experienced professional congress organizer "Intercongress" and the management of the event location "MCC Halle Münsterland" in the city of Münster – Westfalia, a detailed safety and hygiene concept was developed and approved by the health department of Münster.

DGH Exhibition Hall

This enabled the German Hand Surgeons and Therapists to meet in person but under strict covid19 regulations for the 60th annual Congress of the DGH and in combination with the 24th Congress of the German Association for Hand Therapy (DAHTH) from 8 - 10 October in Münster. The Congress program included sessions with technical tips for standard surgical procedures as well as very specialized subjects such as malignant tumors of the hand and forearm and hand disorders in the mentally disturbed patient including treatment of self-damage.

The traditional 'Get Together' on Thursday evening with light music, snacks and drinks was done "at a distance" which allowed networking and dialogue. A vaudeville theatre was the place to be on Friday night. With a three course menu and a fascinating and breathtaking acrobatic show one could almost forget about the challenges we all face in the light of corona.

Almost 600 participants were more than grateful for this unique opportunity to meet face-to-face and to exchange knowledge and scientific updates.

Due to the hygiene regulations and the discipline of all participants there were no infections reported during the weeks following the Congress. Although this meeting was certainly not comparable to the usual standard combined annual congress of the DGH and DAHTH the positive response of all participating parties justified the enormous effort of developing alternative concepts in difficult and complex circumstances.

DGH Lecture Hall

JÖRG VAN SCHOONHOVEN
Secretary General of the German Society for Hand Surgery (DGH)

ITALIAN SOCIETY FOR SURGERY OF THE HAND (SOCIETÀ ITALIANA DI CHIRURGIA DELLA MANO - SICM)

The Italian Society for the Surgery of the Hand, founded on 1962, consists of 12 Honorary Members, 440 Full registered members, and 50 young members. The majority of the Italian members are Orthopedic Surgeons, while Plastic Surgeons are a substantial minority.

The Society Secretariat is based at:
Ad Arte Srl
Via Giuseppe di Vittorio, 2
40057 Cadriano di Granarolo Emilia Bologna, Italy
Tel. + 39 051 19936160 Fax. +39 051 19936700
segreteria@sicm.it
Website: http://www.sicm.it

The Society Journal is "Chirurgia della Mano" and is the official Journal since 1963 (C.G. Edizioni Medico Scientifiche s.r.l.) http://www.cgems.it/Cgems-Prodotti-Elenco.asp?Categoria=21 It has now changed into a new digital format.

When Italy went into a total lockdown in March 2020 (to May) due to the pandemic, the "Guideline Committee" of SICM led by Andrea Atzei, an international webinar was held on Saturday 9 May 2020 entitled "Surgical management of hand surgery patients during the Covid-19 pandemic; challenges and best practice".

The collaborators were from Singapore (Andrew Chin), China (Bo Liu), Hong Kong (Margret Fox and Alex Choi), South Korea (Hyun-Joo Lee), United Kingdom (Chye Yew Ng) and Spain (Vicente Carratalà, Ferdinando Corrella, Pedro Delgado, Mirela Espulgas, Alex Luch). The Italian faculty was represented by the SICM President Luciano Cara, the past and the next Presidents, Bruno Battiston and Alberto Lazzerini and by Giancarlo Caruso, Franco Bassetto, Roberto Maggi,

Michele Riccio, Pietro Ruggeri, Pierluigi Tos and the SICM Guideline Committee.

This webinar shared the experience during phase 1 of the pandemic lockdown. This was educational to help deal with phase 2 which unfortunately came later.

The very popular webinar can be found at https://www.youtube.com/watch?v=Q-hrBh5zFrc&feature=emb_err_woyt

The Guidelines Committee then produced Guidelines for the phase 2 of the Covid19 pandemic for our members; guidelines and rules for pre-surgical, surgical and for outpatient visits.

The Guidelines are posted on our website: https://www.sicm.it/it/area-covid-19/linee-guida-sicm-per-la-fase-2-della-pandemia-covid-19.html

In 2020 all practical educational activities have been suspended and also the international fellowship of 2021 has been postponed to 2022; only the advanced microsurgery course was completed with great effort during 2020. This advanced course was a very important milestone for many young surgeons who spent more than 120 hours under the microscope.

https://www.youtube.com/watch?v=Q-hrBh5zFrc&feature=emb_err_woyt
The international webinar entitled "Surgical management of hand surgery patients during the Covid-19 pandemic; challenges and best practice" – 9 May 2020

Surgeons who completed the SICM–SIM Advanced Microsurgical Training in 2020 in Naples : Roberta Albanese, Giulio Botonico, Luigi Castiello, Enrico Cavalieri, Erich Fabbri, Diego Faccio, Francesca Fissore, Virginia Maria Formica, Pasquale Gravina, Sara Lea, Lucia Pannuto, Filippo Pantaleoni, with the Teachers Alessia Pagnotta, Marco Baronetti, Gabriele Molteni, Pierluigi Tos.

Participants at the "Anatomy and Surgery Cadaver Dissection Course" organized every year in Verona by SICM

In 2020 the Italian Society Congress in Ancona, Italy, under the presidency of Dr Michele Riccio was also cancelled due to Covid19, and postponed to October 2021.

However, instead of the actual Congress, SICM prepared a virtual congress with 9 sessions of one and a half hours each during the three days (1-3 October 2020). It was a very popular event. About 300 members attended the Congress. The SICM new e-learning channel will host all the congress reports which will be available to all members.

Throughout 2020 the SICM Board met in "virtual" mode.

SICM Council 2020-2021 – virtual Council meeting

The 14th Adanced Microsurgery Course held in Naples in 2019

Andrea Atzei, Riccardo Luchetti and Bruno Battiston, Nicola Felici organizers of the two advanced courses on wrist arthroscopy and thumb reconstruction of 2019.

SICM 57th Annual Congress held in Florence in 2019 - a group of Italo-Japanese friends.

Dr Emiko Hori and Dr Sandra Pfanner, president of the 2019 Congess, during the inaugural cerimony

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MEXICAN ASSOCIATION FOR SURGERY OF THE HAND (ASOCIACIÓN MEXICANA DE CIRUGÍA DE LA MANO)

HOW THE MEXICAN ASSOCIATION FOR THE SURGERY OF THE HAND DEALS WITH THE COVID19 PANDEMIC

The year 2020 was for everyone around the globe a year full of fear and depressing news. This new enemy of humanity, and the resulting pandemic taught us new things and new habits like the use of facemasks, social distancing, continuous hand hygiene, etc.

We had to learn how to communicate and educate using various virtual methods such as video calls for meetings and lectures and even virtual hands-on workshops, thanks to the internet.

Dr Juan Ramon Bonfil re-designed our monthly meeting to a virtual program. New members have to give their introductory lectures now virtually. He also started our YouTube channel where lectures by national and international faculty share hand topics.

These lectures are mostly in Spanish but some are in English. The lectures can be viewed on our YouTube cannel: “Asociación Mexicana de Cirugia de la Mano AC”

In October we celebrated “Pink-October”, our Breast Cancer Awareness Month. All our faculty for the virtual meetings were female surgeons, national and International.

“SURGERY BETWEEN FRIENDS”

In November 2020 in Guadalajara Mexico, Dr Francisco García Lira, one of our board members, organized an outreach hand surgery mission called “Surgery between friends”. He invited member surgeons and hand therapists from around the country to help economically disadvantaged people with hand pathologies. About 20 procedures were performed free of charge.

During this missions we presented lectures, discussed cases, different aproaches and techniques, as well as rehabilitation and splinting programs.
We are planning to continue this outreach program on a yearly basis.

NEW ZEALAND SOCIETY FOR SURGERY OF THE HAND

NEW ZEALAND'S RESPONSE TO COVID-19 AND THE EFFECT ON HAND SURGEONS

Like the rest of the world, New Zealand first became aware of the SARs-CoV-2 infection in late January 2020. Travel restrictions from mainland China were instituted by the New Zealand Government on 2 February 2020. The first imported case of Covid19 was identified on 12 February followed by a second case on 16 February. Local community spread became evident on 29 February which led to further extensions of travel bans involving Iran and South Korea. The number of reported cases began to escalate from 8 March 2020 and New Zealand overseas travellers were advised to return home.

The DHBs (public hospitals) cancelled all overseas leave and as a resulted the majority of New Zealand Hand and Upper Limb Surgeons were unable to attend the 12th APFSSH/ 8th APFSHT conference in Melbourne, Australia, in mid-March. Within a week the daily new cases had risen from 7 to over 50. New Zealand entered alert level 1 on 22 March with the population being asked to develop house hold bubbles, work from home and restrict gathering to 10 or less people.

The active number of cases peaked on the 23 March with 92 new active cases and in response the Government raised the alert level from 1 to 4 within 5 days. Like the rest of the world, only essential businesses were allowed to operate. Strict physical distancing restrictions were imposed with the majority of the population being isolated to home. All elective and non-urgent surgery was cancelled and telehealth consultations were encouraged.

By 19 April, non-pharmaceutical interventions including early closure of the border, rapid institution of alert level 4, increasing testing, improved tracking of contacts, use of hand sanitising, abiding with family bubbles and in particular the support from the New Zealand population, community viral spread largely became controlled. The alert level was reduced to level 3 on 28 April and by 10 May there were no further reported new community cases. During this period 1503 cases of Covid19 were detected. New Zealand Health Services remained unstressed with 95 patients requiring hospital admission and only 22 dying.

New Zealand travel borders remain largely closed to overseas visitors, with returning New Zealanders having to undergo a mandatory 14 day isolation period in a designated Isolation Hotel. Despite a community outbreak in Auckland in late August and early September which resulted in a rising of the alert level 1 to 3 for a few weeks in Auckland, both public and private hand surgery practices have been operating normally since 28 April 2020. The pandemic has however resulted in a change in work practice with consultations, work meetings, conferences and other educational meetings being conducted through virtual video/telecommunications.

New Zealand is still enjoying a "Honeymoon Period", but with on average 50 active Covid19 cases being managed in isolation facilities, a million New Zealanders are still waiting to return home. The emergence of more virulent strains and further community outbreak remains possible.

TIM TASMAN-JONES
Hand and Upper Limb Surgeon
President of the New Zealand Society for Surgery of the Hand

DUTCH SOCIETY FOR SURGERY OF THE HAND

THE NETHERLANDS

On the 21 November the Dutch Society for Surgery of the Hand organised its first online congress. Due to the Covid19 pandemic the spring symposium had to be cancelled, including the general assembly. Therefore, the Autumn congress had to be preceded with a general assembly.

There are many options to organize an online environment for such an event. We chose a broadcast option. A congress-center was equipped as a studio from where the congress was broadcasted to all the participants in a secure web-based environment. (Fig. 1). The first hour was scheduled for the general assembly. With an online voting system the members could express their votes. Moreover, the FESSH Secretary General Daniel Herren inspired the members with a lecture about FESSH, its possibilities, ambitions and future. After a short break, the symposium took off. The title of the congress was 'Tips and Tricks in Hand Surgery'. Topics such as scaphoid fractures, ICHOM, ulnar shortening, 'never' surgeries, and 3D guided corrective osteotomies were addressed.

All speakers but one presented from their homes with their own computers. Before the start of the talk they were positioned in an online waiting room. The week before, this procedure was tested to enable smooth transitions between the speakers. However, we have learned that sometimes the internet connection was a little unstable. Therefore, next time we would prefer to tape the presentations in advance and broadcast the presentations. Questions and answers would be live.

An opinion was expressed beforehand that an online congress should not take the whole day because this might be too exhausting for the participants. Therefore, the congress ended at 13.00. Our Society is supported by sponsors. Therefore, virtual booths were created where sponsors could talk in person with the attending surgeons. Also, in between talks short videos covering surgical products were displayed.

In total 139 members of the Dutch Society for Surgery of the Hand participated and we look back on a very

successful and inspiring online congress.

NIELS (N.W.L.) SCHEP
Board Member of the Dutch Society for Surgery of the Hand
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AMERICAN SOCIETY FOR SURGERY OF THE HAND (ASSH)

ASSH TOUCHING HANDS OUTREACH

Before Covid19, Touching Hands of the American Society for Surgery of the Hand was busy sharing knowledge and doing surgery with local surgeons in many countries. The team leaders and their countries were Kevin Little (India), Dana LaVanture (Chad), Dan Zlotolow (Cuba), William Slikker (Viet Nam), Neil Ford Jones (Cambodia), Tony Smith (Ecuador), Lindley Wall (St Vincent), Fraser Leversedge (Honduras), Scott Kozin (Ethiopia and Guatemala), Jim Chang (Bolivia), Jeff Gelfand (Haiti), and Purcell Traverso (Trinidad & Tobago).
Just before Covid19, I spent 2 wonderful days with 75 surgeons and trainees from all over Kenya in a WALANT workshop in Nairobi funded by the IFSSH. As a result of this, WALANT rooms have started in 4 sites, making hand surgery (and training) accessible where it was not before in Thika, Kijabe, Machakos, and Mwala.

Kenyan surgeons plan to open WALANT facilities in 24 other COSECSA institutions in Kenya. In order to help facilitate this, the IFSSH is funding a second WALANT workshop in Kenya 28 and 29 January 2021 with a large virtual component with lectures from Canada, the USA and Malaysia.
In the middle of Covid19, Touching Hands ASSH also helped start Ghanaian plastic and orthopedic surgeons accredit the first West African hand surgery fellowship training program in Ghana in collaboration with AAHS and IFSSH.

FREE TOUCHING HANDS WEBINARS ON TENDON TRANSFERS, BURN RECONSTRUCTION AND LOCAL FLAPS

Then Covid19 hit. All international outreach trips ceased March 2020. We adapted by pivoting to online learning with 5 Touching Hands outreach webinars which attracted an average of 300+ surgeons from over 60 countries and thousands of downloads from the Touching Hands website. The titles of the free webinars available to all are: (1) Details of How to Do Successful Tendon Transfers", (2) Practical Details that Make Tendon and Nerve Transfers Successful, (3) Correction of Burn Contracture – Practical Tips, (4) Practical Tips for Successful Pedicle Flap Reconstruction of the Upper Extremity coming Jan 30, 2021 and (5) How to Achieve Predictable success in Workhorse Microsurgical Free Flaps coming 13 March 2021. These great webinars featuring all stars like Dr Raja Sabapathy are all available for free download and viewing at the Touching Hands website https://www.assh.org/touchinghands/s/webinars

FREE HAND SURGERY EDUCATION WITH HAND.E

On the same Touching Hands website page link above, you will find a link to free registration to Hand.e. This is ASSH's free repository of videos, lectures and all kinds of other great digital hand surgery education available to all of us. Just sign in and learn!

CONSIDER CONTRIBUTING TO TOUCHING HANDS AND IFSSH OUTREACH

Outreach is not for everyone. However, we all can contribute if we choose to. Your contributions to IFSSH and organizations like Touching Hands of the ASSH can help spread better hand surgery throughout the world.

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Extreme Thumb Losses: Reconstructive Strategies

'PLASTIC AND RECONSTRUCTIVE SURGERY' SEPTEMBER 2019, VOLUME 144, NO 3, P665-677

1. What were your main reasons for writing this article?

Reconstruction of a proximal amputated thumb is quite an endeavor, full of traps and technical difficulties. Based on our experience of more than 500 toe-transfers I have developed techniques and tips that may help others to go ahead and give patients better options.

Proximal thumb amputations are rare, even in busy centers, yet they are on their own devastating for hand function. The issue is further complicated because the norm is that there are often associated injuries. The literature recommends pollicization as the first-choice procedure, but my experience and beliefs were different. On one side, patients much preferred to have five digits rather than four. Furthermore, rarely in my protected work-related environment would a patient return to work after a pollicization. In other words, patients were both unhappy and unfit to work by current standards. Thus, adding to, rather than removing from the damaged hand seemed the way to go.

The use of toes in proximal amputations was limited to a few reports using the second toe. In my view the second toe was too slender to provide a thumb. I shared and still go along with Dr Buncke's aphorism: "Great toes make great thumbs". The problem was that to restore the missing length in proximal amputated thumbs with a hallux, the first MTP joint and a part of the first metatarsal were also required. This created unacceptable donor site morbidity.

About 20 years ago we circumvented this problem by the so-called Switching-Two-Toe-Transfer (STTT) (a variation of the original Foucher's technique) with the advantages of providing a "great-thumb" of any length and with a limited donor site sequela.

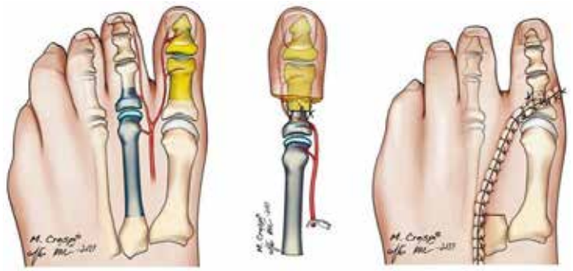

Fig. 1. The Switching-Two-Toe-Transfer procedure permits reconstruction of any length of missing thumb with a very benign donor site. Note that the MTP of the second toe is kept in its anatomic orientation and not rotated 180º as recommended in the literature; doing otherwise results in sideways instability.

2. What are the most interesting/important results and conclusions of your article?

To achieve a functional thumb, the hallux in itself is not enough. Indeed, a supple web is paramount for grasping large objects and for pinching small ones. In proximal amputations, the web is always missing. The surgeon should therefore provide a pliable web - the best thumb will not move if the web is unyielding.

By the same token, the most mobile neo-thumb will Z-collapse unless each joint is effectively stabilized by appropriate muscles. We have seen that by doing the reconstruction soon after trauma (ideally no later than 3 weeks) the remnants of the thenar muscles can still provide a good function. In late reconstructions, however, the surgeon will have to resort to tendon transfers.

Unfortunately, in proximal thumb amputations there is a dearth of resources, because of concomitant injuries, and the surgeon would have to make up for this by doing an arthrodesis, thus losing motion capabilities. We have seen that delaying the reconstructions makes tendon transfers or arthrodesis inevitable. Thus, I have to stress again the importance of early reconstructions.

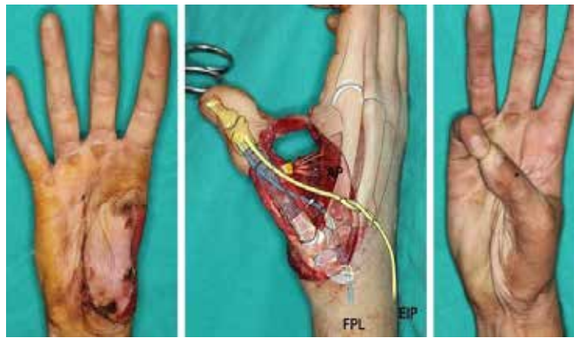

Fig. 2: The use of the STTT in a case of missing thumb at the base of the proximal metacarpal. The reconstruction was carried out in the subacute period, thus some of the intrinsic muscles could be used, providing a stable thumb.

3. What should all hand surgeons (and /or hand therapists) reading your article understand about the findings of your research?

The most important message I wanted to convey was that proximal thumb amputations benefit enormously from reconstruction with great toes. However, the neo-thumb is but a part of the picture: a pliable web and powerful muscles to move the thumb are also needed.

The second, is that to get the most out of what was left after the traumatic event, proximal amputations should be managed like pseudo-emergencies, as otherwise the need for tendon transfers and arthrodesis skyrockets.

Here I should add a word of caution. Despite my strong advice to pursue reconstruction, this should not be taken lightly. The degree of difficulty is enormous and the loss of a toe a tragedy.

Furthermore, a profound understanding of classic hand surgery (hand biomechanics, tendon transfer in tetraplegia and combined palsies) is vital, as patients have severe concomitant injuries in the hand, and available tendons to motorize the thumb are a luxury.

Fig 3. In this case of amputation at the trapezoid level, in a single-stage the thumb was reconstructed and the patient was able to pinch 9 weeks after the reconstruction.

4. Will you be conducting further research/ publishing further work on this topic? If so, what will it entail?

At this moment my main interest is to understand the mechanics of pain, how to prevent it and how to treat it....and to debunk the current notion of CRPS as an untreatable entity.

Regarding the thumb, my main interest is for very proximal amputations and I am currently gathering more cases and looking at ways to solve problems. I am particularly interested in replacing the CMC joint by using the second metatarsophalangeal vascularized joint.

5. Since submitting your article, have any new insights, ideas or practical tips come to mind?

The problem of a paper in any high impact journal is that the information you can give is quite constrained: in length and also in structure. I have been lucky enough to be invited to write the Thumb chapter for Green's 8th edition where there are no such limitations. I think we should move forward to try to restore even the more proximal amputations, but in any reconstruction, it is not just microsurgery at stake, but the surgeon needs to understand and master classic hand surgery as well.

As proximal injuries are often combined injuries, a plan needs to be laid down so that the patient understands the steps that will be taken and why. Patient participation eases the sufferance associated with these devastating injuries and increases cooperation.

Take home message: it is feasible to obtain a powerful thumb with a great toe transfer even in the most proximal amputations, and done reasonably soon after injury.

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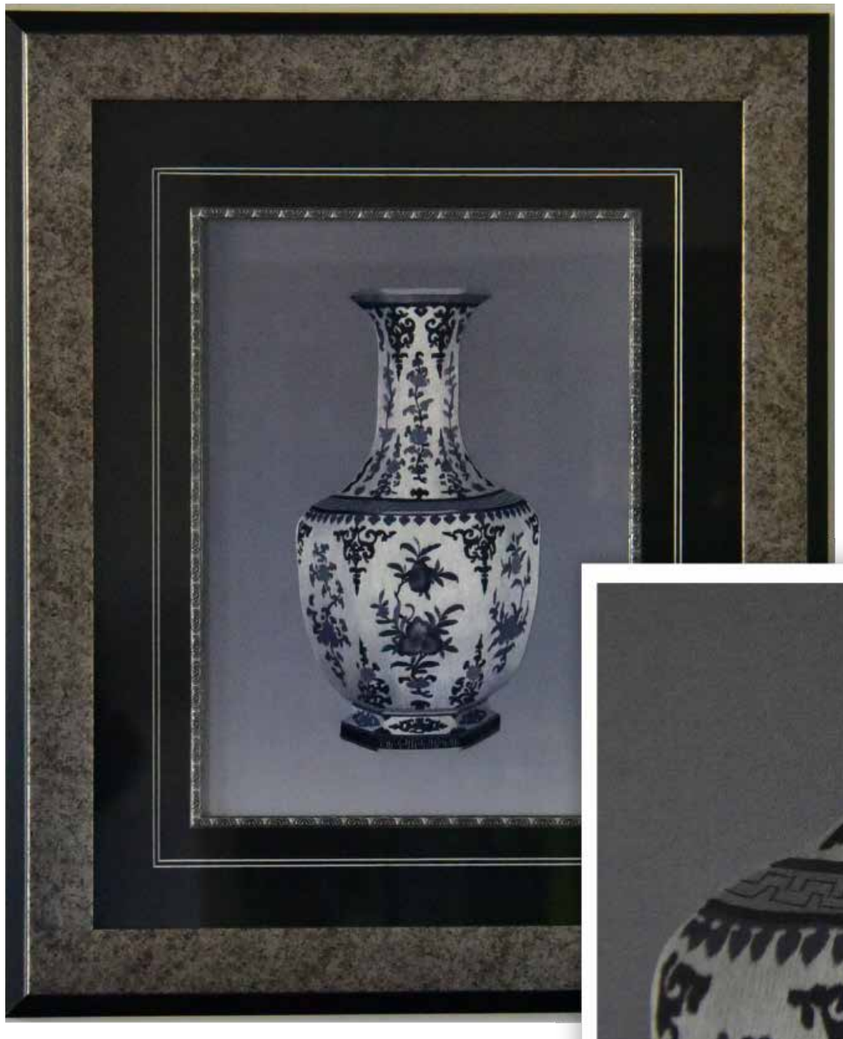
Embroidery with silk threads



The artist (unknown) skilfully used the threads of different black, grey and white shades creating a 3-D effect.

The diameter of the threads are similar to surgical 3/0 - 4/0 size.

From the Collection of Jin Bo Tang

Editor:
"Surgery is also an art. Let every cut and stitch count, and be better than the previous one".

How South Korea face the great challenge of the Covid19 pandemic crisis.

The Covid19 and South Korea's response

The first Covid19 case in the world was reported in December 2019. Approximately 82 million cases have so far been infected, and 1.8 million people have died due to complications related to the Covid19 worldwide as of 3 January 2021 [1,2]. As a result, routine life activities have been interrupted, and the Olympics Games was postponed. Also, many people lost members of their families, friends, and neighbours.

The spread of the Covid19 was no exception in South Korea. People in South Korea were exposed to Covid19 at a relatively early stage due to the geographic location, and the first confirmed case was found on 20 January 2020 [3]. Fortunately, the initial response strategy for infectious diseases was well-designed in South Korea because of previous experience with SARS (severe acute respiratory syndrome) in 2003 and MERS (Middle East respiratory syndrome) in 2012. The initial responses to the COVID-19 were quick and effective. The South Korean government conducted proactive testing and close contact tracing. Asymptomatic and mild patients were quarantined in community treatment centers (Fig. 1-a), while severely ill patients were treated in hospitals. The government implemented staged social distancing and lockdown according to the number of infected people. Korean people have complied well with the government's instructions and have worn masks voluntarily. With the government's quick response and people's voluntary efforts, South Korea has effectively minimized the spread of Covid19. As of 3 January 2021, there were 62,593 cumulative confirmed cases, 1,220 confirmed cases per million, and 942 cumulative deaths with a mortality rate of 1.5% in South Korea [1-4].

South Korea has experienced three waves of the Covid19 pandemic. The first wave occurred in February 2019, centering on a religious facility in the City of Daegu. The South Korean government declared an emergency in the City of Daegu, and medical staff from all over the country voluntarily headed to the City of Daegu. As a result, the situation was stabilized after about 7,000 confirmed cases occurred in about two months in Daegu [3].

The second wave occurred in August 2020 in the City of Seoul and other adjacent metropolitan areas. The second wave of the pandemic spread rapidly due to people's movement during the holiday season, parties by young people, and widespread infection through religious activities. The pandemic's second wave has lasted for a month and a half, resulting in approximately 9,000 confirmed patients [3]. After the second wave of the pandemic, Seoul and other adjacent metropolitan areas maintained a stagnant infection rate of 200-300 confirmed patients per day. The third wave took place in December 2020 in Seoul and other adjacent metropolitan areas again. People's social distancing was loosened due to the fatigue, related to the long-term social restrictions. Also, indoor activities increased due to the drop in temperature, and year-end parties. In December 2020, the number of newly confirmed cases increased markedly, reaching an average of 900 cases per day [3]. The third wave of the pandemic continues as of January 2021, and the South Korean government is facing a new crisis. The government presently hastens the vaccination program, builds additional medical facilities, and makes more sophisticated patient triages. However, the result of such efforts is not yet apparent.

Medical staff in South Korea is at the frontline in the fight against the Covid19 crisis. In the early days of this pandemic, medical staff has proposed several different ideas to protect themselves and effectively locate Covid19 patients. Drive-through and glove-in-wall screening methods were implemented in South Korea for the first time in the world (Fig. 1-b) [5].

Figure. 1 South Korea's responses to the COVID19 crisis. (a) Interior of community treatment centers (b) Glove-wall screening equipment (c) Outpatient clinic using mask and glass walls (d) Smartphone application for self-quarantine [6]

We are actively involved in government epidemiological investigations outside of hospitals to determine the path of a confirmed infected person, to identify the persons who have been in contact, and to determine the need to isolate these persons. The South Korean government has provided two separate medical services to effectively cope with the Covid19 virus while not compromising general medical care quality. National hospitals have been converted to Covid19-only hospitals to respond to infected patients with severe symptoms, while the private hospitals mainly treat non-Covid19 patients. This dual system has effectively managed the Covid19 before the third wave of the pandemic. However, the surge of many new patients during the third wave of the pandemic has necessitated private hospitals to also admit Covid19 patients. The current capacity of all medical facilities has nearly reached the limit.

The life of Korean hand surgeons, and the author's personal experience

Covid19 has an impact on hand surgeons in South Korea too. As patients were reluctant to visit hospitals due to concerns about contracting the Covid19 virus, elective surgeries were reduced. Also, fewer trauma surgeries were done due to the reduced outdoor activities. Compared to last year, the average number of patients per month in South Korea for carpal tunnel syndrome decreased from 35,404 to 31,829 and from 40,179 to 35,055 for distal radius fractures [7]. The risk of Covid19 infection puts stress on hand surgeons. In outpatient clinics, hand surgeons use protection measures by wearing personal protective equipment, such as masks, goggles and glass walls (Fig 1-c). If only a simple follow-up is needed, telemedicine is used rather than face-to-face contact. During a patient's first visit to an emergency room and hospitalization for elective surgery, an antigen test for the Covid19 is routinely performed to prevent infection in a hospital. The medical staff has minimized external meetings and use online conferences. Due to these efforts, there are no reports of Covid19 infections spreading through hand clinics in South Korea.

I'm a hand surgeon in a university-run, municipal hospital. Our hospital is equipped with negative pressure isolation wards and operating rooms for Covid19 patients. Internal medicine physicians mainly manage Covid19 inpatients, and we provide consultations when they have hand-related symptoms. I also work at the Covid19 screening clinics and community treatment centers about six times a month. Community treatment centers are facilities that quarantine Covid19 patients with mild symptoms for about 10 to 14 days from the onset date, and then they return to their homes when infectiousness declines. My job is to monitor the patient's condition and provide counselling and prescription through telemedicine. The essential tips for medical staff when caring for Covid19 patients are not only for medical support, but also to make the patients not feel guilty for their infection. Sometimes people think that infected individuals are careless, unsanitary, and unconscionable. However, the patients whom I met at community treatment centers were just ordinary people. Medical staff also deals with debunking the social stigma of recovered patients.

I have been in self-quarantine after contacting a confirmed patient. In South Korea, if an epidemiological investigation reveals that a person is in close contact with a confirmed patient, the person must self-quarantined for two weeks to check for infection. The quarantined person is forbidden to meet anyone during self-quarantine and must not leave the designated location because of the risk of spreading the virus. The self-quarantined person must install a special smartphone application for checking Covid19-related symptoms and real-time location tracking (Fig. 1-d). I was self-isolated at home for two weeks, starting on 11 December 2020, when my inpatient tested positive for the Covid19. I could not see my family, and I was completely alone

during the two-week quarantine period. I tried to comfort myself by thinking of self-quarantine as a small escape from a busy life, but isolation, being monitored, and worry about infection were never enjoyable. My quarantine was lifted after testing negative and without infection on 25 December 2020, and then I had dinner with my family. It was a special Christmas because I realized that family, health, and freedom are real gifts from God (Fig. 2).

Fig. 2 Christmas ceremony with family after self-quarantine

Great challenges which ordinary people rise to meet Covid19 Crisis

Despite the difficult situation of the third wave of the pandemic, all people in South Korea are working calmly to overcome Covid19.

American General William Frederick Halsey, Jr. said: "There are no great people in this world, only great challenges which ordinary people rise to meet."

I think this speaks well of our response to the Covid19 crisis. Only a small number of great people do not carry out the war against the Covid19. Everyone in a country, including hand surgeons, should take care of other people, and do their part where-ever they are, to stop the virus. The world, including Korea, should fight together to overcome the Covid19, and I believe there will be victory at the end. Hopefully, that victory will come sooner rather than later.

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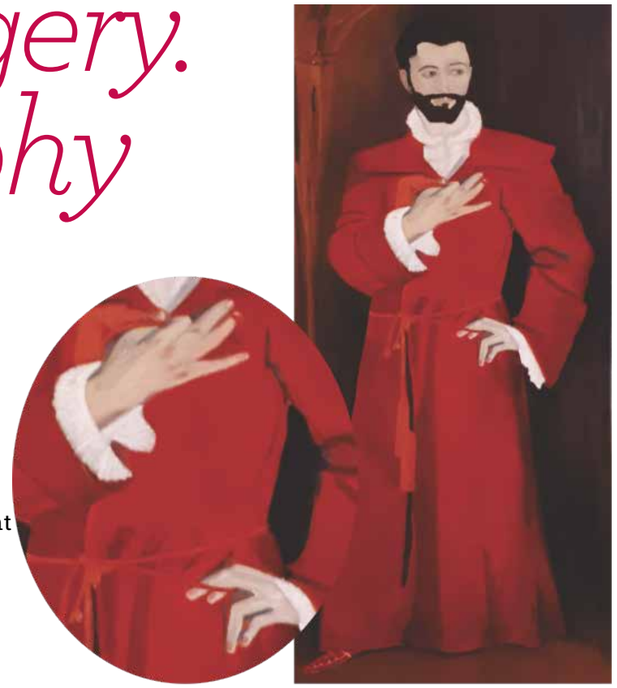
Hand Surgery. A philosophy

In this approach to hand surgery, I will present principles of assessment and management. The philosophy emanating from these principles relies on a precise employment of our learning, which I explain in the following paragraphs.

What is hand surgery? For me, it is the management of hand injuries and conditions which involve any one or all tissues of the hand and the structures in the upper limb which control hand function. Therefore, the hand surgeon must be able to deal with disorders of the skin and its contents, as an orthopaedic surgeon, a plastic surgeon, a vascular surgeon and a neurosurgeon.

Some will ask where the hand begins and ends. The answer depends upon the training and expertise of the surgeon or surgeons undertaking treatment. At the Department of Hand Surgery at the Royal North Shore Hospital in Sydney, fractures of the distal radius fall within the domain of hand surgery. Fractures proximal to the distal radius are treated by orthopaedic surgeons. All hand fractures and joint ligament injuries of wrist and hand are treated by the hand surgeon, as are disruptions of the skin, underlying soft tissues, vessels and nerves. Tendon, vessel and nerve injuries and disorders within the upper limb, involving structures which affect the hand, are treated by the hand surgeon, including the nerves of the brachial plexus. However, in a hospital with a plastic surgery-staffed State referral Burns Unit, hand burns excepting those of an electrical nature are properly treated by plastic surgeons who work in that unit.



Artist: Michael Tonkin (Dr Samuel Pozzi - oil on canvas)

Figure 1. The hands of Dr Pozzi. Tonkin M. after John Singer Sargent's painting 'Dr Pozzi at home' (1885).

The first principle of surgery of the hand is that an intimate knowledge of the anatomy of the hand is necessary for those wishing to practise in this field. My own introduction to hand surgery began with a fascination with the intricate anatomy of the hand. Perhaps all medicine begins with an understanding of anatomy. That of the hand is delicate, combining form and function in a unique manner which differs from other parts of the body.

The hands shown in the painting depicted in Figure 1, demonstrate an elegance of form with different positioning of the joints of each digit, giving suggestion of a dexterity of movement. Power is not obvious but is implied. Sensitivity is paramount. The hands are those of a Parisian gynaecologist of Italian heritage, Dr Samuel Pozzi, who, near the turn of the century during the time that became known as 'the belle epoque', was elevated to the first Chair of Gynaecology in France (1).

Many surgeons who have developed an interest in the anatomy and surgery of the hand have applied the art of drawing to their surgical field. Zancolli is one who has expressed his understanding of hand anatomy through drawings (Figure 2). The diagram is also an important accompaniment of a description of a hand injury and its surgical treatment. It depicts a clarity of findings and procedures that may be lost to a reader of words.

The second principle emphasises the importance of history and examination in the assessment of hand conditions. The above-mentioned Dr Pozzi, in his inaugural lecture in the amphitheatre of the Broca Hospital in Paris, at the time of the establishment of the Chair in Gynaecology, referred to the role of surgery in his field. He warned against the 'furor operativus': the rage to operate. 'I would like to teach the young doctors who will train at this clinic how to examine the sick so as not to scare them, how to examine them without needlessly wounding their modesty, and how to talk to them in words which, according to the occasion, might need to be indulgent or severe, but without either over familiarity or harshness' (1). No better words have been written in the support of a gentle questioning and a systematic and thorough examination of person and part before deciding upon a treatment plan.

In hand surgery, the process passes from the history obtained employing the advice of Pozzi to a detailed observation of form and characteristics of both hands and unassisted active movement of all joints of both upper limbs -demonstrating these movements with one's own limbs is effective- before any touch by the examiner is considered. Don't touch! Sit on your own hands, if necessary. First listen, and then look.

Only then may the examiner proceed to demonstrate assisted passive movement beyond active range of motion of relevant joints, movement strength against resistance, followed by gentle, tactile investigation of areas of tenderness and, finally, provocative tests. Testing of sensibility may be the first or last activities of touch, depending on the amount of pain induced by the examination.

A radiological examination remains the mainstay of investigations. Three views of the involved part are often necessary; comparison with the opposite, unaffected hand may be appropriate; specific dynamic views, as for a dynamic scapholunate dissociation, probably should await the findings of the preliminary radiology but circumstances may alter this advice. It is respectful and courteous to provide a pertinent history with the request for radiological examination.

> "The first principle of surgery of the hand is an intimate knowledge of the anatomy....."

We have many other investigations available to us. These are recommended according to need. Some investigations deserve further words in this short review. Ultrasonography, performed by well-trained hands and eyes, remains a helpful, non-invasive procedure. Magnetic Resonance Imaging (MRI) is a valuable investigation. The aim is to align any abnormal MRI findings with the symptoms and signs found following history-taking and examination, not to embark on treatment of incidental, non-relevant MRI findings.

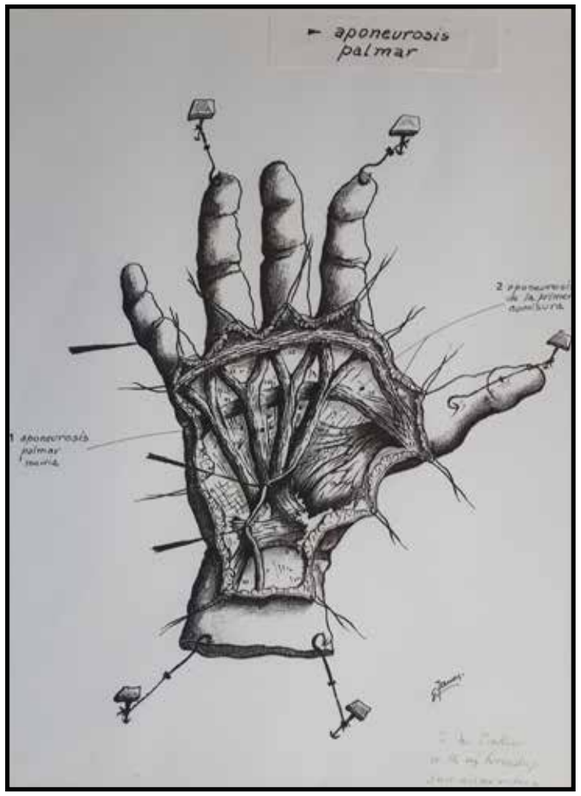


Figure 2. The palmar aponeurosis. Zancolli EA.

Far better to listen to the history and conduct a physical examination before reading an MRI report.

The third principle is the determination to restore normal anatomy to a hand affected by injury or disease. All damaged anatomical structures should be repaired or reconstructed where possible. This adage is not restricted to the teachings of Kleinert and colleagues in Louisville, Kentucky, but this is where I was introduced to the concept as an absolute principle. Both digital arteries should be repaired in a vascular digital injury. Both flexor tendons should be repaired following division. Of course, there are circumstances when it is appropriate to compromise this principle. It is beyond the scope of this article to detail these. However, the principle remains valid.

The assessment of results following surgery, indeed the natural history of many conditions without treatment, demand the ability to measure objective and subjective parameters. In the current day, we are advised that the patient's opinion is all important. Of course, it is. However, we must guard against abrogation of our responsibility to measure objective outcomes. Subjective opinions of patient, parent or carer, and medical or paramedic medical staff are vital. All may reflect flaws in judgement. Objective measurements may not necessarily provide a precise and correct picture of outcome. Nevertheless, they tend to remove the prejudices of interested parties. One example of the worth of application of objective measurement is the introduction of the Mende score (unpublished data) to describe the clinical status of the hypoplastic thumb. Without such a scoring system, it becomes apparent that the ability to detail both pre-operative and post- operative status of the thumb in the hand of a young child is overwhelmingly difficult. This difficulty must not inhibit the effort.

The search for verification of treatments and assessment outcomes through evidence-based medicine may or may not arrive at a valid conclusion. The lack of proof of efficacy does not indicate that the opposite alternative is valid. Further, a statistically significant difference may not equate with a clinically relevant difference. A word of warning: if the objective test or score does not align with the level of function apparent in front of one's eyes, question the test. Most surgeons, indeed, most doctors must employ a 'common sense' in assessing clinical status. In the absence of evidence-based information or when this is inconclusive, as it so often is, this 'common sense' relies on medical knowledge gained from our teaching and reading, our experience and that of others. 'You need to read more, Tonkin' was a common admonishment from one of my professors. The application of the principles of assessment and management are utilized, both for decision-

making and for an interpretation of outcomes after treatment. This should not be ignored in the pursuit of evidence-based information.

Finally, some words on hand surgery training. This varies from country to country. Medical services in Australia must be matched to the realities of geography and population spread, which demand the availability of generalists with diverse training within specialties. However, most Australians live in relatively large cities. Although independent, dedicated hand surgery departments are uncommon, sophisticated services are provided by well-trained surgeons in plastic surgery and orthopaedic surgery units in all major centres. These surgeons train in one or the other specialty for a minimum of five years, receiving whatever hand surgery training is available in these programmes on an ad hoc basis. Recently, the Royal Australasian College of Surgeons has introduced a non-compulsory training programme in hand surgery of 18 months to 2 years duration, conducted by the Australian Hand Surgery Society, after completion of orthopaedic or plastic surgery training. This is a long haul and there is some logic in shortening the surgical training period from its current seven years and replacing it with a more intensive hand surgery programme as present in Singapore and Switzerland, whilst continuing to provide some hand surgery training for those who will become generalists. There seems little to gain from the teaching of lower limb joint replacement or breast reconstruction surgery to those determined to practise hand surgery alone. In fact, this deprives those who intend to work in these fields.

Hand injuries and conditions involve the skin and its contents. This demands the expertise taught within all four specialties referred to at the beginning of this article. A concentrated and extensive training is required if one is to reach the teaching precision of a Graham Lister, the best didactic teacher I have encountered, a precision which is combined with a flexibility and a fertility of mind, both of which are based on knowledge, not whim.

Two recent writings are illustrative. The first defines the precision of terminology for the digits of the hand, thumb and fingers (2). Names, not numbers are preferred. A judge has great difficulty with identification of the 'first bone of the second finger' when one is referring to the 'proximal phalanx of the long finger (or middle digit)'. However, a certain flexibility (and fertility) of mind helps to manage contradictions. There is no word for 'digit' in those languages based on Chinese characters. Asians refer to five fingers, of which one is the 'thumb finger'. To help Asian authors in their speaking and writing of English, a simple sentence in English is of benefit: 'One hand has five digits, that is, one thumb and four fingers.' Reference to the fingers in a hand following pollicization of the index finger also benefits from some agility of mind.

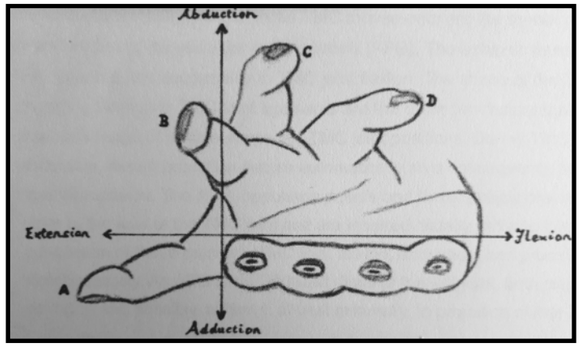


Figure 3. Thumb movements in circumduction. Tonkin M. Reprinted from J Hand Surg Eur.

The second example concerns the Kapandji score for opposition. (3). Palmar abduction, pronation and flexion of the carpometacarpal joint are the main components of opposition (Figure 3). It has been pointed out, correctly, that opposition as defined by palmar abduction and pronation does not increase from position 6 (anterior thumb tip or pulp to the little finger anterior tip or pulp) to position 10

(anterior thumb tip to the distal palmar crease in the line of the little finger). The system seems to suggest that the greater the score, the greater the amount of opposition. In fairness to Adalbert Kapandji, he acknowledged with some emphasis that attainment of position 10 could be achieved through crawling of the thumb across the palm, not an opposition movement, and that higher numbered opposition positions could only follow the satisfactory attainment of all preceding positions. However, perhaps it is better to consider the Kapandji numbers as an ability to achieve opposition of the thumb when it and the other digits are in certain positions. That is, the score is a measure of function rather than an indication of increasing opposition. Position 10, for instance, demands a combination of three thumb movements, carpometacarpal opposition, interphalangeal and metacarpophalangeal flexion. Without all three, the position cannot be correctly achieved. Opposition to the tips of the digits also relies on some movement of joints other than the carpometacarpal joint of the thumb.

Both examples illustrate a blending of precision and ingenuity which are dependent upon the principles referred to throughout this article.

MICHAEL TONKIN
Emeritus Professor of Hand Surgery
Past President: IFSSH

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Art Exibit # 14

Bottle Cap Opener - metal

2022 IFSSH-IFSHT Congress, London UK

Preparations for the 2022 IFSSH-IFSHT congress in London are continuing, despite the current global problems. Hopefully by then the effects of vaccination will have taken effect and this terrible catastrophe will be behind us....

Date: 6 – 10 June 2022

Venue: The ExCeL Centre https://www.excel.london, situated in London Docklands, is a huge, versatile venue, with enough space to accommodate 4000 delegates, or more if necessary. It can provide a vast central space for industry. Accommodation for delegates in the vicinity of ExCeL is plentiful. If delegates decide that they would prefer to stay in central London, then transport options from the centre to ExCeL are good. The river boats departing from major London piers every 20 minutes offer a particularly scenic route https://www.thamesclippers.com/route-time-table.

Programme: The programme committee, led by Jonathan Hobby and co-chaired by Wee Lam, is meeting regularly and the structure of the programme is being finalised. We can promise a diverse range of topics and symposia with the best speakers in the World.

Instructional Course & Book: There will be a core series of plenary instructional lectures, the topic for which is Tendon Disorders of the Hand and Wrist. There will be an accompanying book, edited by Grey Giddins, Dean Boyce and David Shewring, which will be included in the registration fee for surgeons.

FESSH: After the successful meeting in Berlin and with the Congress being held for a consecutive time in Europe, there will be an inevitable impact on FESSH. This Congress will therefore be a combined meeting with FESSH XXVII. We will be providing facilities for all of the requirements of FESSH, including the EBHS Diploma examination.

Gala Dinner: We have inspected the Old Billingsgate Market which seems an ideal site for this. Maximum seating is 1800. There is a terrace overlooking the river with Tower Bridge, HMS Belfast and the "Shard" dominating the skyline. For people who want to have a pre-dinner wander it is in a great position for both North and South of the river.

We look forward to welcoming you to London in 2022 for a truly unmissable and memorable event!

David Shewring
Chair, Organising Committee IFSSH & IFSHT 2022
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