August 2017

www.ifssh.info VOLUME 7 | ISSUE 3 | NUMBER 27 | AUGUST 2017

ezine ifssh

CONNECTING OUR GLOBAL HAND SURGERY FAMILY

IFSSH
SCIENTIFIC COMMITTEE
ON CARPAL INSTABILITY - PART II

HAND THERAPY
CHALLENGES IN MANAGING SCARS
ON PAEDIATRIC BURNT HANDS

The sensational hand & the plastic brain

PEARLS AND PITFALLS OF THE VOLAR LOCKING PLATING FOR DISTAL RADIUS FRACTURES

MEMBER SOCIETY UPDATES
UPCOMING EVENTS

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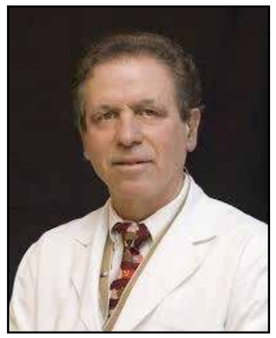
Jesse Jupiter, MD



October 24 to 28, 2016 saw the 13th Congress of the International Federation of Societies for Surgery of the Hand and the 10th Congress of International Federation of Societies for Hand Therapy meetings being held in Buenos Aires, Argentina. Nearly 2000 surgeons from over 50 countries attended. The organizing committee chaired by Eduardo Zancolli II created an extraordinarily diverse and comprehensive program.

Even at a casual glance at the subjects covered and the renowned speakers who populated the 48 symposia, courses, round tables and debates, one realizes that the decided potential of such an international congress centers on the ability to attract these experts who are eminently qualified to cover the breadth of hand and upper limb surgery.

The subjects extended from brachial plexus, nerve transfers, traumatic and reconstructive problems of the wrist, tendons, soft tissue, small joints, congenital, just to list a few. Freed from the burdens of the ever-increasing requirements for publication in our English language journals, which prove especially burdensome to many international surgeons, the 13th Congress presented a format for the participant to gain insight into years of surgical experience, novel concepts, surgical tips and tricks, and a chance for exchange of ideas as audience interaction was a feature of nearly all of the clinical courses.

Because of the changing dynamics of the health care landscape in the United States, we find our meetings and journal articles also presenting cost analysis, value propositions of what we do, outcome measures, and now how we as surgeons will be evaluated by our peers and government providers. It was actually a breath of fresh air to be able to listen and learn for 4 days on all of the clinical issues that stimulated all of us to pursue our careers in hand and upper limb.

Lastly, a meeting such as this is fun and provides enormous opportunities to make new friendships as well as reacquaint ourselves with international colleagues. One of the social highlights of the meeting was the banquet that ended with 2 hours of disco dancing and brought back memories from when the American Society for Surgery of the Hand also had a banquet with dancing at the last day of the meeting. It would be wonderful to return to these social interactions at our own meetings.

The above Editorial was published in "Techniques in Hand & Upper Extremity Surgery" 21(1):1, March 2017. We felt it reflected the general consensus of the Delegates to the last IFSSH and IFSHT Congresses in Buenos Aires, Argentina, and with permission of the Editor, we are happy to re-publish it in the IFSSH Ezine.

Letter to Colleagues

Dear Colleague:

As you know, congenital hand and upper limb malformations (CHULM) are complex conditions that profoundly influence patients' health-related quality of life. However, there is scarce information regarding outcomes during the follow-up of CHULM patients.

Uncertainty regarding treatment outcomes coupled with unsustainable growth in healthcare expenditure has driven interest in the development of standardised health outcome measures for comparing the effects of treatment across populations and for assessing quality of care. Therefore, global comparisons are essential for patient safety and improvements in the quality of care since they set the stage for more rapid learning across institutions.

ICHOM (International Consortium for Health Outcomes Measurement – www.ichom.org) is a nonprofit organisation, working with healthcare professionals, registry leaders and patient representatives from around the world to define a Standard Set of outcome measures that matter most to patients, driving the adoption and reporting of these Standard Sets worldwide.

An international working group of plastic and orthopaedic surgeons, hand and occupational therapists, genetic and outcomes researchers was assembled to review existing literature and practices. In a series of teleconferences, a modified Delphi process was used to reach consensus on what outcomes matter most to patients with CHULM.
Patient opinions and interests were obtained during patient advisory groups.
Your input as an expert in the field of hand surgery is essential for us during this stage of the Standard Set development. We would appreciate if you could provide us with your feedback by completing the survey in the link below.

If you have any questions or would like further information on this work, please do not hesitate to contact the project team (a.delatorre@ichom.org).
Survey link: https://hbs.qualtrics.com/jfe/form/SV_1TYIFdxdgz8QSfb

Many thanks,

Alethse De la Torre, Jason Arora, Monique Ardon,
Christianne Van Nieuwenhoven and Branavan Sivakumar

On behalf of the ICHOM Congenital Hand and Upper Limb Malformations Working Group

Letter to Colleagues

Dear Members of IFSSH,

I completed my term as the National Delegate of the Japanese Society for Surgery of the Hand (JSSH) to the IFSSH in 2016.

In 2015, I retired as chairman of the Department of Orthopedic Surgery at St. Marianna University and I now serve as emeritus member of JSSH and JOA. I also served as president of APFSSH from 2013 to 2015 in Kuala Lumpur, Malaysia

.

I was also the Member-at-large on the Executive Council of IFSSH from 2013 until the 2016 Congress in Buenos Aires, Argentina. I greatly enjoyed the term with Michael Tonkin, Zsolt Szabo, Ulrich Mennen, Marc Garcia Elias, Daniel Nagle, and Frank Burke and I truly appreciate the effort of IFSSH members all over the world.

Additionally, I am still working as Medical Committee chairperson and Anti-Doping Committee chairperson for the Japan Tennis Association. The Society for Tennis Medicine & Science World Congress will be held in Tokyo from April 30 - May 2, 2020. You may find more information here if you are interested: http://tennismedicine.org/. Naturally, the hand, wrist, and elbow are an important issue of racket sports.

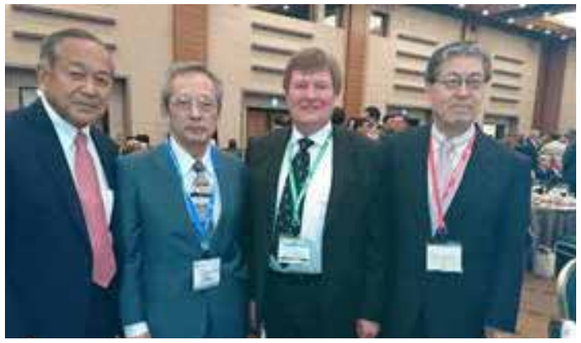
We are looking forward to seeing you at the Tokyo Olympic and Paralympic Games in 2020.

Thank you and best regards,
Moroe Beppu, M.D.

My Retirement Party in 2015
Back row: Dr. J. Tanaka, Dr. A. Minami, Dr. M. OchiFront row: Dr. K. Asou, myself, Dr. Tsu-Min Tsai, Dr. K. Okubo, Dr. H. Iwamoto

Dr. A. Minami, Dr. K. Tsuge, Dr. Y. Ikuta, and myself. Dr. Tsuge passed away last year.

As Member-at-Large at the IFSSH Congress in 2016



Myself, Dr. Y. Ikuta, Prof. M. Tonkin, and Dr. A. Minami at the JOA Annual Meeting in 2017

Dr. Y. Yamauchi, past president of IFSSH, and myself at the JSSH annual meeting in 2017

Myself, Dr. A. Shin, Prof. M. Tonkin, Dr. F. Kanaya, Dr. Y. Tu. APFSSH executive members, at the JOA Annual Meeting in 2017

IFSSH Newsletter

MESSAGE FROM THE IFSSH SECRETARY-GENERAL, DR. DANIEL NAGLE

The IFSSH Executive Committee gathered during the FESSH congress in Budapest. Dr. Zsolt Szabo (our President) was the Chairman of the FESSH Congress and graciously accommodated the IFSSH ExCo. Many of the ExCo members participated in the FESSH program which delivered interesting updates on the theme of Evidence Based Medicine. One could not help but notice the enthusiasm of the 1700+ FESSH/EFSHT participants, with the congress rooms and social events overflowing. The wonderful city of Budapest provided a special backdrop for the congress. The goal of the IFSSH Executive Committee meeting was to discuss progress made since the IFSSH meeting in Buenos Aires and take action to pursue the vision of the IFSSH so eloquently presented by President Szabo in Buenos Aires. What follows is a brief synopsis of the ExCo meeting.

The IFSSH is dedicated to expanding hand surgery knowledge throughout the world and President Szabo once again emphasized the need to encourage our member societies to identify worthwhile educational endeavors which could benefit from IFSSH financial support. Through this Ezine Dr. Szabo and the Executive Committee are urging the IFSSH societies to actively engage their members in the creation of educational opportunities. Dr. Szabo stated we must use our knowledge and funds to give intellectual and financial assistance to those in need. Furthermore, he stated the IFSSH must be flexible as it responds to such requests. Regional education courses should be an ongoing priority as a method of disseminating knowledge and skills to local surgeons. In addition, through the Harold Kleinert Professorship, the IFSSH is able to underwrite a visiting professorship to hand surgery centers which do not have the resources to absorb the cost of a visiting professor. Dr. Raja Sabapathy, IFSSH Member-at -Large related how such visiting professors can have a lasting impact on the centers and countries they visit. Dr. Goo Hyun Baek as chair of the Committee for Educational Sponsorship (CES), stands ready to facilitate the IFSSH support of our member society educational endeavors.

President Szabo and President Elect Dr. Marc Garcia Elias then went on to speak of the Triennial congresses. They stated the IFSSH Triennial meeting must cater to the diverse needs of the participants. The IFSSH must be inclusive and encourage the young physicians to participate in all aspects of the IFSSH meetings. To accomplish this goal financial support has been and will continue to be available for those young surgeons who find the cost of attending the Triennial meeting onerous. Furthermore, Drs. Szabo and Garcia Elias wish to encourage the organizers of the Triennial meetings to express their local traditions when planning the components of the meeting.

Dr. Szabo and the Executive Committee recognize the importance of communicating our mission to our member societies. We are grateful for the opportunity to publish IFSSH updates in several world hand surgery journals. In addition, Dr. Ulrich Mennen does everything possible to keep our member societies up to date on IFSSH activities and issues through the Ezine. The Executive Committee is acutely aware of the importance of the IFSSH website and is in the process evaluating how to best update and optimize the IFSSH web presence.

The ExCo was honored to have four guests. Dr. Jorg van Schoonhoven, Secretary General of the German Society for Surgery of the Hand (DGH), provided the ExCo with an update regarding the 2019 IFSSH Triennial meeting to be held in Berlin. The planning for the meeting is moving along smoothly and Dr. Schoonhoven is certain the meeting will be one to remember. Dr. David Shewring, Vice President of the British Society for Surgery of the Hand (BSSH) provided the ExCo with a brief update on the progress of the BSSH IFSSH Triennial meeting committee. The venue is being finalized and contracts should be signed in the not too distant future. The BSSH is proud and excited to be the 2022 IFSSH Triennial meeting host. Anne Wajon PhD, HTCC President of the International Federation of Societies for Hand Therapy and Dr. Eduardo Zancolli (IFSSH Buenos Aires Congress President) were pleased to provide the final reports on the grand success of the combined Buenos Aires IFSHT/IFSSH meeting.

The IFSSH Executive Committee and the IFSSH Delegates' Council will meet in San Francisco during the September 2017 ASSH Annual Meeting. We once again ask all delegates to consider the opportunities the IFSSH offers and encourage submissions for educational support and/or suggestions for future IFSSH endeavors.

We congratulate the FESSH on the success of their meeting and thank the organizers for including the IFSSH Executive Committee Meeting within the programme.

2017 IFSSH Delegates' Council Meeting:

The 2017 IFSSH Delegates' Council Meeting will be held in San Francisco in September, in conjunction with the annual congress of the American Society for Surgery of the Hand, as follows:

8:00-11:00am, Thursday 7th September

Moscone West Convention Center, San Francisco

An agenda and further information will be forwarded to each IFSSH delegate closer to the meeting. Details of the ASSH congress, including a preliminary programme and registration information, can be found on the ASSH website - http://www.assh.org/annualmeeting/General-Information

We look forward to seeing you in San Francisco.

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:

XIVth IFSSH – XIth IFSHT Congress – Berlin, Germany
20-24 May, 2019
www.ifssh-ifsht2019.com

XVth IFSSH – XIIth IFSHT Congress – London, United Kingdom
2022 (Dates to be confirmed)

Daniel Nagle MD
Secretary-General, IFSSH

Historian Report

by David Warwick

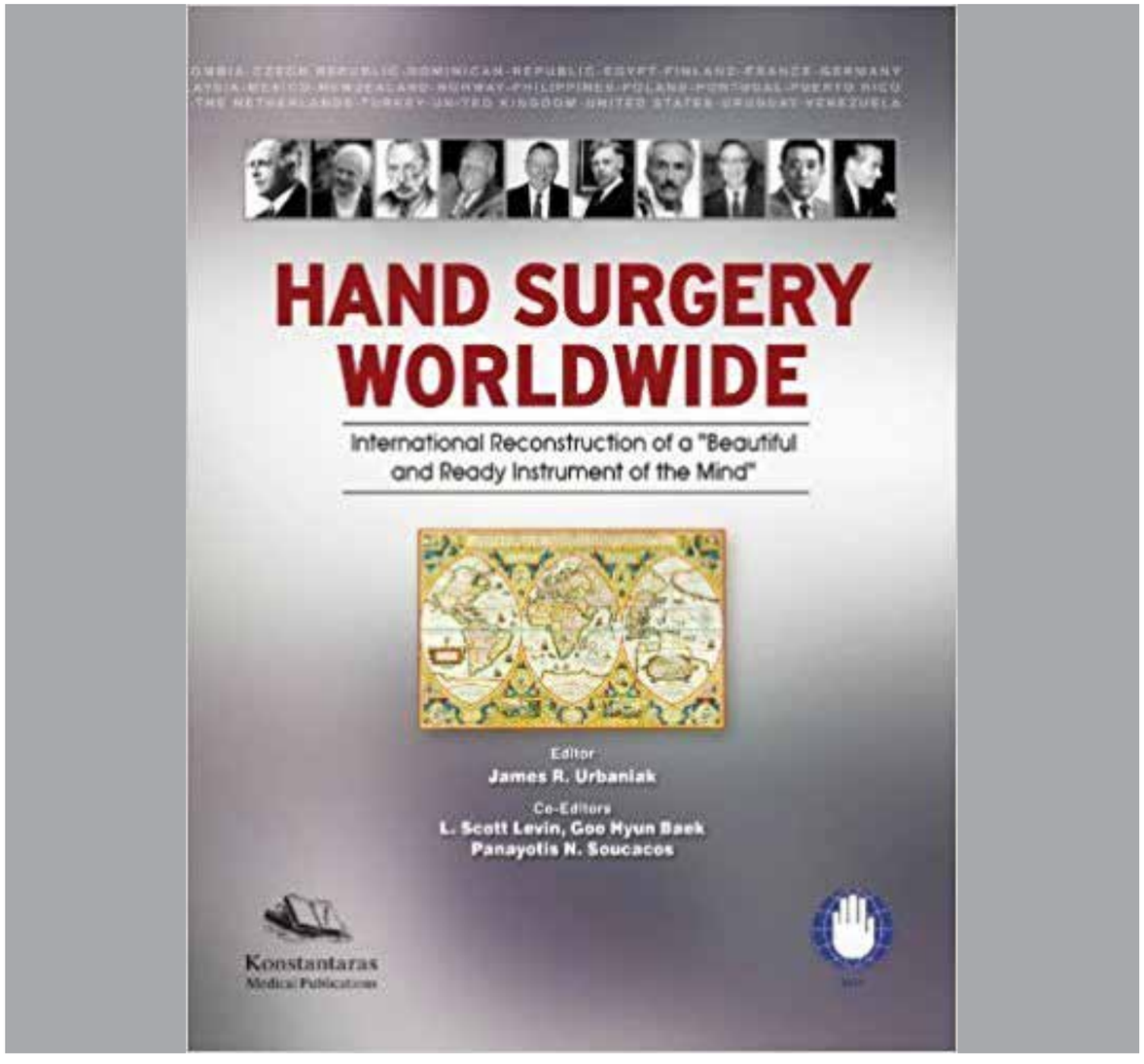
In October 2016, I was privileged to take over the role of Historian from Professor Frank Burke. Frank spent 6 years in this role, meticulously classifying and archiving thousands of documents which map out the development of the IFSSH. Frank described this journey in the August 2016 edition of Ezine (http://ifssh.info/pdf/IFSSH_August_2016.pdf). The world hand community, represented by IFSSH, owes Frank our respect and thanks for this Herculean task.

So now the archive is complete, with the exception of one or two documents which may or may not one day emerge; the work of the Historian has been made rather easier. When a new document is formed it will routinely be added to the Archive. But there remains some work to do.

Currently the Archive is stored on Dropbox with access limited to the IFSSH office and Council to avoid accidental deletion or corruption. We will copy the useful and interesting material from Dropbox to the website so that anyone can have access to this resource in an easily accessible format. The headings include Delegate Council minutes, financial summaries, Scientific Committee reports, triennial congress reports, triennial Pioneers in Hand Surgery brochures, history of the IFSSH, individual histories of the national societies and finally the sequential iterations of the IFSSH Protocol Book which evolves constantly over time.

If anyone finds a document that they feel would be of interest, then please email it to me administration@ifssh.info and davidwarwick@handsurgery.co.uk. And most tantalising of all- no-one has yet found the Inaugural Charter. There will be a reward for the person who tracks this down and sends it to me…..

In 2011, Jim Urbaniak published the book Hand Surgery World Wide. It is a wonderful book describing the development of IFSSH and containing the histories of most of the member Societies. We are trying to get this available as a digital version so that it is accessible to all.



In Jim's book, many Hand Societies described their own history and current organisation. Since then several more societies have joined the IFSSH; we will ask their leaders to kindly provide a similar vignette for publication in Ezine and to be archived with the existing descriptions in the IFSSH website.

Finally, Education remains a key role for IFSSH; the Archive will keep a full record of the IFSSH's work in organising educational opportunities and distributing funds which support individuals to learn from colleagues around the world.

David Warwick

The sensational hand and the plastic brain

Göran Lundborg

Department of Translational Medicine – Hand Surgery, Lund University, Skåne University Hospital, Malmö, Sweden

It is no wonder that the hand has been called the outer brain or an extension of the human brain. All tactile stimuli that are applied to the hand generate signals which are transmitted to the sensory cortex of the brain [1]. In the cortical body map, described already more than 80 years ago, the hand has a very large representation (fig 1) and by the use of fMRI techniques it has proved possible to identify even the locations of individual fingers [2]. Such a detailed cortical hand-map is a pre-requisite for the fine and extremely well developed sensation of the hand. However, the detailed cortical hand representation is spontaneously reorganized in various situations like exposure to vibration, and nerve injury and repair. Peripheral nerve injury and repair is usually followed by incorrect re-innervation of individual fingers resulting in extensive reorganizations of the cortical hand representation.

Peripheral nerve injuries

A median nerve transection at forearm level illustrates many of the problems associated with nerve injuries in general and at all levels – from the brachial plexus to the digital nerves. Repair of a totally divided peripheral nerve was long regarded exclusively a mechanically problem where the solution is an exact matching of the subcomponents of the nerve – the fascicles and fascicular groups. However, today we know that the growth direction of regenerating nerve fibers is not controlled only by the surgeons efforts, but rather by biochemical factors in the microenvironment which are beyond the surgeons control [1] (fig 2). Some degree of axonal misdirection can never be avoided. In spite of the use of refined microsurgical techniques the result is usually disappointing: an adult patient never or seldom regains original tactile discriminative functions in the hand.

So - is nerve repair a mechanical or a biological problem? I was early inspired by Cajal's classical observations already 100 years ago that the distal segment of an injured nerve has an attractive influence on the regenerating fibers (fig 3) [3]. Our hypothesis – based on Cajal´s observations - was that this phenomenon can be used in experimental and clinical nerve repair if the right conditions are created. We felt that some chemical factors, synthetized in the distal degenerating nerve segments, can influence axonal growth and growth direction.

The original tube model

Our experimental model was the sciatic nerve of rats where the ends of the proximal and distal segments were introduced into a silicone tube, leaving a 10 mm distance in between (fig 4a). Our hypothesis was that any possible chemical factors synthetized by the distal segment, exerting an attracting influence on regenerating nerve fibers, would accumulate in the tube.

When we re-explored the tube after three weeks a new nerve trunk had, to our surprise, spontaneously formed in the tube – the nerve had reconstructed itself (fig 4b). This new nerve was well organized showing all components of a normal nerve including epineurium, micro-vessels and mini-fascicles.

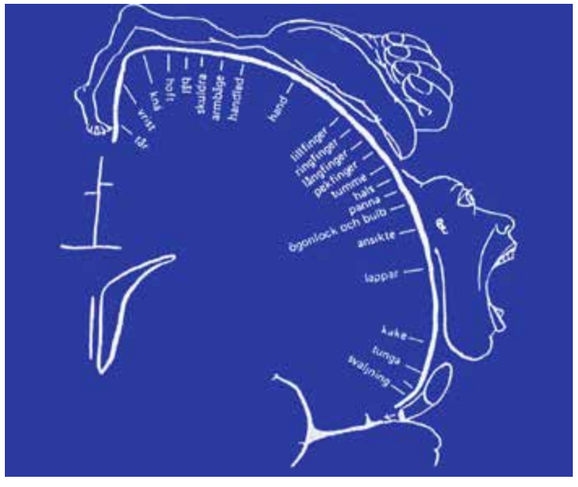


Fig 1. The hand has a very large representational area in the brain cortex.

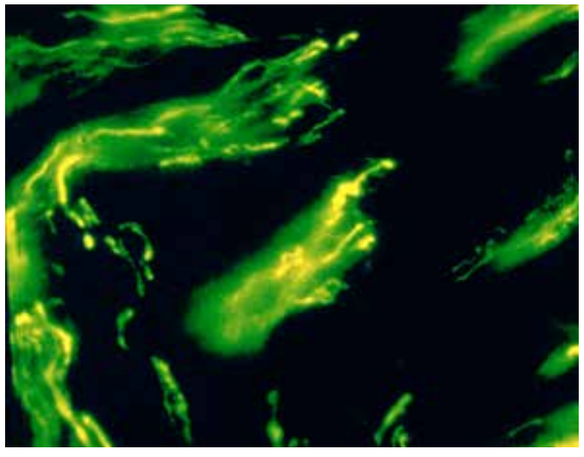


Fig 2. The growth direction of regenerating nerve fibers is regulated by biochemical factors in the local microenvironment.

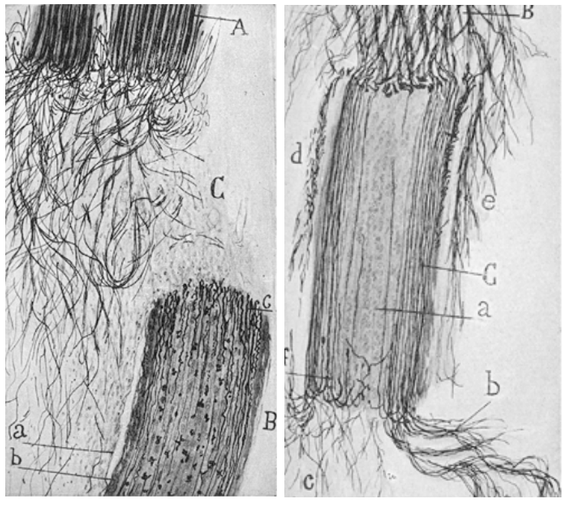


Fig 3. Cajal demonstrated already 100 years ago that a distal degenerating nerve segment has an attractive influence on regenerating nerve fibers. If the cell components in a degenerating distal segment are chemically destroyed the growth of fibers from the proximal segment is randomized (a). In contrast, if the cell components in the distal segment are preserved there is a directed growth towards this segment.

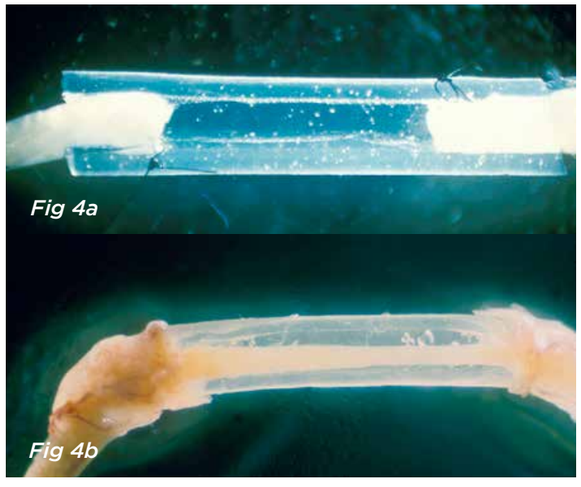


Fig 4. The proximal and distal segments of a transected rat sciatic nerve were introduced in a silicone tube, leaving 10 mm inbetween (a). After three weeks a new nerve trunk had spontaneously formed in the tube, bridging the gap(b).

In 1980-1981 I spent a year at UCSD in San Diego visiting the neurobiologist Silvio Varon, an expert in culturing nerve cells. We found that when the tissue fluid which had accumulated in the tube was transferred to cell cultures of sympathetic and sensory nerve cells there was an extensive sprouting indicating presence of the growth-stimulating factor NGF (Nerve Growth Factor) as well as CNTF (Ciliary Neurotrophic Factor) and several other neurotrophic factors in the fluid (fig 5) [4].

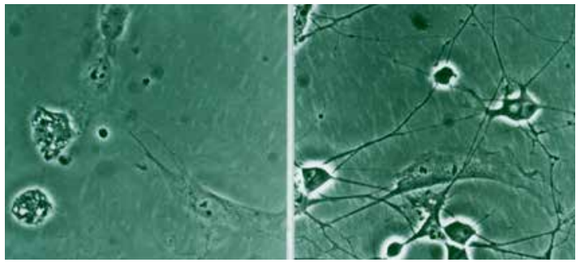


Fig 5. Sensory and sympathetic nerve cells were studied in culture (left picture). When fluid from the tube was transferred to these cultures there was an extensive sprouting of the nerve cells indicating presence of NGF (Nerve Growth Factor) and CNTF (Ciliary Neurotrophic Factor) in the fluid (right picture).

Clinical application of the tube concept

We found our findings extremely exciting and started to apply the tube concept clinically in nerve injured patients, leaving a 5 mm distance between the proximal and distal nerve segments of the median or ulnar nerve (fig 6). When the tube was re-explored and opened after 3 months the former gap was bridged by a continuous nerve structure – the nerve had reconstructed itself. (fig 7). At clinical follow-up of 40 cases after five years we found that tubular repair was at least as good as conventional microsurgical repair when evaluated by several clinical routine tests [5]. However, recovery of sensation was still incomplete, and it was obvious to us that nerve repair in fact is a very complex biological problem involving several levels of the nervous system, and that the brain plays a key role in this process.

Normally, each finger has its own well defined representation in the brain cortex, but after nerve injury and repair the cortical hand-map is completely deranged and reorganized as a result of axonal misdirection (fig 8) – the hand "speaks a new language" to the brain and the brain's capacity to adapt to this new language is essential [1, 2, 6].

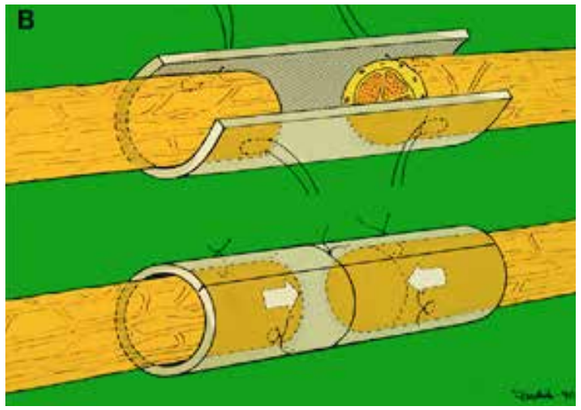


Fig 6. Schematical drawing of the clinical set-up. The ends of the proximal and distal nerve segments were introduced into a silicone tube, leaving 5 mm inbetween.

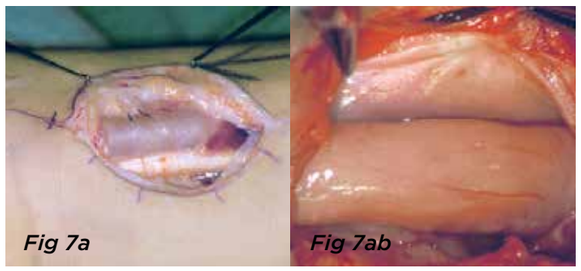


Fig 7. Exploration of the silicone tube 3 months after repair of a median nerve (a). The two sutures indicate the levels for fixation of the ends of the proximal and distal nerve segments. The tube is surrounded by a thin mesothelial-like membrane. When the tube was opened a spontaneously reconstructed nerve structure, bridging the gap was found (b).

We therefore focused on the importance of the cognitive capacities of the brain for restitution of functional sensibility. Interestingly enough we found that the central nervous factors of greatest importance for the clinical outcome were verbal learning capacity and also visuo-spatial logic capacity [7].

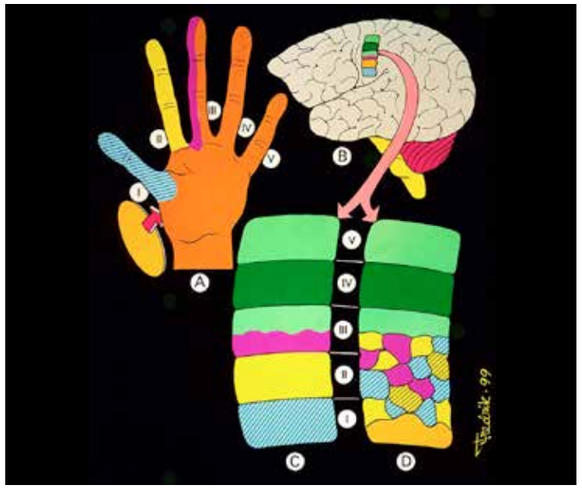


Fig 8. Following nerve repair the original hand representation in the brain cortex is totally reorganized as a result of axonal misdirection – the hand speaks a new language to the brain (schematical illustration from a primate experiment)

The age factor

It is well known that the age of the patient is of importance for the functional outcome of nerve repair, very young patients showing the best results. In a study published in Lancet 2001 we demonstrated that recovery of tactile discrimination after repair is perfect up to the age of 11, but then there is a continuous decline in sensory recovery [8]. Interestingly enough, these data correlated very well with other data showing the capacity among immigrants from South Korea to USA to learn and understand a second language – the American language. The verbal learning capacity was perfect up to the age of 10-11 years followed by a rapid declining capacity at older ages [9]. So, the capacity to learn a second language shows the same age correlation as recovery of sensation after nerve repair.

Nerve repair in children – a long-term follow-up

Do the excellent results in young children last lifelong? How is the situation at follow-up 30 years later? An exciting finding by Anette Chemnitz in our research team is that following nerve repair before age 11 the excellent results last for at least 30 years [10]. Interestingly the neurophysiological evaluation was still bad at follow-up but the excellent clinical outcome could be verified by fMRI showing that children operated very early in life, below eight years, showed a normal fMRI image at follow-up after 30 years, not different from controls [11, 12]. However, this is in contrast to the patients operated at an age >13 years showing a more non-organized activation of much larger parts of the sensory cortex. In other words, the child's brain can easily adapt permanently to the new language spoken by the hand, the cortical hand representation showing a normal picture even after 30 years.

The adult brain

The adult brain is not so plastic and adaptive as the child's brain. We all know that the adult brain has difficulties in learning a new language. After a nerve injury the adult brain has to be re-educated and sensory re-educational programs are essential for recovery of functional sensibility [13]. Such sensory re-educational programs are based on interaction between visual and sensory input. The patient touches a well-known subject without understanding the shape and the identity of the object, but by observing the object in question a correct mental picture of the object is created. However, the sensory re-educational programs have not changed much over the last 40 years. For the future we feel that the focus should be on the brain, the ambition being to make the adult brain behave more like a child's brain. Sensory re-educational programs needs to be improved by using new knowledge and new insights in brain plasticity and learning mechanisms. Key issues in this respect are the right timing for initiating of sensory re-education; and use of guided plasticity (induction of brain plasticity for therapeutic purpose) to facilitate the learning process.

For instance, we feel that sensory re-education should start immediately after nerve repair, the aim being to prepare the sensory cortex for peripheral regeneration. In a prospective randomized clinical study such a principle has proved effective for improving the clinical outcome [14]. Observation of touch of the injured hand very early after repair, before sensation has become re-established in the hand, has been shown to activate visual areas as well as sensory areas of the brain [15].

Regarding guided plasticity we have demonstrated that cutaneous anesthesia of the forearm results in enlargement of the cortical hand representation, making sensory re-education more effective [16]. This effect is a result of rapid brain plasticity mechanisms. With cutaneous anesthesia of the forearm no sensory inflow corresponding to the forearm representation arrives, and this area becomes "vacant". The nearby hand representation rapidly expands over the former forearm representation and the hand gets access to more brainpower making sensory re-education more effective [16].

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Announcement

The American Society for Surgery of the Hand is pleased to announce its establishment of the Young International Membership category, the Society's newest membership type that offers a myriad of benefits to international surgeons who have completed a post-graduate program in disorders of the upper limb within the last 5 years. This is a valuable opportunity to engage with some of the most renowned and experienced experts in the field and enjoy benefits like a full subscription to The Journal of Hand Surgery, free access to Hand-e, the Society's premier hand and upper extremity online learning resource, access to the online ASSH membership directory and discounts on products and meetings. Learn more about membership at www.assh.org.

Members and nonmembers alike are invited to attend the 72nd Annual Meeting of ASSH in San Francisco, California, 7-9 September 2017. The meeting features high quality scientific programming, networking opportunities and a special International Reception. The reception is open to all international attendees and honors the 2017 International Guest Society, the Canadian Society for Surgery of the Hand (CSSH). Visit www.assh.org/annualmeeting for information on the program, travel and registration and to learn about special benefits for international attendees and members of the CSSH.

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DIETER BUCK-GRAMCKO

MD, FRCPS (Glasgow)(Hon) 1927- 2012

Dieter Buck-Gramcko was born in Hamburg, Germany, on 28 October, 1927. He studied medicine at the Universities of Hamburg and Düsseldorf from 1947 to 1952. He trained in General Surgery and Traumatology in Graz, Austria (1954), and Hamburg (1955 to 1959). His special interest in hand surgery was reinforced after a fellowship with Erik Moberg in Göteborg, Sweden, in 1957.

From 1959 to 1992 he worked at the Accident Hospital Hamburg, where he founded, in 1963, the first independent Hand Surgery Unit in Germany. A few years later, this unit was expanded to include reconstructive plastic surgery, microsurgery, and treatment of burn injuries.

In 1976, he was appointed Professor of Hand and Plastic Surgery at the University of Hamburg. He was admitted as Honorary Fellow of the Royal College of Physicians and Surgeons (FRCPS Glasgow) in 1980, because of his tremendous contribution to Hand Surgery.

In 1959, Dieter founded the later 'Deutschsprachige Arbeitsgemeinschaft für Handchirurgie' (German Association of Hand Surgeons) and has acted as Honorary Secretary until 1993. He was Founder Member (1966) and President (1974-75) of the IFSSH. He was Honorary Member of the American, Australian, Austrian, French, Hungarian, Japanese, Scandinavian, Spanish, and South African Societies for Surgery of the Hand, and of the French and Japanese Societies for Plastic and Reconstructive Surgery, and Corresponding Member of the Italian Society for Surgery of the Hand, and the Austrian Society for Plastic and Reconstructive Surgery. He is Founder Member and second President of the German Association for Microsurgery, Founder Member of the Association of German Plastic Surgeons, and Founder Member and first President of the German Society for Surgery of the Hand and its Honorary President since 1994.

Professor Dieter Buck-Gramcko was especially interested in the reconstruction of injured hands and of congenital malformations of the extremities, where he introduced several new or modified procedures, particularly the pollicisation of the index finger, which he has performed on more than 500 hands. Professor Buck-Gramcko has published more than 230 papers in journals or book chapters and is editor or co-editor of several books. He has written extensively on the treatment of congenital deformities, including his book "Congenital Malformations of the Hand and Forearm". From 1969, he was the Editor-in-Chief of the German Journal: Handchirurgie-Mikrochirurgie-Plastische Chirurgie. His last book "Ein Leben für die Handchirurgie" was published in 2007, and contains the history of 100 Hand Surgeons. Dieter Buck-Gramcko has trained many hand and plastic surgeons from Germany, Austria, and Switzerland, and hosted a great number of visitors from innumerable countries of the world.

At the seventh International Congress of the International Federation of Societies for Surgery of the Hand in Vancouver, Canada in 1998, Dieter Buck-Gramcko was bestowed the honour of "Pioneer of Hand Surgery"

DOUGLAS ANDREW CAMPBELL REID

MRCS; FRCS; MB BS; LRCP. 1921 - 2005

Douglas Campbell Reid, was born on 25 February 1921 in Cardiff, and was trained at the Royal London Hospital, qualifying as a doctor in 1943. After general surgical appointments, he trained in Plastic Surgery for four years with Sir Harold Gillies. An appointment with Guy Pulvertaft in Derby enabled him to introduce Plastic Surgical techniques to the Orthopaedic unit. The combined two specialties played a significant part in developing the Derby Hand Surgery Service. In 1958, he won a Sheffield Regional Hospital Board Research Prize for an essay on thumb reconstruction which was published in the Journal of Bone and Joint Surgery (1960), and became widely quoted. As one of the original five Foundation Members of the Second Hand Club, he organized its inaugural meeting in Derby in 1956. That Club later became the British Society for Surgery of the Hand (BSSH).

Campbell Reid was the first to undertake pollicisation in the United Kingdom by the Littler neurovascular pedicle method. His paper on the first 23 cases was presented at the 1968 joint meeting of the British and American Societies for Surgery of the Hand in London and Oxford, and was published in the first number of "The Hand" (1969). In Stockholm, 1955, he gave a paper at the Hand Surgery Section of the First International Congress of Plastic Surgery, and at that time, met Bill Littler, who gave his classic paper on pollicisation. In 1962, as Consultant to the Sheffield Plastic Surgery Unit, he took over the Hand Surgery service, and at the request of Sir Frank Holdsworth, Head of Orthopaedic and Accident Services, also undertook the hand surgery in that Department. As Honorary Lecturer at Sheffield University, he taught countless students. His lectures took him to many centres at home and abroad, and numerous orthopaedic and plastic trainees and visiting postgraduates received his instruction.

Campbell Reid served on the Council of the British Society for Surgery of the Hand from 1970-71, and 1975-79, and was President in 1978. He was on the Council of the British Association of Plastic Surgeons and on the Editorial Boards of the Journal of Hand Surgery and the British Journal of Plastic Surgery. He coedited the book : "Mutilating Injuries of the Hand" (1979) (first and second editions) (in English and French) and contributed to numerous other textbooks. In his Foreword to Campbell Reid's book "Surgery of the Thumb" (1986), Guy Pulvertaft said "....Campbell Reid's exceptional experience brought him international acclaim and has drawn doctors and patients from many lands to his Clinic." Campbell Reid was a Gillies Lecturer and Gold Medallist of the British Association of Plastic Surgeons, London (1981). His presentation was titled 'The Emergence of Hand Surgery in the United Kingdom'. On retirement in 1983, he was made Honorary Consultant Plastic Surgeon to the Sheffield Health Authority.

Apart from Hand Surgery he was a keen ornithologist and photographer. In 1946 he married Margaret Joyce née Pedler, who was an archivist and head of her division at the Foreign Office. They had a son and two daughters. Douglas passed away on 16 August 2005.

Douglas Andrew Campbell Reid was honoured as a "Pioneer of Hand Surgery" at the 7th International Congress of the IFSSH in Vancouver in 1998.

IFSSH Scientific Committee on Carpal Instability

Part 2: Management of scapho-lunate dissociation

Chair: Max Haerle (Germany)

Committee: Abhijeet Wahegaonkar (India), Marc Garcia-Elias (Spain), Gregory Bain (Australia), Riccardo Luchetti (Italy)

Report submitted May 2016

PRINCIPLES OF MANAGEMENT

Garcia-Elias[27] developed a set of 6 questions that provide a useful framework for developing stage-based treatment algorithms:

1. Is the dorsal SL ligament intact?
2. If repaired, has it good chances of healing?
3. Is the radioscaphoid angle normal?
4. Is the lunate uncovering index normal?
5. Is the misalignment easily reducible?
6. Are the joint cartilages normal all over the wrist?

By answering these questions in terms of yes or no, each case can be placed into one of seven categories (Table 3). As expected, the increasing number of negative answers indicates a progression of the dysfunction from minimal (Stage 1) to maximal (Stage 7). In general, all instabilities from the same stage will be treated similarly.

Table 3.

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7
Is the dorsal SL ligament intact?	YES	NO	NO	NO	NO	NO	NO
If repaired, has it good chances of healing?	YES	YES	NO	NO	NO	NO	NO
Is the radioscaphoid angle normal?	YES	YES	YES	NO	NO	NO	NO
Is the lunate uncovering index normal?	YES	YES	YES	YES	NO	NO	NO
Is the misalignment easily reducible?	YES	YES	YES	YES	YES	NO	NO
Are the joint cartilages normal?	YES	YES	YES	YES	YES	YES	NO

From Garcia-Elias M: Classification of SL instability, In: Shin & Day (eds) "Advances in Scapholunate Ligament Treatment eBook". Chicago: American Society for Surgery of the Hand, 2014

Treatment of Scapholunate Ligament Injury

Treatment of SLD is difficult, not always predictable, and seldom entirely satisfactory. Patient selection is very important when deciding which treatment is most appropriate. The patient's age, occupation, recreational demands, and level of symptoms must all be considered. There are several different treatment options based on the severity of the SL ligament injury (Figure 15). Mildly symptomatic patients can be treated conservatively with wrist splinting and activity modification. Surgical treatment of scapholunate dissociation is dependent on the severity of the instability (i.e. predynamic, dynamic, or static), the chronicity of the injury, and the presence of any degenerative changes to the carpus.

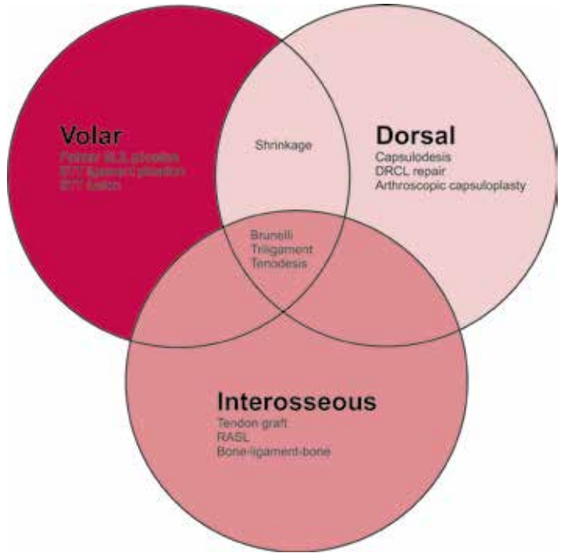

Figure 15. The SL interosseous ligament has 3 parts. The important components are the dorsal and volar aspects. This diagram considers the various treatment options: dorsal, volar or interosseous (which is through the centre of the SL articulation[43].

Acute Injuries

In acute injuries, arthroscopy can be used to determine the extent of scapholunate interosseous ligament injury. Partial tears may be treated by percutaneous pinning of the scaphoid and lunate, thus allowing for the possibility of primary healing or fibrosis. Open repair of acute, complete scapholunate interosseous ligament tears, maintains grip strength and wrist motion and presumably halts the progression to degenerative changes and the development of a SLAC wrist.

Predynamic (Occult) Scapholunate Dissociation

Predynamic or occult SL injury results from an incomplete tear of the SL ligament, with a normal radiographic appearance throughout the entire range of motion or under stress. Frequently there is a disruption of the palmar and proximal connections of the SL joint but not the dorsal aspect of the ligament. In the acute phase, when the healing potential of the disrupted ligaments is at its best, a percutaneous or arthroscopically guided Kirschner wire fixation is recommended.[23] In the chronic predynamic instability, three different approaches have been proposed: (1) proprioception re-education of the flexor carpi radialis muscle[28-30], (2) arthroscopic debridement alone of the torn ligament edges, and (3) electrothermal ligament shrinkage.

Dynamic Scapholunate Dissociation

Dynamic SLDs are characterized by a complete disruption of all SL ligaments (including the dorsal ligament) and by preservation of the secondary scaphoid stabilizers (STT and RSC ligaments). In these cases, carpal malalignment in dynamic SLD only appears under specific loading conditions (e.g., clenched fist, loaded ulnar deviation). Yet, there is substantial kinematic dysfunction with inability to sustain full load in most wrist positions. If the healing potential of the injured ligaments is optimal, without retraction and correct vascularization of the ligament stumps, a direct repair of the dorsal SL ligament is performed using open or arthroscopic techniques.[20, 31-37] This is supplemented with a percutaneous SL joint fixation (Figure 16). If the dorsal ligament cannot be repaired, one alternative is to re-create the ligament by using either local tissues from adjacent ligaments or by utilizing a bone-ligament-bone autograft. Another alternative is to perform a dorsal capsulodesis, such as that more recently described by Mathoulin[37].

Figure 19

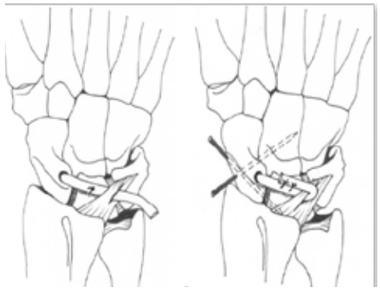

Figure 20

Figure 19. The FCR tendon is passed through the scaphoid and then onto the dorsal radius to stabilize the proximal pole of the scaphoid [38,59]

Figure 20. The three-ligament tenodesis for the treatment of scapholunate dissociation [27]

Static Reducible Scapholunate Dissociation

An SLD is considered "reducible static" when (1) the ligament rupture has not healed in the acute phase, its remnants having degenerated into a retracted, disorganized fibrous stump, precluding a strong direct repair; (2) the secondary stabilizers (DIC, STT and SC ligaments)[10, 11, 33] have failed, and a permanent (static) malalignment has appeared; (3) carpal subluxation still is reducible; and (4) no cartilage deterioration has appeared yet. If the ligament has avulsed off the scaphoid or the lunate, ligament repair can still be performed.

The repair may be augmented with a dorsal capsulodesis to compensate for the loss of the secondary stabilizers (Figure 18). Unfortunately, these repairs often remain unstable.

For this reason, many different techniques have been developed, in order to stabilize the joint and make the results more predictable. However, many techniques still fail e.g. Bone-Ligament-Bone reconstructions, pure capsulodesis techniques, tendon transpositions[38, 39] and the so-called RASL procedures (reduction-association of the SL joint) (Figure 17)[40]. Why they fail is still unknown. Some of the studies show low statistical evidence due to low numbers.

On the other hand, several tenodesis techniques have been described in the attempt to reconstruct the forces of the secondary stabilizers[27] (Figures 19, 20). Some of the more recent techniques show promise, but need further review [56, 60, 61, 62]. The results of these operations may be more predictable and may be considered as a valid solution, at this point in time, before proceeding to salvage procedures. Further research, is required to identify the best methods of repair, graft and stabilisation.

Figure 16. The Whipple technique of arthroscopic assisted stabilisation of the SL interval [23]

Figure 17. The RASL procedure with the SL interval stabilised with a cannulated screw[40]

Figure 18. Arthroscopic dorsal capsulodesis, with plication of the dorsal soft tissues adjacent to the SL interval [37]

Static Irreducible Scapholunate Dissociation (Without Arthrosis) Chronic rupture or insufficiency of both primary and secondary SL ligament stabilizers results in the formation of fibrosis between the scaphoid and surrounding carpus. With time, subluxated joint surfaces tend to deform, making the carpal malalignment even more irreducible. These cases represent irreducible static SLD. The results of ligament repair and tenodesis are poor in this group, therefore the most frequently recommended treatment for the symptomatic, irreducible carpal malalignment secondary to an SLD is a partial wrist fusion.

Wrist Arthrosis Secondary to SLD (SLAC Wrist)

Long-standing SLDs progressively deteriorate the adjacent joint cartilages following a specific pattern of osteoarthritis, the so-called SLAC wrist. The cartilage wear initiates between the tip of the radial styloid and the distal scaphoid and progresses proximally until the entire RS joint is involved. At a later stage, the midcarpal joint may also degenerate, usually starting at the lunocapitate interval. In advanced cases, the rest of the carpus may be involved, with the exception of the radio-lunate joint, which typically is spared from this degenerative process.[7]

Options for treating SLAC wrist include: 1) Radial styloidectomy, 2) Scaphoid replacement arthroplasty, 3) Three and four corner fusion[45,46,49,] 4) Proximal row carpectomy[53] 5), Wrist denervation[52,] 6) Hemiarthoplasty[54,] 7) Total wrist arthroplasty[64], and 8) Total wrist arthrodesis[55].

Radial styloidectomy

Radial styloidectomy is an old procedure designed to relieve pain caused by severe impaction of the tip of the radial styloid against a malpositioned distal scaphoid. When performing a radial styloidectomy, care is required to protect the dorsolateral branches of the superficial radial nerve, and not to detach the origin of the radiocarpal ligaments, as this might lead to further instability.

Scaphoidectomy and midcarpal fusion

Popularized by Watson and co-workers [7] the SLAC procedure (scaphoid excision plus capitate-lunate-triquetrum-hamate fusion, also known as four-corner fusion) has gained wide reputation for the treatment of chronic SL dissociation. For it to be successful, however, good articular cartilage at the RL level is required. It is important to fully correct the DISI extension malalignment before fusing the midcarpal joint. Low-profile circular or square plates have been designed to avoid dorsal radiolunate impingement, but considerable concerns have been raised due to the high rate of complications and nonunions [50, 51]. In selected cases, fusion is only recommended to the lunocapitate joint, particularly in ulnar-plus wrists. Cadaveric studies have suggested that by excising both the scaphoid and triquetrum there will be a better range of motion [49, 52]. A subjective and objective functional outcome study has demonstrated a better outcome for the 3 corner fusion than the 4 corner fusion [46]. The long term results of midcarpal fusion have been generally good, but attention to surgical detail is important[44, 63].

Proximal row carpectomy

Proximal row carpectomy is a salvage operation consisting of the complete excision of the proximal row, in order to create a neoarticulation between the capitate and lunate fossa of the radius. Most published series show proximal row carpectomy as an excellent choice, providing an excellent outcome in terms of pain relief [53].

	Proximal row carpectomy	Four-corner fusion
Common indications	SLAC (stage 1 and 2) SNAC (stage 1 and 2) Kienböck (Lichtman IIIB, Bain 2B)	SLAC (all stages) SNAC (all stages) LTAC
Pain relief	84%	85%
Patient satisfaction	80%	90%
Range of motion (of contralateral hand)	60%	50%
Grip strength (of contralateral hand)	70%	75%
Complications		
Development of OA	3.7%	1.4%
CRPS	1%	1%
Sepsis	0.4%	0.6%
Nonunion		5.5%
Dorsal impingement		2.6%
Hardware problems		3.3%
Conversion to total wrist fusion	4%	3%

Abbreviations: 4CF, four-corner fusion; CRPS, chronic regional pain syndrome; LTAC, lunotriquetral advanced collapse; OA, osteoarthritis; PRC, proximal row carpectomy; SLAC, scapholunate advanced collapse; SNAC, scaphoid nonunion advanced collapse.

Table 4. Comparison of the outcomes of proximal row carpectomy and four corner fusion[57]

Total wrist arthroplasty

Total joint replacement of the wrist is a reasonable treatment for patients with low demand on their wrists[64]. Unfortunately, most patients with late post-traumatic instability are young and active individuals, if not heavy duty manual labourers. In such cases, a joint prosthesis may not be an acceptable choice. If the cartilage of the proximal surface of the capitate is preserved, there is the option of replacing only the proximal row by a hemiarthroplasty [54].

Total wrist arthrodesis

Arthrodesis still is the procedure of choice in patients involved in heavy manual work. According to some sources, total pain relief can be expected in 85% of patients with 65% of them returning to their former occupations. As shown in many clinical series, most patients with total wrist fusion are able to accomplish all daily tasks by learning to compensate for the loss of wrist motion [55].

Denervation has been promoted by some authors[52]. Various studies have shown the benefit of this procedure especially in an arthritic wrist. Nevertheless proprioception of the wrist begins in sensory end organs located in ligaments and joint capsules (mechanoreceptors). When these mechanoreceptors are stimulated, an afferent signal causes an involuntary spinal reflex that induces a selective

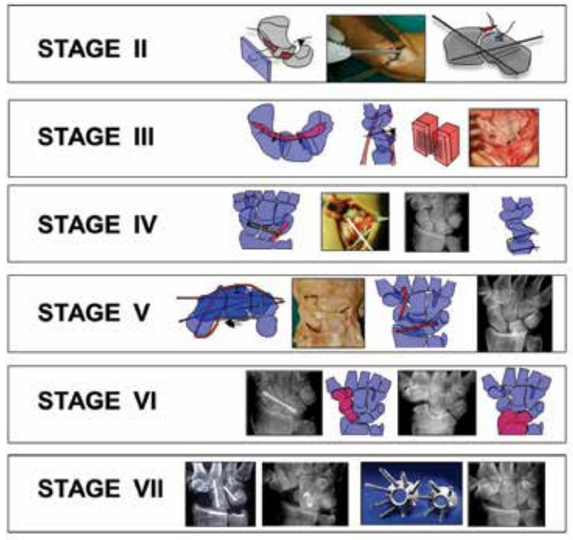

Figure 21. Summary figure demonstrating the various stages, and the associated treatment options.

muscular contraction in order to protect from ligament injury. The aim of the most recent investigation in this regard is to provide an understanding of the role of proprioception and neuromuscular control in carpal instabilities, as well as descriptions of potential clinical applications.

It has been postulated that the ligament-muscle reflexes may have a role in protecting a joint from excessive excursion and from excessive loading, which might have a protective effect on the development of posttraumatic OA. We believe that denervation procedures should be avoided in young non-arthritic wrists where the proprioceptive function may play a role. Conscious training of muscles which may protect the carpus from further malalignment and subsequently protect the SL joint is one future direction that needs to be explored.

Conclusion

There have been steady advances in the understanding of the anatomy, biomechanics and imaging of the wrist with scapholunate instability. However there are still significant gaps in our knowledge base for this patient population. What is a greater issue is to be able to understand the best care for the individual patient. We still struggle to determine the natural history and best treatment for each patient who presents to our clinical practice.

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Challenges in managing scars on pediatric burnt hands

Yating Wei, M.Sc. & Cecilia WP Li-Tsang, Ph.D.

Pediatric hand burns and common problems

Normal hand function is important for an individual's quality of life, especially for a child in the process of learning manual skills. Children are susceptible to domestic burn injury as they are curious about the world and are not aware of potential dangers, such as hot water and other hot beverages or food in a household (1-4). Children's hands have thinner skin when compared with adults, therefore, the same thermal source tends to cause deeper burns(5). Partial thickness burns that do not heal within 2 weeks in children are at greater risk of forming hypertrophic scar.(6) Development of hypertrophic scar will cause joint contractures, deformities and impede growth of the hand (7). Common scar problems are narrowing of web spaces between fingers; MCP hyperextension contractures of fingers; flexion contractures of the PIP and DIP joints, narrowing of the first web space, collapse of the palmar arch etc. (as shown in Figure. 1).

Figure. 1

Early and effective rehabilitation of hand burns is crucial to maintain maximum hand function.(3) Splinting the burned hand in a functional position and encouraging early mobilization is important during the wound healing process.(8) Scar management should be implemented as soon as the wound heals. The prevalence of hypertrophic scar formation is much higher in the Asian and African population when compared to Caucasian skin.

Scar Management

For newly healed skin as well as early scars that are brittle and fragile, it is often difficult to apply elastic pressure gloves, especially if on small hands. Edema in the freshly healed burned hand is a common symptom of scar remolding and hypertrophic scar. Bandaging using soft elastic bandages may be an alternative (e.g. Coban). They are easier to put on and remove, avoiding the friction that might be caused by a pressure glove. Controlling the edema by pressure bandaging is also important for facilitating hand movement and preventing the formation of hypertrophic scars. However, the elastic properties of the bandages may be lost quickly and require regular replacement.(7)

Careful measurements, fitting of a pressure glove and adding in pressure padding are essential to provide the best pressure therapy intervention environment for the small hand. They need to be worn as long as possible to provide consistent pressure during the period of scar remodeling, until the scar is mature.

Pressure therapy and silicone gel application are proven to be the mainstay of conservative management (9, 10). Silicone gel sheets are applied on healed wounds to moisturize the scars through the occlusive properties of the silicone gel. Yet, the occlusive effect alone is inadequate to control the growth of fibroblasts in the scar tissues. Pressure therapy has been proven to be effective to reduce scar thickness and redness (11)The actual mechanism was hypothesized to be related to mechanical-reduction of scar tissues and reduction of vascularity but is yet to be proven scientifically.

Principles of Pressure therapy

According to Laplace law (Figure.2), the pressure generated by a pressure garment is related to the radius of curvature of the body surface.(12) If a child wears a pressure glove, the two sides of the hand will be subjected to higher pressure while the dorsal and palmar side of the hand have lowest pressure. Thus, the huge pressure at two sides may cause narrowing of palmar arch, thus the palmar arch may collapse with prolong wearing of pressure glove.

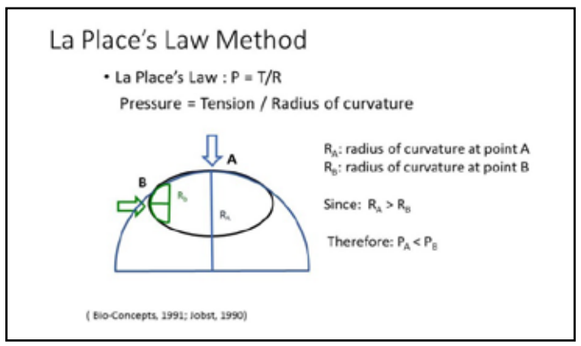

Figure 2. Laplace law for pressure management

Therefore, insertion of a palmar arch support made of thermoplastic material to be placed underneath the pressure glove is required. It also serves the purpose of exerting pressure on the palmar side of the hand if scar is present, which is less common than on the dorsum of the hand.

On the other hand, since the dorsum of the hand is relatively flat, the pressure glove cannot generate adequate pressure to the scar there. Based on the concept of Laplace Law, it is essential to provide a padding insert in order to lower the radius of curvature (as shown in Fig.2). Padding materials such as foam, neoprene or plastazote are used as inserts to increase the pressure. However, it remains a challenge to insert both silicone gel sheets and padding on a small hand before applying the pressure glove.

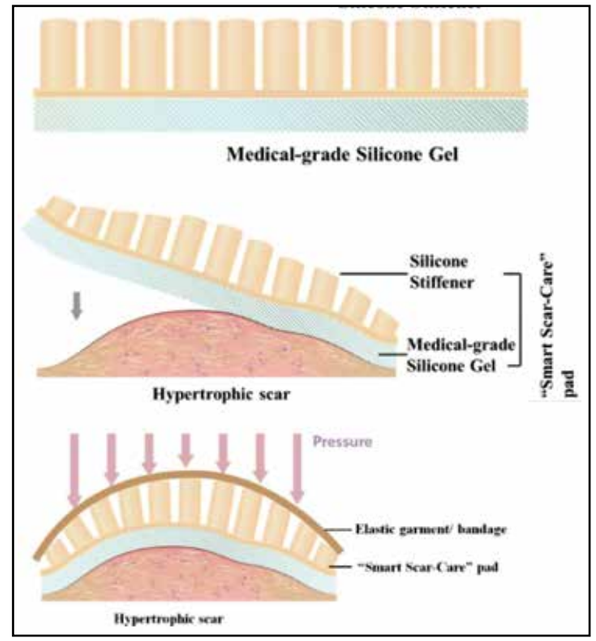

Figure 3. Schematic side view of how combined silicone gel + padding + pressure bandages can effectively control Scar hypertrophy

A new innovative way of combining silicone gel sheet and padding has been designed (recently presented at the 45th Geneva Innovation Expo, 2017), and named the Smart Scar Care pad (SSCp). The SSCp is made of medical grade silicone gel and coated with a sheet of silicone rubber with

multiple studs, which can be trimmed to fit into different contours of the hand and body, to provide optimal pressure (see Figure.3). It will be commercially available soon from the Hong Kong Polytechnic University.

Children with hand burns should be encouraged to utilize the injured hand throughout the day through games and ADL tasks. The following pediatric case of a 17 month old child with a hand burn demonstrates the importance of early intervention and illustrates the application of comprehensive hand therapy, incorporating the principles mentioned above.

A Case Review

A 17-month old girl was scalded by hot water on her right hand. She suffered second degree burns and was referred to our rehabilitation clinic a month after initial injury. The wounds healed and were erythematous at the first appointment. There was thickening of the scars on the dorsum of the hand and fingers. The MCP joints were limited in flexion due to scar contracture and tightening of the collateral ligaments. The PIP and DIP joints were in flexion with some limitations in full extension. Web spaces were found to be narrower than the left hand. (Figure. 4)

Initially, Coban dressing with silicone padding was provided to control the hypertrophic scar on the dorsal aspect of the hand. A small palmar arch support was also applied on the palm of the hand (Figure 5a). When the oedema subsided, a tailor-made pressure glove with inserts of silicone gel padding on the dorsum of the hand was applied. For the hypertrophic scar on the fingers, thin silicone sheet tape was used to wrap each individual finger and silicone padding in strips was inserted in the web spaces (Figure 5b) before donning the pressure glove (Figure 5c). An web spider was applied in the later stages to further work against the contracture of the scars. (Figure. 5d).

Figure 4. The right hand of the case upon discharge (wound healed up but odematous)

Figure 5. The scar management regime for the child

In addition to the pressure therapy, active daily exercises of the burned hand were strongly encouraged, to achieve a good rehabilitation result. Thorough education and training were provided to the parents and the care giver to ensure correct implementation of the therapeutic instructions.

After six months, the hypertrophic scar of the child's hand was mostly mature, and hand function was restored completely. A year after the initial intervention, the child has achieved normal function of the hand (Figure. 6)

The most important component of managing the pediatric burnt hand is the application of silicone padding, As the silicone padding is composed of a layer of medical silicone gel and a layer of silicone stiffener, it can be easily trimmed to fit either the dorsal hand or the finger web (Figure 5b). With silicone gel, the padding can provide hydration to the hypertrophic scars.

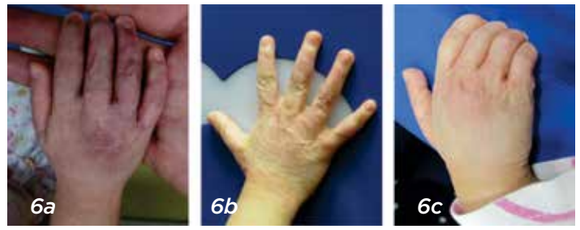

Figure 6. The right hand of the pediatric case after rehabilitation

With the silicone stiffener, the padding can add pressure for the flat and convex areas of the hands where the pressure gloves are not able to provide enough pressure. Although a web spider may also serve the function to provide pressure over the finger web space, it is not as comfortable and may sometimes cause abrasion on the delicate skin. As the common hand problems of children after burns are the dorsal hand hypertrophic scar with hyperextension of the MCP joints caused by scar contraction, as well as loss of web spaces, the silicone padding is a convenient and effective insert for pressure gloves in the management of pediatric burn hands.

For pediatric burn care, a supportive family relationship is also important to achieve a better long-term outcome of the patients.(13) The cooperation of the parents for hand therapy is essential to guarantee the successful implementation of the therapeutic strategies. (8) As the rehabilitation of hand burns in children is a long-term process, in addition to a well-planned rehabilitation strategy, persistent effort through collaboration among therapists, care-givers and patients are required to achieve satisfactory hand function.

Conclusion

To conclude, children are at high risk of hand burns and any hypertrophic scarring can lead to impairment of hand function. An early and comprehensive scar management program incorporating effective therapeutic strategies is important to maximize the outcome of the burn injury. Rehabilitation of pediatric hand burns should be managed with patience and care, incorporating the collaboration from both the professionals and the families.

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Pearls & Pitfalls of the **Volar Locking Plating** for **Distal Radius Fractures**

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Journal Of Hand Surgery (Asian-Pacific)
June 2016 Vol 21 No 2

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

In recent years, volar locking plate fixation has been so popular for the treatment of unstable distal radius fractures. Although some hand surgeons consider this technique as a cure-all for every distal radius fractures, it has inherent risks of complications and failures. I wanted to highlight the important issues of volar locking plate fixation, such as selecting the shape and size of the plate, selecting the number and length of the locking screws, and positioning of the plate itself. I also wanted to share the tricks to improve radiologic outcomes by restoring radial length and volar tilt angle.

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

Flexor and extensor tendon complications have been a problem after volar locking plate fixation. I focused on the reasons why volar locking plate irritates flexor tendons. One reason may be a fitting issue. I found the volar prominence of the intermediate column tends to be larger as the size of the distal radius is bigger.

Plate manufacturers reflected these anatomic features and made wider plates with greater prominence in the intermediate column. However, it is not always the case and some people may have flexor tendon complications with the wider plates. I suggest it is safer to choose a smaller plate if a hand surgeon has to decide in between. Choosing proper length of the distal locking screws may be difficult due to dorsal comminution of the distal fragments. I found the length of the diaphyseal screw strongly correlated with the length of distal locking screws. From this result, we can estimate the length of distal locking screws without measuring them. Comminuted distal radius fractures tend to be fixed in shortened position.

Moreover, radial shortening inevitably occurs in well-fixed constructs. To prevent secondary ulnar impaction syndrome, I routinely perform intentional distraction of the distal fragment during the volar plate fixation and have experienced excellent results so far. Distal locking first technique is a well-known procedure to correct volar tilt angle effectively especially for treating refracture of the malunited distal radius where normal anatomy was distorted.

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

Many hand surgeons think that volar locking plate fixation is easy to perform and they can obtain good clinical results universally. Putting the plate on and inserting the screws may be easy, but reducing the fragments and maintaining with proper implants without flexor and/or extensor tendon irritation is not an easy job. I hope all hand surgeons have knowledge to choose proper implant and screws to achieve optimal results and to decrease implant-related complications.

"Although some hand surgeons consider this technique as a cure-all for every distal radius fractures, it has inherent risks of complications & failures"

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

My focus on further work will be about ulnar-side wrist pain after trauma. I experienced several patients who had secondary ulnar impaction syndrome after volar plating of the distal radius fractures. It occurs commonly in the Asian population as they already have positive ulnar variance. I will do research to find the way of reducing this complication. I am also interested in the relationship between traumatic tear of the triangular fibrocartilage and the ulnar impaction syndrome.

I found ulnar variance is increased after foveal tear of the triangular fibrocartilage and it can be a cause of ulnar impaction symptoms in the Asian population. I have experienced good results with combine ulnar shortening and triangular fibrocartilage repair for those patients so far.

SBCM
Brazilian Society of Hand Surgery

The Brazilian Society for Surgery of the Hand (SBCM) was pleased to receive the news of the improvement in the rotation of the Triennial Congress of the IFSSH until 2037, which was published in the IFSSH Newsletter in February 2017. We would like to congratulate the IFSSH Exco for this decision, and we consider this decision a progress in the development in acknowledging the expertise of Hand Surgery world-wide.

As a demonstration of our alignment with this new directive and after an in-depth analysis of the tremendous burden which may be experienced by our Society, we are pleased to announce the application of Brazil to host the "2025 IFSSH Triennial Congress", which will be according to the rule of rotation, viz. that a country from the American Continent has the choice to host the 2025 IFSSH Congress. The SBCM is confident that it has the capacity to take over this responsibility and carry out an event that will exceed the expectations of all the participants.

The Brazilian Society for Surgery of the Hand was one of the Founding Members of the IFSSH in 1966 in Chicago, USA, with the American, British, French, Italian, German, Scandinavian and Japanese Societies. Our Society was represented by Dr. Alípio Pernet. It has been our Society's mission to promote Hand Surgery globally right from the beginning.

Our Society was founded in 1959, and has almost seventy years of history. Since the very beginning it organised events and courses nationally. Apart from these events in Brazil, SBCM has also been regularly present in the events in other countries with a strong representation in at least thirteen other international congresses. This international exchange resulted in the election of Arlindo Pardini as president of the IFFSH.

Currently, SBCM has more than 600 members, which indicates the interest in Hand Surgery in our country. The Members of the Brazilian Hand Society have contributed actively and regularly to the activities of the IFSSH and its electronic magazine the IFSSH Ezine.

The Brazilian Society for Surgery of the Hand Congress is held every year and attracts over 800 participants, many of them being from other countries of South America.

For many years, Brazil has hosted major international events and has an infrastructure of hotels and appropriate Convention
Centres to cope with all the sizes and levels of complexity. Recently, as the host of the World Soccer Cup and the Olympic and Paralympic Games, the facilities were even more improved. Daily flights from the main cities of the world fly to Brazil.

The following medical Congresses were held in Brazil, which is an indication that we are capable of hosting the 2025 IFSSH Congress! :

- *Meeting of Federación Sudamericana de Cirugíade la Mano 1999, 2005, 2013*
- *XII World Congress of Federation of Societiesof Intensive and Critical Care Medicine (2017)*
- *STI & HIV World Congress (2017)*
- *World Congress on Brain, Behaviorand Emotions (2017)*
- *6th World Pediatric Congress (2016)*
- *21st World Congress of International Federation for the Surgery of Obesity & Metabolic Disorders (2016)*
- *20th World Congress meeting of the International Society for the Study of Hypertension in Pregnancy (2016)*
- *9th World Congress International Brain Research Organization (2015)*
- *23rd World Congress of Dermatology (2015)*
- *XXVI SICOT Triennial World Congress(2014)*
- *The International Congress of Shoulder & Elbow Surgery (2014)*
- *III World Congress of Minimally Invasive Spine Surgery and Techniques (2012)*
- *International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine-ISAKOS (2011)*
- *3rd Triennial Scientific Meeting of the International Federation of Foot & Ankle Societies (2008). World Congress on Osteoporosis 2004*

The SBCM has the support of several national entities such as the Brazilian Medical Association, Brazilian Society of Orthopaedics and Traumatology, Brazilian Society of Hand Therapy, Brazilian Society for the Progress of Science and the Brazilian Secretary of Health.

Finally, we have the important and essential support of the City, State and Federal governments of Brazil to facilitate a successful IFSSH Congress in 2025!.

Thus, esteemed colleagues,

Your support will be much appreciated.

16th IFSSH & 13th IFSHT

TRIENNIAL CONGRESS

Brazil 2025

CANDIDATE COUNTRY

ifsht
International Federation of Societies for Hand Therapy

www.ifssh.info
To provide global networking and educational opportunities to develop and enhance the practice of hand therapy

UPDATE

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VOL 11 NO3 | JUNE 2017

SPOTLIGHT ON IFSHT MEMBER SOCIETY: GERMANY

The German Society for Hand Therapy (Deutsche Arbeitsgemeinschaft für Handtherapie e.V.: DAHTH), founded in 1995 to promote research and foster exchange of practical hand therapy information, has more than 630 members. DAHTH is partnered with the German Association of Hand Surgery (DGH) and the German Association of Plastic Surgery (DGPRÄC) and has a close relationship to the Hand Therapy Societies of Switzerland and Austria.

To establish a nationwide network of highly-qualified hand therapists, the educational committee of DAHTH and DGH representatives developed

(L to R): Beate Jung (IFSHT & EFSHT Delegate), Christine Popp (Public Relations), Marion Bäumer (Secretary), Anna-Lena Avenius (Continuing Education), Daniela Neye (Public Relations), Natascha Weihs (Chair), Dagmar Fucik (Treasurer), and Johanna Ismaier (Vice-chair)

a post-graduate qualification for occupational therapists and physiotherapists: "Hand Therapist DAHTH." The annual symposium with the German Association of Hand Surgery (DGH) will take place in Munich in 2017 and in Mannheim in 2018. DAHTH especially looks forward to welcoming hand surgeons and hand therapists from all over the world

BUILDING BRIDGES - TOGETHER HAND IN HAND

at the Triennial Congress of IFSHT and IFSSH in Berlin in 2019!

(L to R): Cecilia Li (Information Officer), Maureen Hardy (Secretary General), Peggy Boineau (Treasurer), Ann Wajon (President), Nicola Goldsmith (President Elect), Sarah Ewald (Past President)

IFSHT EXECUTIVE COMMITTEE MEETS IN HONG KONG IN JUNE

At a two-day intensive meeting the IFSHT executive Committee agreed to implement a lifetime achievement award for therapists who have made significant international contributions to the development of Hand Therapy. Also discussed were updates to the IFSHT website, social media and the 2019 IFSSH & IFSHT Congress in Berlin. The executive committee met with the Head of the Department of Rehabilitation Sciences, Hong Kong PU and toured the teaching and research labs and the rehabilitation clinic.

VOLUNTEER TO JOIN OUR IFSHT COMMITTEES!

IFSHT is seeking volunteers for our various committees. Please go to our website: **http://www.ifsht.org/content/request-join-committee.**

IFSSH EZINE

- The May 2017 IFSHT contribution to the IFSSH Ezine, "International Hand Therapy Visit to Komfo Anokye Teaching Hospital, Ghana," is by Rajani Sharma-Abbott, who was sponsored by IFSSH through the IFSHT International Teaching Grant to travel to Komfo Anokye Teaching Hospital (KATH) in Kumasi, Ghana.
- The February 2017 IFSHT contribution to the IFSSH Ezine by John Avery is "Proximal Interphalangeal Joint Dorsal Dislocation," presenting management principles for these common and potentially complex injuries. Both are available at: **www.ifssh.info/ezine.html.**

For hand therapy educational events, go to "National/ International Education Events" under "Education" at **www.IFSHT.org**.

BULGARIAN SOCIETY FOR SURGERY OF THE HAND

Message from the chairman– Prof. Margarita Kateva

The Bulgarian Society for Surgery of the Hand (BSSH) was founded in 2002 by Prof. Ivan Matev. Bulgaria has strong traditions in the field of hand surgery starting with the names of I.Matev, Y.Holevich and E.Paneva whose techniques are included in all hand surgery textbooks. Society meetings are organized twice a year with a scientific and a social program. Every 3 years we organize a national conference with international participation.

Therefore, I'm happy to announce and invite hand surgeons from across the globe to our 5th national conference this year, which will be held in the city of Plovdiv, Grand hotel Plovdiv, 19-22 October 2017. Official languages of the event will be Bulgarian and English. For registration information, please send an email to nikk_simeonov@abv.bg

SPANISH SOCIETY OF HAND SURGERY (SECMA) – AN UPDATE

New Board of the SECMA.

The new board of the Spanish Society was constituted during the national meeting held in Marbella in April. The new President is Dr. Pilar Pradilla, the first woman to become president of the SECMA, and the General Secretary is Dr. Adolfo Galán. The rest of the Council members elected by the General Assembly are: Dr. Joaquin Casañas (President Electe), Dr. Guillem Salvà (Treasurer), Dr. Pedro Delgado (Secretary Electe), Dr. Fernando Corella (Director and Editor in Chief of The Ibero-American Journal of Hand Surgery), Dr. Marta Guillén (Chair of the Council of Social and Media Service and Website Manager), Dr. Manell Llusá (Council of Teaching Committee), Dr. Luis Aguilella (Council of Research Committee), Dr. Javier de Torre (Council of Professional Matters), and Dr. R. S. Rosales (International Delegate & Council of Institutional Relations Committee).

Dr. Pilar Pradilla, the first woman to become President of the Spanish Society of Hand Surgery (SECMA), April 2017.

The New Board of the Spanish Society of Hand Surgery, elected at the National Meeting held in Marbella, April 2017

SECMA & RICMA

(The Ibero-American Journal of Hand Surgery).
The new online version of the "Revista Iberoamericana de Cirugía de la Mano" (RICMA) also named "Ibero-American Journal of Hand Surgery", has contracted "Thieme E-Books & E-Journals" as the new publisher. A new editorial manager web will help the authors to submit their manuscripts to the RICMA. The editorial staff, Dr. Fernando Corella and Dr. Pedro J. Delgado, have carried out tremendous work for that purpose www.thieme.com/RICMA.

The objective is to start publishing scientific original articles in English and Spanish language at the same time. A new editorial board has been elected for that purpose: Dr. Vicente Carratalá, Dr. Mireia Esplugas and Dr. Montserrat Ocampos (Associate Editors); Dr. Roberto S. Rosales (Statistical Advisor); and Dr. Pedro J. Delgado Serrano (International Advisor). Several Ibero-American Hand Surgery and Plastic Surgery Societies have already become associated with this Journal: Portugal, Argentina, Venezuela, Chile, Brazil, Uruguay, and México. We hope that many more will follow in a short time.

IX INSTITUTIONAL SECMA COURSE

SECMA offers a two-day institutional instructional course every year, with lectures and lab cadaver sessions. This year, the course took place in Madrid in June under the direction of Dr. Pedro J. Delgado.

V INSTITUTIONAL SECMA COURSE IN METHODOLOGY OF CLINICAL RESEARCH and DATA ANALYSIS IN HAND SURGERY

SECMA offers a day course in clinical research methodology and data analysis. This year the course will be organized by Dr. Gabriel Celester in La Coruña. The course is free for SECMA members and Dr. R. S. Rosales will be the professor. The course will approach the clinical design, level of evidence, the use of patient reported outcome instruments and data analysis using the SPSS Statistics.

R. S. Rosales MD, PhD
International Delegate of the Spanish Society

9th Institutional SECMA Course. 15-16 June 2017, Madrid

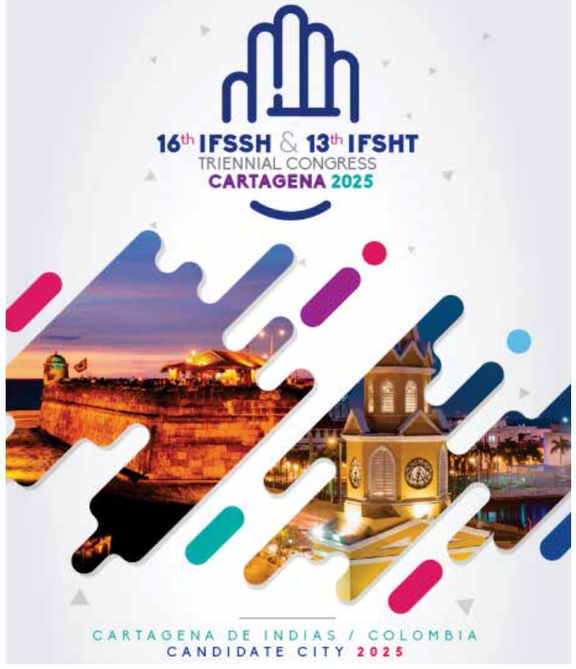
COLOMBIAN SOCIETY FOR SURGERY OF THE HAND

The Colombian Society for Surgery of the Hand was founded in Bogota on 1 July 1966 by 29 surgeons dedicated to this discipline. Presently it has 113 Full Members, 10 residing in other countries. Seventy five international recognised colleagues are Corresponding Distinguished Members.

Annually our Society has a National Congress, which is attended by about 300 Hand Surgeons from Central and South America. We also have, in addition, 3 Webinars, which are developed with international experts amongst others Alexander Shin, Zsolt Szabo, and Randy Bindra.

The Colombian Society for Surgery of the Hand intends to host the IFSSH Congress in 2025 in the city of Cartagena.

All Hand Surgeons and Therapists are invited to attend our 33rd National Congress from 23 to 25 August 2017 in Bucaramanga, 'home to the best coffee in the world'!



BELGIAN SOCIETY FOR SURGERY OF THE HAND

The last year has been successful for the Belgian Hand Group. In continuation of the work of our past presidents, the new elected board started with an update of our website (belgianhandgroup.be), launching an e-learning site and promoting the scientific work of the Belgian hand surgeons. In 2016-2017 this scientific work resulted in some nice congresses, and cadaver workshops.

We especially note the collaboration with our Swish and Irish colleagues:

- 50th Annual Congress of the Swiss Society for Surgery of the Hand with the Swiss Society for Rehabilitation of the Hand and the Belgian Hand Group (BHG) as the invited Society - November 2016.
- Irish Hand Surgery Society (IHSS) and Belgium Hand Group (BHG) combined meeting - March 2017.

At our general assembly meeting in April 2017 we welcomed 16 new junior members and 11 new full members, so the future of the BHG is looking good.

For the future, these events may be placed in your agendas:

- 01-02-03 February 2018: Brussel Hand European Symposium: Workshop arthroscopies (elbow, wrist) and congresses oral presentations.
- 23-24 March 2018: Cadaver workshop upper limb surgery in Antwerp.
- 18-19 May 2018: Ligament injury wrist prior to osteoarthritis in Tournai (BHG Spring Meeting). This congress is a follow up of a congress held 10 years ago also in Tournai on the same subject, with almost the same international faculty but now with 10 years more experience. The different ligament injuries will be reviewed – mechanism – diagnostics and treatment.

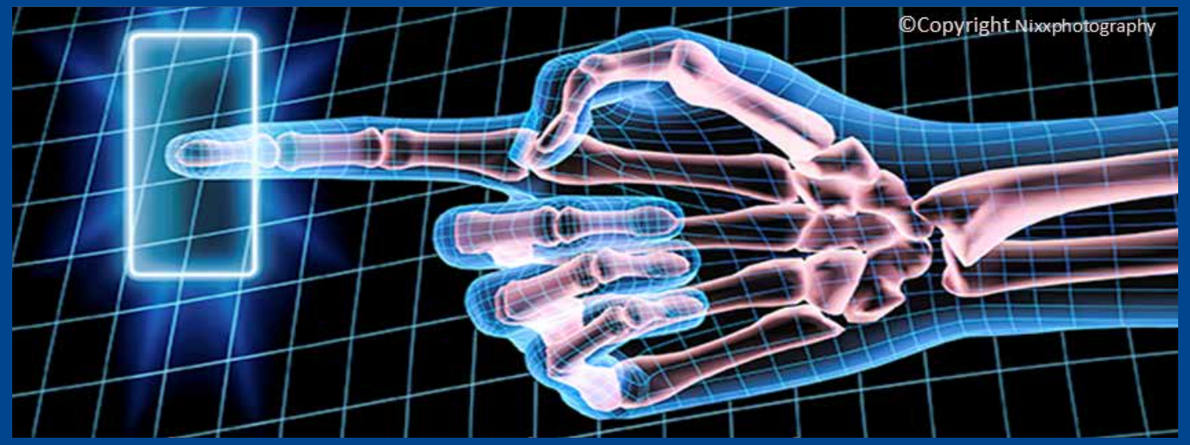
We hope to see you at one of these meetings.
Greetings from the Belgian Hand Group.

BOLIVIA SOCIETY FOR SURGERY OF THE HAND

It was an honor to receive an invitation from IFSSH to participate in the Triennial Congress, held from October 24 to 28, 2016, in Buenos Aires, Argentina. We are also honoured with an invitation from the AACM to participate in the 42nd Argentine Congress of Hand Surgery (October 11 to 13, 2017) and give our commitment to continue contributing with our experiences at the Annual Meeting of the AAHS, from (10 to 13 October 2018) in Fajardo, Puerto Rico.

We wish to inform to you, on April 25, 26 and 27, 2018, the Third Summit of Experts in Hand Surgery will be held in Santa Cruz de la Sierra, Bolivia.

Dr. Juan Carlos Suárez López
PRESIENTE
ASOCIACIÓN BOLIVIANA DE CIRUGÍA DE LA MANO (ABOCIMA)



Hand Surgery Evidence Updates

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Hand Surgery Evidence Updates are compiled by the Centre for Evidence Based Hand Surgery at the University of Nottingham, with support from the University of Nottingham, Nottingham University Hospitals NHS Trust and the British Society for Surgery of the Hand (BSSH).

Dear Colleagues, Hand Therapists and Friends,

It is our pleasure and privilege to invite you to the 16th National Congress of the Turkish Hand and Upper Extremity Society, and the 5th National Congress of the Hand Therapists Society which will be held in Pamukkale, Denizli, TURKEY on May 2018.

We are looking forward to your attendance to our congress where you will also be able to visit Hierapolis-Pamukkale which is a UNESCO World Heritage Site since 1988.

Congress attendees will have the chance to benefit from scientific exchange during meetings and visit one of the natural wonders of our country.

Yours sincerely

TURKISH HAND AND UPPER EXTREMITY SOCIETY

HAND THERAPISTS SOCIETY

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Ass. Prof. Dr. Mustafa Kürklü – Congress Secretary
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November 7 - 10, 2017 | Radisson Blu Hotel, Cebu City, Philippines
Early Bird (November 7, 2016 to July 31, 2017)
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Surgeons USD 700 USD 800 USD 900
Residents & Fellows in Training USD 500 USD 600 USD 700
Therapists USD 300 USD 400 USD 500
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Accompanying Person USD 100 USD 100 USD 150
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First 20 registrants will receive a FREE CITY TOUR to see and enjoy different tourist spots around Cebu City.
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41ST Annual conference of Indian Society for Surgery of the Hand
co hosted by Singapore Society for Hand Surgery

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Dr B B Joshi Oration

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cum 31st Annual Congress of the Hong Kong Society for Surgery of the Hand

Venue: **Harbour Grand Kowloon Hotel**
Abstract Submission Deadline: **31 August 2017**
Early Bird Registration Deadline: **31 October 2017**

7-10 MARCH 2018
(WEDNESDAY - SATURDAY)
HONG KONG

ABSTRACT CATEGORIES

- Antenatal diagnosis and treatment
- Arthrogryposis
- Basic research, gene therapy
- Cleft hand
- Complication of treatment, Keloid
- Fingers anomaly
- Hypoplastic thumb
- Longitudinal deficiency
- Overgrowth syndrome, genetic basis
- Polydactyly
- Rehabilitation and Outcome measure
- Syndactyly, Complex syndactyly, Apert syndrome
- Transverse deficiency
- Use of IT on management of CULA, Telemedicine
- HKSSH Annual Congress free papers

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ORGANISER
The Hong Kong Society for Surgery of the Hand

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香港

Please contact Conference Secretariat for more details:
Email: wchs2018@swiretravel.com Tel: 3151 8814 Website: wchs2018.org

Call for Abstracts

The **Asia Pacific Wrist Association (APWA)** invite you to submit abstracts for the

APWA 3rd Annual Congress - 6-8 October 2017 - Adelaide, Australia.

It promises to be an exciting meeting with a strong international scientific program.

The Asia Pacific Wrist Association is a non-profit international scientific association open to all individuals involved or interested in disorders of the wrist and its surgical and non-operative management.

APWA 2017 is aimed at hand surgeons, trainees, students and hand therapists.

The conference will be at the "state of the art" Flinders Advanced Surgical Training facility at **Tonsley Campus of Flinders University. Cadaveric demonstrations** will be beamed from the Cadaveric Lab to the Lecture Theatre. This will enable the attendees to witness the quality faculty demonstrate principles of anatomy, examination and surgery. Lectures and panel discussions will follow.

You're invited to participate in this prestigious academic event in Adelaide, in October 2017.

Yours sincerely

Greg Bain
Professor of Upper Limb Surgery and Research
Flinders University, Adelaide, South Australia
Chair – APWA 2017, Adelaide

Flinders UNIVERSITY

Faculty

International

Alejandro Badia (USA)
Tyson Cobb (USA)
Marc Garcia Elias (Spain)
Diego Fernandez (Switzerland)
Max Haele (Germany)
Phillippe Livernaux (France)
Steve Moran (USA)
Nash Naam (USA)
Jorge Orbay (USA)

Hand Therapy

Joy McDermid (Canada)
Josephine Wong OT (Hong Kong)
Polina Yeung PT (Hong Kong)

Asia Pacific

Greg Bain (Australia) Chairman
PC Ho (Hong Kong) *APWA President*
Toshi Nakamura (Japan) *V President*
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Wei-jen Chen (Taiwan)
Andrew Chin (Singapore)
Jeff Ecker (Australia)
Margaret Fok (Hong Kong)
Keiji Fujio (Japan)
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Program Outline

Approximate timings – subject to change.

Thursday 5th October 2017
1900-2230 Faculty Reception

Friday 6th October 2017
0800-1600 Cadaveric Workshop

Saturday 7th October 2017
0800-1600 Academic program and exhibition
1900-2300 Congress Dinner, Adelaide Oval

Sunday 8th October 2017
0800-1600 Academic program and exhibition

Dedicated Hand Therapy sessions

Submit Abstracts to APWA Website

http://apwa.asia

Follow submission guidelines

Submissions close:

Mon 12th June 2017

Congress Secretariat

the[meeting]people

APWA 2017 Annual Congress Secretariat
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International Societies
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International Federation of Societies for Hand Therapy (IFSHT)
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