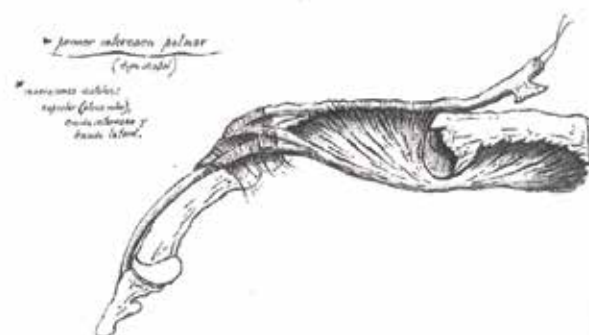




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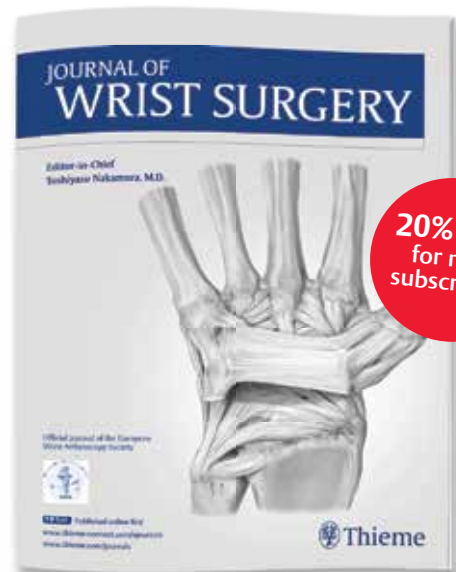
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IFSSH 50 Years on: Time to do some stock-taking

In 1966, eight Hand Surgeons came together in Chicago representing eight Societies to establish a group to share, encourage, debate and learn from each other. This is still the prime aim of what has now developed into a huge international family of 56 Member Societies, forming the International Federation of Societies for Surgery of the Hand (IFSSH). It is therefore prudent to reflect on what has been achieved over these last 50 years.

The IFSSH is governed by the Delegates of its Society Members. The day-to-day running of this Federation is done by the Executive Council (President, Past-President, Secretary-General, Secretary-Elect, President Elect, Members-at-large and Historian) and is assisted by the Administrator.

The first of the triennial Congresses was held in Rotterdam, The Netherlands in 1980. Last month we have celebrated the half centenary of our Federation at the 13th Congress in Buenos Aires, Argentina. The Organisers under the chairmanship of Eduardo Zancolli must be congratulated on a very successful and memorable event! (In this issue we have compiled a few images of the combined IFSSH-IFSHT Congress)

The IFSSH Congresses have not only grown over the years, but have integrated with the Federation of Societies for Hand Therapy (IFSHT) since the last 10

congresses. This mutual relationship has been beneficial to both the surgeons and therapists.

One of the major aims of the IFSSH is to produce Scientific Reports, which reflect a balanced and "state of the art" account of various hand related topics. The last 40 can be accessed from the IFSSH website (ifssh.info) and have also been published in the IFSSH Ezine.

The IFSSH Ezine is published every 3 months and is the international communication medium of the IFSSH. Subscription is free of charge (ezine@ifssh.info). It is full of relevant information, including helpful tips and advice from the Hand Therapist, as well as what's happening in our Member Societies. Members are encouraged to use this magazine to share information and ideas.

Educational sponsorships have been introduced in the form of the Kleinert Visiting Professor, financial support for deserving surgeons and therapists to IFSSH Congresses, financial sponsorships for courses, workshops, educational material, fellowships and projects, etc. Applications are welcomed, indeed encouraged from members of Member Societies.

The IFSSH has also recognised exceptional contribution to hand surgery by individuals by honouring them with

the title of "Giants of Hand Surgery" and "Pioneers of Hand Surgery". These names are listed on the IFSSH website.

The IFSSH Charter was thoroughly overhauled, and brought up to date. The financial auditing has become 'professional' to comply with the stringent regulations of the Illinois, USA tax laws, where the IFSSH is now officially registered as a not-for-profit organisation.

The history of the IFSSH up to now has been scrutinised for relevant and important documents which are now digitalised and thus made much more accessible. This mammoth task was undertaken by Frank Burke whom we owe special thanks.

The "World of Hand Surgery and Hand Therapy" has become internationally interconnected, readily accessible and freely available. Our Hand Family is more vibrant than ever, and is growing at a healthy pace. Hope you enjoy reading this issue of the Ezine!



Prof Ulrich Mennen
Editor, IFSSH Ezine
Past-President, IFSSH



Message from the outgoing IFSSH Secretary-General, Dr. Marc Garcia-Elias

Dear friends:

Eleven months ago, on my way back home from the customary inspection of the facilities that would hold our congress in Argentina, I wrote; "...the determination of the organizing committee in hosting this event is unparalleled. I am sure that nobody will leave Buenos Aires unchanged". I was right! The organizers have done an excellent job, and the meeting has been one of the most enjoyable, interesting, and easy going IFSSH congresses I have ever attended. Unforgettable!

As Secretary-General of the IFSSH, I went to Buenos Aires with a long list of matters to supervise, issues to discuss, and decisions to make. Five days later, no longer worried, I returned home fully satisfied. The scientific program had been balanced, carefully chosen to cover all aspects of our specialty. The benefits of mutual interaction between surgeons and therapists had been, once again, demonstrated. There have been fruitful and rewarding discussions

between the young and the more experienced, between the Eastern and the Western societies. The social program had been planned to please everyone: the flying hands over the crowded Faena Arts Center, the Tango show at the Alvear Palace, the Closing Banquet at the Yacht Club Puerto Madero.... what a colorful set of great moments to treasure. The people, the venue, the city, the country, all contributed to classify this meeting as one of the best. Thank you, Eduardo Zancolli. What you and your team have achieved is extraordinary. Congratulations!

October 27th 2016 was an important day for those who had been preparing bids to organize the 15th Congress of the IFSSH in 2022. They all had done their best to attract the sympathy of the members of the Council of Delegates with a right to vote. In the end, and without hesitation, the Council expressed unequivocally its preference: the meeting will be held in London. Not surprisingly, the word "Brexit" was seldom pronounced by the defendants of

the British option. Well done !

Another important moment of the Council of Delegates was when president of the ExCo, on behalf of the Assembly, welcomed two new members from Mexico: the "Asociación Mexicana de Cirugía de la Mano A.C." and the "Sociedad Mexicana de Cirugía de la Mano y Microcirugía S.C.". Personally, I am delighted to see my brother Mexicans joining our organization. They are not only fun people to be with, but also wise professionals to learn from.

Electing the IFSSH Executive Committee for 2016-2019 was another highlight of the Council of Delegates. None of the propositions made by Prof. Ulrich Mennen, Chairman of the Nominating Committee was dismissed by the Assembly. For the next three years, the IFSSH Executive Committee will be formed by: 1) President: Zsolt Szabo, from Hungary; 2) President Elect: Marc Garcia-Elias, from Spain; 3) Immediate Past President: Michael Tonkin, from Australia; 4) Secretary-

General: Daniel Nagle, from USA; 5) Secretary-General Elect: Goo Hyun Baek, from South Korea; 6) Historian: David Warwick, from United Kingdom, and 7) Member-at-Large: Raja Sabapathy (from India). A full report of the Delegates' Council Meeting will be provided in an upcoming IFSSH Ezine.

I'll never forget the Congress of Buenos Aires. Not only because of a carefully planned scientific and social program, but also because it was there where, having ended my three-year term as Secretary-General, the Assembly of Delegates trusted me with my new assignment as President-elect. What a big honor! I feel grateful for this. Needless to say, I'll do my best to cope effectively with what our new President asks me to. No matter what! Welcome President Szabo!

But before closing this letter, let me say a few words about the out going President, Prof. Michael Tonkin. In my opinion, he has endured one of the most difficult terms in the history of the IFSSH. Yet, he has proved to be a gentleman, a diplomat, an excellent analyzer, and an effective and intelligent leader from whom I learned a lot. I'll never forget his words when, not long ago I went through a difficult time in my life. Thank you, my President. The long applause you got at the closing ceremony was well deserved.

As I said in my first Newsletter, three years ago, our mission is not to accumulate honors and awards, but to increase and spread the knowledge of surgery of the hand throughout the globe. Let this goal guide our steps through the next three years.

Yours sincerely,

Marc Garcia-Elias
Secretary-General, IFSSH
Email: secretary@ifssh.info



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REPORT SUBMITTED OCTOBER 2015

Macroductyly Update



Figure 1. Median nerve distribution macroductyly; Lipofibromatous hamartoma of the median nerve.

Macroductyly has traditionally been considered a specific diagnosis characterized by enlarged digits in the hand or foot that is present at birth and does not undergo malignant degeneration. Involvement of a "nerve territory", most commonly the median nerve in the hand, had been noted. Enlargement of the thumb, index, and middle fingers in some combination is usually associated with a lipofibromatous hamartoma of the median nerve. (Figure 1) Similarly, enlargement of the ulnar digits can be present when the ulnar nerve is involved. (Figure 2)



Figure 2. Ulnar nerve distribution macroductyly.

Macroductyly most often is confined to a single anatomic region or limb, but cases of more than one site of involvement have been reported. The level of involvement may vary from the distal part of a single digit to an entire hand/foot or limb. All the tissues in the involved area are abnormal. Osseous structures enlarge and joints become stiffened and hyperostotic. Angular deformity of the digits is caused by asymmetric growth of the open physes. The enlargement in the typical case of macroductyly remains in its original distribution over the growth of the child. The condition may be relatively static, growing in proportion to the child, or may demonstrate progressive enlargement out of proportion to the size and growth rate of the child. When the abnormal tissues grow progressively and extend proximally into uninvolved areas, the condition is termed macrodystrophia lipomatosa. Other overgrowth conditions have

been associated with macroductyly leading to speculation that there is an underlying diagnosis causing the dysregulation of growth. The development of genome wide parallel sequencing has allowed comparison of DNA from involved and uninvolved tissues. This has led to the identification of a number of somatic mutations, occurring in the post-zygotic early embryo, and causing mosaicism in growth regulation.

Through eloquent genetic sequencing reported by multiple authors, including Rios et al.¹, the genetic abnormality was found to be a gain-of-function mutation in PIK3CA pathway (Phosphatidylinositol-4,5-Bisphosphate 3-Kinase). Because it is a postzygotic mutation some cells carry the mutation while others do not. DNA sequencing of affected tissue will show this PIK3CA mutation, while DNA sequencing of unaffected areas in the same individual will not.

The most recent, significant advance in our understanding is the discovery that macroductyly is a part of a spectrum of overgrowth disorders related to PIK3CA mutations. PIK3CA-Related Overgrowth Spectrum (PROS)² includes macrodystrophic lipomatosis, CLOVES (Congenital Lipomatous Overgrowth, Vascular malformation, Epidermal nevi, Spinal/skeletal anomalies) (Figures 3-4), as well as

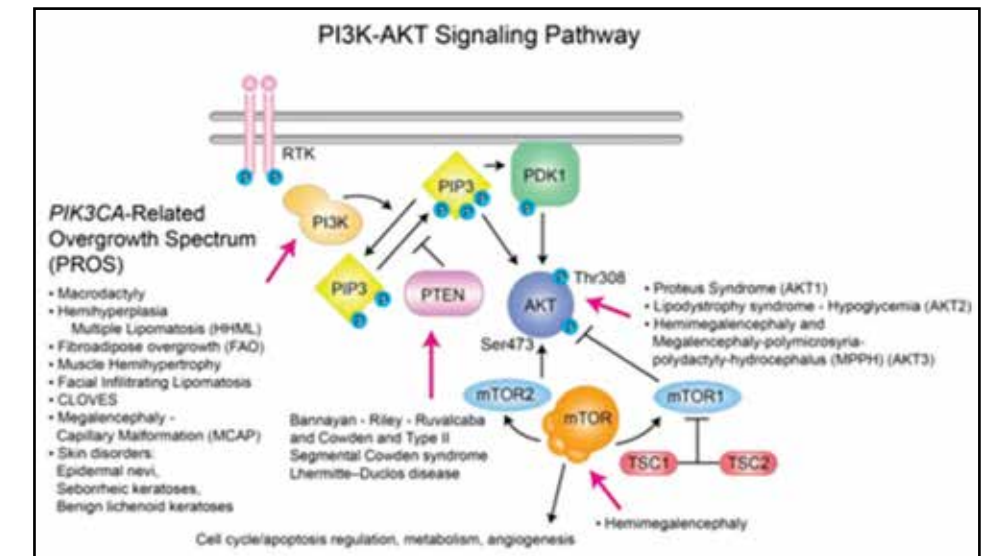


Figure 3. PI3K-AKT Pathway and associated clinical overgrowth disorders. Used with permission from Keppler-Noreuil et al. PIK3CA-Related Overgrowth Spectrum (PROS): Diagnostic and Testing Eligibility Criteria, Differential Diagnosis, and Evaluation. Am J Med Genet A. 2015 Feb; 0(2):287-295.

hemimegalencephaly and others. Interestingly, Luks et al.³ have recently reported that PIK3CA mutations are present in most isolated lymphatic malformations as well as conditions in which lymphatic malformations are a component.

The clinical presentation of a PIK3CA mutation/mosaicism would then depend on the location, timing and specific tissue in which the mutation occurred. It appears to now be appropriate to refer to all these conditions as "overgrowth" conditions, and sub-divide them further according to phenotypic presentation and tissue involved. This has already been done in the new IFSSH Classification of Congenital Anomalies, the OMT(Oberg Manske Tonkin)

classification, where macroductyly is placed into the general category of dysplasia, and then subdivided into hypertrophy or tumorous conditions, with further delineation depending on amount of upper limb involved.⁴

PIK3CA, along with mTOR and AKT, constitute a signaling pathway shown in Figure 3. This pathway is involved with the regulation of growth, protein synthesis and cellular proliferation. Mutations within this pathway have been found in various cancers, and treatment for the malignancies now is focused at blocking the mTOR receptors. This has led to the development of targeted chemotherapeutic agents with encouraging results in the cancer world.⁵

PROS conditions are non-malignant, although many have extensive associated morbidity (Figure 4A-D). It is hoped that the same mTOR blocking strategy used in cancer treatment can control or modulate the growth abnormality in children with PROS. Treatment will not reverse the condition, and must be administered over a prolonged period of time, with no clear endpoint.



Figure 4A. PROS - macrodactyly



Figure 4B. PROS - CLOVES



Figure 4C. PROS- Muscular Hemihypertrophy



Figure 4D. PROS-Macrodystrophia Lipomatosa

“macrodactyly is a part of a spectrum of overgrowth disorders related to PIK3CA mutations”

Clinical trials have begun utilizing these medications to treat the most severe conditions, with promising results.^{6,7} At our institution we have treated several patients with large vascular components with mTOR blocking agents, and have been likewise encouraged with the short-term results. However, at this time it is unclear exactly which patients can benefit from treatment. Side effects and morbidity include mucositis, hypercholesterolemia/hypertriglyceridemia, dyspnea,

hypertension, anemia/thrombocytopenia, peripheral edema, creatinine elevation, and potential hard tissue malignancy. Long-term follow-up is mandatory. In the next few years hopefully we will have more information regarding ideal candidates and length of treatment.

Surgical treatment of patients with upper limb macrodactyly includes options such as ray amputation, de-bulking procedures, and epiphysiodesis depending on the clinical findings. In patients with mild to moderate enlargement de-bulking +/- epiphysiodesis can be a reasonable option; however in patients with extremely large index and/or middle fingers with very little use ray amputation is a good alternative as multiple de-bulkings and epiphysiodeses procedures are unlikely to improve function or cosmetic appearance. (Figure 5) A recent publication by Gluck and Ezaki⁸ has outlined a reasonable algorithm for the treatment of these patients. (Figure 6)



Figure 5.

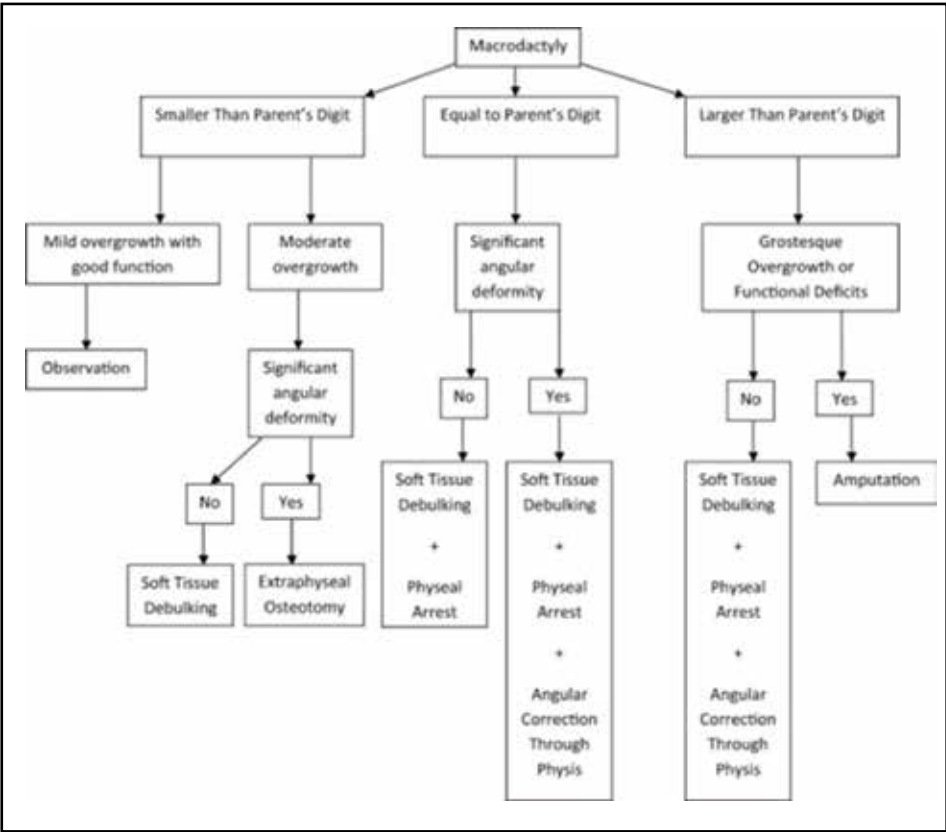


Figure 6. Treatment algorithm. Used with permission from Gluck J & Ezaki M. Surgical Treatment of Macrodactyly. J Hand Surg Am. 2015;40(7):1461-1468.

Summary

Somatic mutations resulting in limb overgrowth can present as macrodactyly alone or involve the whole upper or lower limb as well as many types of different tissue. DNA sequencing has identified mutations along the PI3K-AKT signaling pathway as the culprit in the affected tissue. Treatment can involve observation, surgery for de-bulking/ amputation, and/or chemotherapeutic agents for mTOR blockade. Hopefully in the near future we will be able to identify the appropriate time and place for each type of intervention.

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Ayan Gulgonen

1937 - 2016

Ayan Gulgonen, a mentor and pioneer in the field of Hand Surgery and Microsurgery in Turkey, passed away on August 25, 2016. The international family of hand surgeons and microsurgeons feel the personal loss of a great friend and colleague, and the medical world a loss of a true giant in the field.

Ayan Gulgonen was trained in general surgery at the Geissen-Evangelisches Hospital and then worked as an "Oberarzt" at Unfall-Krankenhaus in Vienna, as well as in Zofingen-Berzirkisspal in Switzerland. He returned to Turkey in 1969, where he was faculty and division chief of the Emergency Department at the Hacettepe University. In 1972, he completed his hand surgery fellowship at Columbia University. After serving as a faculty member at the Department of Plastic and Reconstructive Surgery at Gulhane Military Medical Academy (1974-1975), Professor Gulgonen joined the faculty of Medicine at Istanbul University. In 1978, he pursued additional microsurgery training at Hopital Jeanne D'Arc in France. Upon Dr. Gulgonen's return to Turkey, he established the first hand and microsurgery group in the country. In 1980, he presented his thesis on "Finger Replantations" and earned professorship at the Marmara University. He served as the chief of hand surgery at VKV American Hospital, and was active in training fellows until his retirement in 2010.

Professor Gulgonen was one of the founders of the Turkish and Hand and Upper Extremity Surgery Society in 1977. In the history of the society, Dr. Gulgonen is considered the man who initiated the application of

Hand Surgery and Microsurgery together. Between 1978 and 1980, Professor Gulgonen accomplished many "firsts" in Turkish Microsurgery, including the first replantation of 5 digits, toe-to-thumb transfer, replantation of upper and lower extremity, among others. Professor Gulgonen was also a renowned teacher, having trained numerous surgeons in hand and microsurgery, establishing national symposiums on advanced techniques in hand and microsurgery. In recognition of his efforts, Dr. Gulgonen received the "Eczcibasi Science Award" in 1979, and the "Medical Sciences Award" by the Istanbul Medical Chamber in 1994.

Great surgeons are remembered by generations because of their wisdom and actions that altered the course of history. Professor Gulgonen changed medical history in Turkey with his actions and perseverance to strive for excellence. Gulgonen also had the humility and passion that makes him a true giant.

A few words and good-bye to my friend Ayan; a man, who by nature was polite and pleasant. He was a humble man of few words who had a vision and the courage to try to achieve the most from the often-meagre opportunities. Ayan was a surgeon of great strength and perseverance, who believed that it was worth the effort to strive for excellence, even when things seemed impossible. Ayan lived his life well.

Panayotis N. Soucacos, MD, FACS

November 2016



Cadaveric Human Specimens for your Medical Research, Training or Educational Needs

When it comes to medical research, development and surgical training, experts agree that the use of human tissue is far safer and superior to textbooks, computer simulations or artificial substitutes. In the field of hand surgery, many advancements, including the world's first pediatric bilateral hand transplant, can be attributed to hours of research, training and practice using cadaver tissue.

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EDUARDO A ZANCOLLI, MD,



Dr Zancolli trained at the Finochietto School of Surgery, Rawson Hospital, in Argentina and at the Campbell Clinic in Memphis, Tennessee where he studied orthopaedic surgery for 6 months under H Boyd, M J Steward, R Knight, J S Speed and H Smith. He also visited the Hand Service of Michael Mason, Harvey S. Allen and Summer Koch at the Passavant Memorial Hospital of Chicago. He studied scoliosis and arthritic hand surgery at the Hospital for Special Surgery in New York with J Cobb and L R Straub.

Dr Zancolli visited the Rehabilitation Center of Warm Springs, Georgia in 1950, where he observed tendon transfers and reconstructive procedures for hip and spine deformities.

This influenced him to initiate the Orthopaedic Service at the Rehabilitation Centre of Buenos Aires where special emphasis was given to paralytic deformities of the upper limb. A strong group of orthopaedic and hand surgeons were formed and worked with him at this facility for more than 20 years. A number of publications on the spastic hand, tetraplegic upper limb and congenital malformations evolved from their experiences. He is especially known for the two textbooks on the hand: one on the "Structural and Dynamic bases of Hand Surgery" and a massive "Atlas of Surgical Anatomy of the Hand".

Prof. Zancolli is Honorary Professor at the Medical School of Buenos Aires, and at the Córdoba University in Argentina. He was Professor of Orthopaedics and Traumatology at the Medical School of Buenos Aires and at UCES Medical School in Buenos Aires. He is the ninth member elected to the National Academy of Medicine and is also a member of the Academy of Medicine of Córdoba.

Prof. Zancolli is Past-President of the Argentine Society of

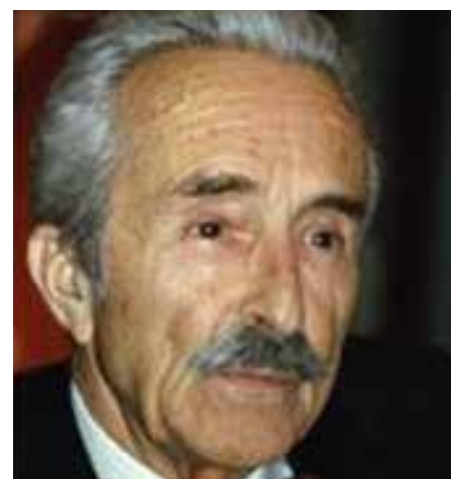
Orthopaedics and Traumatology, the Argentine and South American Societies for Surgery of the Hand and the Society of Hip and Knee Surgery. He is Honorary Member of the Hand Societies of the following countries: Argentina, USA, Australia, Spain, South Africa, Great Britain, Chile, Costa Rica, Venezuela, Uruguay, and Brazil.

Prof. Zancolli has taught hand surgery at the National Rehabilitation Centre and at the Medical School of Buenos Aires. He has lectured world-wide through series of conferences, courses and surgical programs and was Visiting Professor at Harvard, Cornell, Irvine and Stanford Universities. The majority of hand surgeons in Argentina have received training from him in hand and orthopaedic surgery.

At the sixth IFSSH Congress in Helsinki, Finland, July 1995, Prof. Eduardo A Zancolli was honoured as a "Pioneer of Hand Surgery"

He was also honoured as Honorary President of the 13th IFSSH Congress in Buenos Aires, Argentina, in October 2016.

JACQUES MICHON (1921-1989)



Jacques Michon was born on 22 January 1921 in Nancy, France. He was the eldest of four sons. Their father was professor of Medicine, and this influenced him to study medicine. The Second World War saw him serving in the Military in Algeria from 1945 to 1946. In 1948 he completed his medical studies, and became a trainee under Professor Chalmot. In 1955 he graduated as a surgeon and became "Professeur agrégé" in 1958.

Professor Michon's interest in traumatology was influenced by Robert Merle D'Aubigné at the Hôpital Cochin, as well as by Daniel Morel-Fatio at the Hôpital Vaugirard. During this time he realised that the injured hand was a neglected part of both, Plastic and Reconstructive Surgery, and Surgical Traumatology.

The need to manage the injured hand better was further influenced and encouraged by same minded colleagues such as Marc Iselin in Paris, Pierre Colson in Lyon, Herbert Seddon in London, Claude Verdan in Lausanne, William Littler and James Smith in New York.

Prof Michon was one of the first surgeons in Europe to use the microscope for nerve reconstructive surgery, when he returned from a stint in the USA in 1963.

In 1970 he established the surgical service in the Hôpital Jeanne d'Arc in Nancy, France, with special emphases on the reconstructive aspect of injured upper limbs. Some of his students included Claude Guibert, Guy Foucher and Michel Merle, who caught on to this "new speciality" and propagated the importance of excellent primary care for the injured hand.

This then led to the establishment of the "Confédération Européenne des Services d'Urgences de la Main" by Jacques Michon, R Vilain, G Foucher and M Merle. Presently there are some 30 such centres of excellence in Europe.

Jacques Michon was also one of the founding fathers of the Société Française de la Main (French Society for Surgery of the Hand) in 1963. He was president of this Society from 1972-1973, and also president of the French Society for Plastic and Reconstructive Surgery in 1980. Michon was member and honorary member of various international societies.

Jacques Michon was still active in his Clinic days before he passed away on 9 March 1989. Although his personality was characterised by a humble and quiet demeanour, he had an intense desire and exceptional energy to improve healthcare to the injured hand patient.

The IFSSH, at its sixth international congress in Helsinki, Finland, 3-7 July 1995, honoured Prof Jacques Michon with the title "Pioneer of Hand Surgery".

An exercise program for the chronically painful wrist



Annemieke Videler, PT, PhD

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Physical examination and imaging of chronic wrist pain is a well-documented challenge. Nevertheless, an objective diagnosis that directly explains the pain often remains elusive. These non-specific chronic wrist pain patients are regularly referred to a physio-/hand therapist. Immobilisation, avoiding excessive wrist load, steroid injections and various physical therapy methods predominantly focus on the pain itself. In our

experience these methods do not result in a satisfactory long-term pain relief. Therefore, we have been treating these patients since 1992 with an exercise program that is not primarily focused on the pain but on functional re-education and strengthening of the musculoskeletal system. This article discusses the rationale, the exercise program and some study results.

THE RATIONALE

If the major complaint of the patient with a chronic wrist disorder is pain, why start exercising? The exercise program that is developed in our clinic is based on the idea that the pain is maintained by subtle overload mechanisms in the wrist due to persisting compensatory movement patterns. A movement pattern is the visual result of a series of complex information processing¹. The intention to perform a movement activates a motor-planning process that combines acquired abstract 'motor programming rules' with a selection of a multitude of perceptive, proprioceptive and cognitive input. An initial motor

strategy is composed. Immediately after the planned movement is effectuated, feedback information from the peripheral effector organs will contribute to the continuous adaptation of the motor strategy. This process is continuously changing the strategy until it is optimally adjusted to the peripheral body and the environment. The result is a customised movement pattern that satisfies the primary intention². Repeated adaptation of the same strategy will, at some point, require a revision of the 'motor programming rules' that will make the adaptation unnecessary and thus create a more efficient motor strategy³. For example, a definite change in the peripheral effector organ, such as the amputation of a finger, will lead to adaptation of the 'motor programming rules' for all actions that involved that finger^{2,3}. This model of dynamic motor programming can be used to approach chronic wrist pain from a different point of view. What if the feedback information contains pain? Pain will also serve as input and the motor strategy will adapt to this pain with a compensatory movement

pattern. This compensatory movement pattern is the physiological reaction to a temporary change in peripheral feedback. If the pain disappears, the adaptation will not be necessary anymore and the original motor strategy is resumed. But what happens when the pain exists long enough to induce a revision of the programming rules? The compensatory movement pattern will be upgraded as the new standard motor strategy. Even when the original pain has disappeared, the 'compensatory' movement pattern will continue.



Figure 1: Circle of chronic wrist pain

It is our hypothesis that even if there is no objective pathology in the wrist (any more), chronic pain can very well be maintained by such a persisting compensatory movement pattern. In a joint as complex as the wrist a subtle change in movement pattern can lead towards loss of strength and functional instability which in turn leads to disproportional loading of the musculoskeletal system and pain [Figure 1].

Functional re-education and

strengthening of the musculoskeletal system aims to correct these persistent compensatory motor patterns. In our experience this approach may offer long-term pain relief.

THE EXERCISE PROGRAM

The exercise program covers 12 weeks of intensive training. In the first sessions, the emphasis lies on a thorough perception of the rationale and goal of the treatment and instructions for home exercises. It is really important that although pain may be present, the patient is encouraged to start with active exercises. The use of a supporting wrist brace is cut down as much as possible. In the beginning the therapist helps the patient to become aware of their wrist positioning, compensatory movements and pain provoking activities. Furthermore, a lot of feedback is given about having a neutral position of the wrist during especially load bearing activities

Figure 2: Frontal view of the neutral wrist position

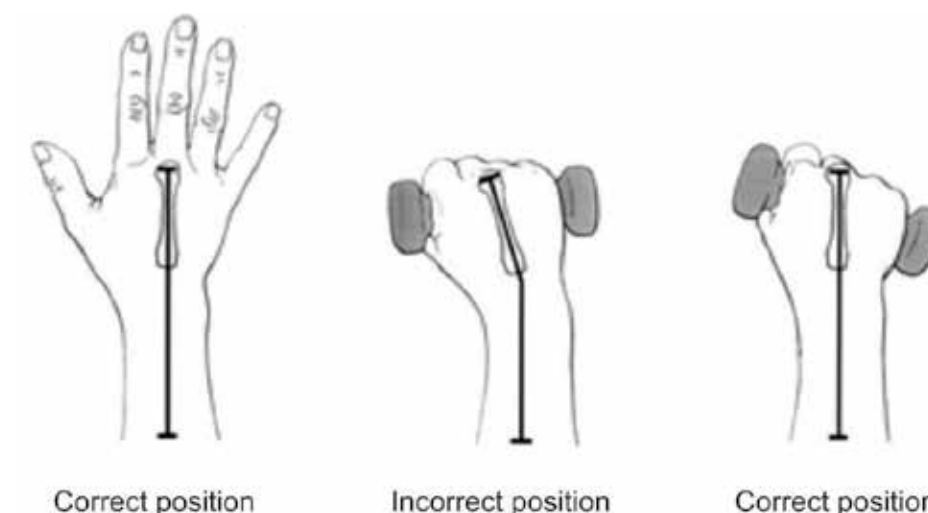


Figure 3: Lateral view of the neutral wrist position

[Figure 2 & 3].

The program consists of exercises that focus on different aspects of our motor system. Some exercises focus on strength, others more on wrist stability, proprioception, coordination or mobility. During therapy sessions the attention will be alternately focused on a different aspect of the motor system but the integration of all aspects should always be kept in mind. If we train, for example, muscle strength, proprioception and coordination will, of course, also be part of the exercise. The course of the program is not fixed. Different aspects require attention for a longer or shorter period, earlier or later in the program

adjusted to the individual patient. Strength and co-ordination exercises aim to achieve a good qualitative control of movement and functional stability. Especially the long extrinsic muscles of the hand should be trained as active stabilisers of the wrist. The exercises are as much as possible in the pain-free range. Initially the focus is on positioning and stabilising the wrist during upper extremity movement. During the therapy sessions the patient works towards extending the pain-free range with increased loading and complexity of movements. Some examples of exercises are given

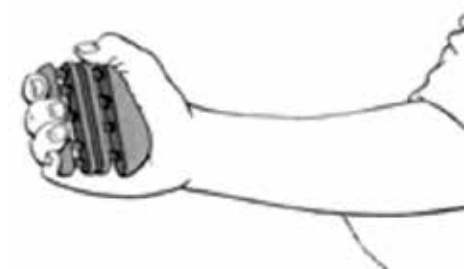


Figure 4: Training of extrinsic muscles with handgrip



Figure 5: Stabilisation of the patient's wrist while the therapist gives isometric resistance in different directions

below [Figures 4-8].

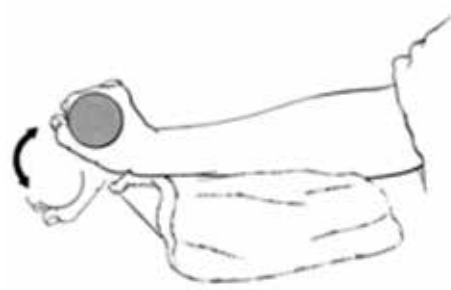


Figure 6: Dynamic exercises with a dumbbell

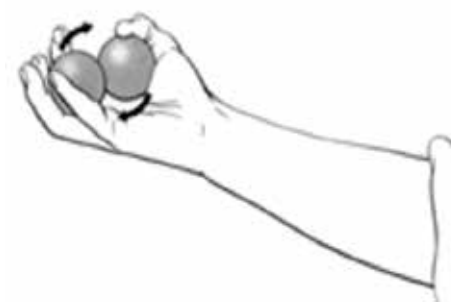


Figure 7: Manipulating heavier objects in the hand

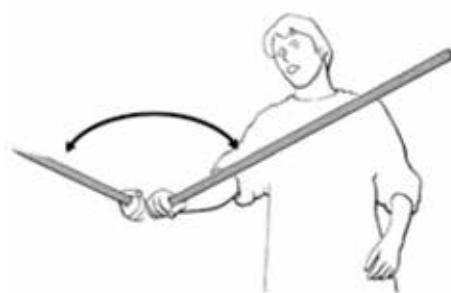


Figure 8: Stabilization of the wrist in pro- and supination movements

The exercises should be as functional as possible and directed at the problematic actions of the patient. With the optimisation of mobility and strength and the gradually increasing stability and complexity of movement it is possible to work towards these problematic activities. It is also important to advise

and inform the patient about the involvement of the upper extremity, especially the affected wrist, during daily activities. Variation in training by using different materials and changing in posture are absolutely necessary for optimal functional results.^{1,2} This requires creativity and motivation from the therapist and patient.

It takes a lot of time and effort from the patient to regain a functional and stable motor pattern in the wrist. With the help of the therapist a patient should try to become aware of wrist positioning, compensatory movements and pain provoking activities during daily activities and work. Obviously a clear understanding of the rationale of the program, a good motivation and creativity are essential for both the therapist and the patient.

STUDY RESULTS

We have performed a couple of studies to support the rationale of our exercise program and to evaluate its effect. The first studies were set up to investigate if motor function is indeed different in chronic wrist pain patients compared to healthy subjects. Furthermore, we wanted to study if there is a centrally disturbed motor programming in these patients. In this study fine motor function between 18 patients and 20 healthy controls of the same age and gender was studied.⁴ All subjects performed a writing task and fluency of movement was analysed using a customized computer setup. The

results of this study showed that patients moved significantly less fluently compared to the healthy matched controls. And even more interesting, the same disturbance in fine motor control was found at the contra lateral, non-painful wrist.⁵ These results support our view that chronic wrist pain can disturb cerebral motor programming maintaining the circle of pain.

To evaluate the effect of the program a retrospective pilot study was performed among 100 patients who were referred to follow the program. The patients were selected from the outpatient clinic of the department of plastic, reconstructive and hand surgery. All patients had a pain history of the wrist of more than six months' duration and no objective cause for the pain nor any indications to justify further examination. The questionnaire consisted of questions related to the time and duration that the exercise program was followed, a visual analogue scale to assess patient satisfaction on pain relief, the PRWHE for the rating of wrist pain and disability questions about recreational activities, job history and ability to work.

Eighty-four completed questionnaires (84%) were returned. The 16 questionnaires that were not returned were sent to patients who had moved to an unknown address (11%) or to patients who were not willing to participate in the study (5%). Following analysis

of the questionnaires 24 patients were excluded from the study. Twenty-three of these patients did not complete the exercise program and one patient had surgery after a second opinion. The remaining 60 patients had all completed the exercise program and had not received any further treatment since then. These were 51 women and 9 men with a mean age of 24 years old. The follow-up ranges from 2 to 50 months with a mean of 17 months. The data from the visual analogue scale for pain relief (VAS) could be separated into three groups. The largest group of 29 patients (48%) were very satisfied with the pain relief (score 7-10 on the VAS). Sixteen patients scored the maximum possible satisfaction (score 10 on VAS = 27%). An intermediate group of 13 patients (22%) did have some benefit from the therapy and were equally satisfied with the gained pain relief (score 4-6 on the VAS). However, there is also a group of 18 patients (30%) that did not have long term pain relief at all (score 0-3 on the VAS). The results from the PRWHE ranged from 0 to 100. A total wrist score of zero means that the patient experiences no pain or disability at all and a score of 100 means extreme pain and complete disablement. The data in our study show an equal spread between score 0 and 90. However, the same three groups could be identified when these data were compared with the results of the VAS. A statistically significant correlation was shown between a good (=high) score on the

VAS and a good (=low) score on the PRWHE. Spearman rank correlation coefficient ($r_s = -0.7$, $p < 0.0001$).

Before treatment with the exercise program 20 patients (33%) were not able to work at all because of their wrist pain and depended totally on health insurance. Five patients were partially disabled because of their wrist pain and only 23 patients were able to work in their own profession without adjustment. The remaining 12 patients were unemployed or students. At the time of evaluation there was a decrease in job disablement by 21% and 38 patients (63%) were completely able to work in their own profession without being restricted by their wrist pain.

“patients with a chronically non-specific painful wrist can be successfully treated with an exercise program”

The results of the questionnaire showed that patients with a chronically non-specific painful wrist can be successfully treated with an exercise program. Further study will be necessary to understand why some patients improve and others do not. In a prospective longitudinal study, it may be possible to identify criteria that will select patients with a high potential to benefit from this program.

Our exercise program has been published in a Dutch booklet and has been used successfully for many years. It has now been translated into English: "Exercise Therapy for Chronic Wrist Pain". The booklet elaborates on the issues of chronic wrist pain and on the rationale behind treatment with our exercise program. The content and structure of the exercise program is thoroughly discussed and many examples of exercises (with drawings) are given. An exercise program that focuses on the correction of impaired motor skills is important in many chronic wrist problems. In patients with mid-carpal instability, for example, the exercise program is perfect for improving the function and usability of the wrist.

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"Exercise Therapy for Chronic Wrist Pain"

The booklet elaborates on the issues of chronic wrist pain and on the rationale behind treatment with our exercise program. The content and structure of the exercise program is thoroughly discussed and many examples of exercises (with drawings) are given. An exercise program that focuses on the correction of impaired motor skills is important in many chronic wrist problems. In patients with midcarpal instability, for example, the exercise program is perfect for improving the function and usability of the wrist.

This booklet contains of 44 pages, is written for physio- and occupational therapists and should be seen as a guide in the treatment of patients with chronic wrist pain. We hope that this guide will inspire you to use our vision as a potential approach in your treatment of this category of patients. Many positive responses have been received since the publication of the first edition.

The cost of the booklet is 15 euros (~\$21) + postage costs

If you're interested in purchasing the booklet please send an email to Annemieke (ajvideler@me.com) so she can arrange your order.

Member Society Updates

GERMAN SOCIETY FOR SURGERY OF THE HAND

The German Society for Surgery of the Hand (Deutsche Gesellschaft für Handchirurgie = DGH) has a busy time. With the annual meeting in October 2015 in Ludwigsburg we started a series of combined meetings with other national societies for surgery of the hand, which will culminate in 2019 with the IFSSH meeting in Berlin. In Ludwigsburg we hosted the Italian Society for Surgery of the Hand. The meeting was very successful with a total of more than 700 participants. The meeting ended with an excursion through the vineyards around Ludwigsburg and a wine tasting.

In January 2016 the DGH was the guest society at the annual meeting of the American Association for Hand Surgery (AAHS) in Scottsdale.

In May 2016 the DGH was invited to join the Meeting of the Chinese Society for Surgery of the Hand in Qingdao. 23 German hand surgeons used the opportunity to visit Qingdao, to meet Chinese colleagues, who were in Germany over the last decade as visiting fellows, and to taste beer from the world-famous "Tsingtao" Brewery, which was founded in 1903 by Germans.

In September 2016 we were able to return the invitation and had the AAHS as our guest society at the annual DGH meeting in Frankfurt. The meeting was very well attended with a total of nearly 800 participants from Germany, USA, Austria, and Switzerland. The day before the meeting was a day-long live surgery workshop at the Department for Plastic, Hand and Reconstructive Surgery at the BG Trauma Center in Frankfurt. Main topics at the symposium were microsurgical reconstruction after severe hand injuries, wide awake surgery, and malignant tumors

at the hand and forearm. We were honored to have William (Bill) Cooney, the former head of the department for hand surgery at the Mayo Clinic, to present the Buck-Gramcko lecture.

In October 2016 there will be a further combined meeting of the DGH and the Italian Society for Hand Surgery, this time taking place in Palermo, Sicily, Italy. The annual meeting 2017 of the DGH will be in Munich with the British Hand Society as the guest society, and in 2018 we will welcome our colleagues from the Swiss Society for Surgery of the Hand in Mannheim.

The DGH has at the moment 905 members. We all look forward to welcoming hand surgeons and hand therapists from all over the world to Berlin in 2019.

Prof. Dr. Karl-Josef Prommersberger IFSSH delegate of the DGH



Michael Sauerbier (Congress president of the annual DGH meeting in Frankfurt), Nicola Borisch (President of the DGH) with Bill Cooney, the Buck-Gramcko lecturer, and Ulrich Lanz, Pioneer of Hand Surgery



The delegation of the DGH visiting the meeting of the Chinese Society for Handsurgery in Qingdao

HELLENIC SOCIETY FOR SURGERY OF THE HAND

The Hellenic (Greek) Society for Surgery of the Hand and Upper Extremity holds its Annual Meeting for the year 2016, in Larissa from December 1 to December 3. It will be the 22nd Consecutive Combined Meeting with the Hellenic Society of Reconstructive Microsurgery.

Surgery of the Hand in Greece has a significant tradition long before the establishment of the official Associations for the Surgery of the Hand and Reconstructive Microsurgery. Soon after this establishment, the combined annual meetings took place with great success helping especially residents and young surgeons to be acquainted with the practice and secrets of Hand Surgery. Six national and international Hand Surgery workshops and seminars were organized in Greece in 2016 providing a high level training in more than 200 young surgeons.

This year the convention will take place in Larissa, at the facilities of the Medical School of the University of Thessaly. The Scientific Program will cover many topics of Hand Surgery including trauma, osteoarthritis, instability, soft tissue coverage, tendon transfers and congenital abnormalities. The most known and experienced Greek Hand Surgeons will be participate in the Meeting and present their work.

International participation this year will be outstanding. Four distinguished colleagues and renowned Surgeons will honor the Meeting with their presence and lectures. These are Drs Dean Sotereanos and Mark Baratz from the USA, Dr Marko Bubasirevic from Serbia and Dr Alexandru Georgescu from Romania. Their expertise in the fields of Hand Surgery and Microsurgery and also their teaching experience will contribute to a high scientific level of the Meeting.

Larissa is the place where Hippocrates, the father of Medicine, lived his last years, died, and was buried. His tomb is a significant monument for people who

know and like history. Larissa is a very nice city which is attractive for everybody to visit and not only for scientific reasons.

Our Associations invite you to attend the Meeting and enjoy a wonderful time in Larissa.

THE HONG KONG SOCIETY FOR SURGERY OF THE HAND

On 18 March 2016, the 2016-2018 Council of the Hong Kong Society of Surgery of the Hand (HKSSH) had been elected. Our current council includes experience as well as young and energetic members. We aim at promoting hand surgery among the surgeons and the allied health personnel. Our council members are:

President: Dr CHAN, Ping-Tak
Vice-President: Dr LAU Yan-Kit
President-Elect: Dr WONG, Hin-Keung
Secretary: Dr KOO, Siu-Cheong Jeffrey Justin
Treasurer: Dr WAN, Siu-Ho
Council Member: Dr IP, Wing-Yuk; Dr CHOW, Ching-San



Our society is formed in 1986 by a group of enthusiastic pioneers, including Prof PC Leung and Prof SP Chow. This year, we are celebrating the 30th Anniversary of our society. A symposium will be held on 12 Nov 2016 to denote our celebration. The theme is "continuing the legacy, committed to the future". We are looking forward for this memorable event. Esther; Dr YAU, Leung-Kai Edmund



INDIAN SOCIETY FOR SURGERY OF THE HAND

The 2016 Annual meeting of the ISSH was held between the 15th to 17th September, 2016 at Ranchi, the state capital of Jharkhand. It is a developing state of India, rich in minerals. The site was chosen as per the policy of the ISSH, whereby once every 3 or 4 years we reach out to an area where the meeting has never been held. It gives the opportunity to the local surgeons to project Hand surgery in the region. The organizing team led by Dr. Anant Sinha took on the challenge very well. Presently Ranchi is more known as the hometown of the Captain of the Indian Cricket Team Mr. Dhoni. In line with that the whole meeting was held at the Cricket Club. The club did have good rooms and it provided a good ambience for the visitors since the halls and the lobby was studded with photographs and memorabilia of great cricketers and matches. The organizers had opened up the stadium for the delegates to play before the dinner. It was a rare opportunity for everyone to be at the flood lit stadium and even our overseas visitors had a great time.

The theme of the meeting was "Back to Basics". ISSH has two orations named after the doyens of Indian Hand Surgery, Pro. R. Venkataswami and Prof. BB Joshi. The Venkataswami oration was delivered by Prof Goo Hyun Baek from Korea and the BB Joshi oration was delivered by Prof Martin Boyer of the Washington University, USA.

The Indian Hand Society fondly remembered the contributions of Dr Robert Acland who passed away recently. ISSH ever remains in debt to Dr. Acland who graciously transferred the copyright of his popular 'Red book', the Practice Manual of Microsurgery; the latest edition was published with Dr Raja Sabapathy joining as co author. The proceeds has helped the ISSH to institute the Dr. Acland International Travelling Fellowship, a mid career award for an Indian Surgeon to take up a 3 weeks study tour abroad.

The next meeting of the ISSH will be in Mumbai on 21st, 22nd & 23rd September, 2017 under the chairmanship of Dr. Pankaj Ahire (<http://isscon2017.com/>)

Prof Richard Gelbermann and Prof James Bertelli will be guest orators and this is held with the Singapore Society for Surgery of the Hand as the Guest Society. Dr Ravi Gupta of Chandigarh and Dr. Rajendra Nehete of Nashik are the current President and Secretary of the society.



(L-R) Dr. Rajendra Nehete, Secretary, Dr. Prakash Kotwal, President, ISSH and the Prof. Venkataswami Orator Dr. Goo Hyun Baek



Dr. Martin Boyer facilitated by the Organising Chairman of the Congress

www.ifsht.org | info@ifsht.org

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SPOTLIGHT ON IFSHT MEMBER SOCIETY: FINLAND

The Finnish Hand Therapy Society has 289 members, two thirds of whom are OTs and the remaining one third are PTs. This year's biggest society event was the 26th Scandinavian Hand Society Congress, March 31-April 3 in Levi, Lapland which was organized together with the Finnish Society for Surgery of the Hand.

The therapists' program consisted of focus sessions



At the Levi congress; Back row L to R: Pia Nahi, Elina Kanninen (Vice President), Virpi Natt (President), Sari Marjala (Secretary), Tiina Marjala (Treasurer), and front row from L to R: Annu Voipio (IFSHT delegate), Saara Raatikainen, Mira Sillanpää, Anna Piironen. Piia Pajunen is absent.

on new insights in neuroscience and pain mechanisms as well as the role of fascia in upper limb pain. The participants also deepened their understanding of peripheral neuropathies, the central changes related to them, and the clinical means to measure them. The information was brought together through learning how to interpret functional and sensory assessments and base clinical practice on the results. Other courses this year will be basic splinting courses in Helsinki and Oulu as well as a course on evaluation of the hand for junior therapists in Jyväskylä at the end of the year. The Finnish Hand Therapy Society publishes an electronic journal on its website four times a year.

KNOW WHAT IS GOING ON AT THE 2016 IFSHT CONGRESS



If you are unable to join us in Buenos Aires, follow us on our IFSHT Facebook page to keep up with the scientific and social events at the Congress.

2013-2016 IFSHT ACCOMPLISHMENTS

Much of the work of the IFSHT Executive Committee (EXCO) has been accomplished through regular Skype meetings. These past three years have seen

- Substantial upgrades to the IFSHT website
- Survey of member countries
- Significant improvements to the treasurer's accounting processes
- Increase in member countries from 41 to 50
- Establishment of regular communication through the IFSHT Facebook page, Hand Therapy Connections E-Newsletter and the IFSSH Ezine.

Sarah Ewald, our outgoing President, has represented IFSHT at the American, Brazilian, Asia-Pacific and European hand conferences. To prepare for the Triennial Congress in Buenos Aires she has worked tirelessly with Birgitta Rosén to develop the scientific program, and with Beatriz Inés Piso, local organizing committee chairperson, to ensure the success of the congress. Ursula Wendling, has served two terms as IFSHT Secretary General to coordinate IFSHT communication and keep everyone organized.

IFSHT, a totally volunteer organization, appreciates the contribution of the EXCO and all volunteers.

IFSSH EZINE

The IFSHT contribution to the July 2016 IFSSH Ezine (<http://www.ifsht.info/ezine.html>) is a discussion by Birgitta Rosén and Pernilla Vikström



Imagery exercises from the sensory re-learning model.

Please write to presidentelect@IFSHT.org if you would like to contribute, or if you have a topic to suggest.

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

Letter to the Editor

Alexander Zolotov

Thank you very much for the last issue of the IFSSH Ezine (August 2016, #23)

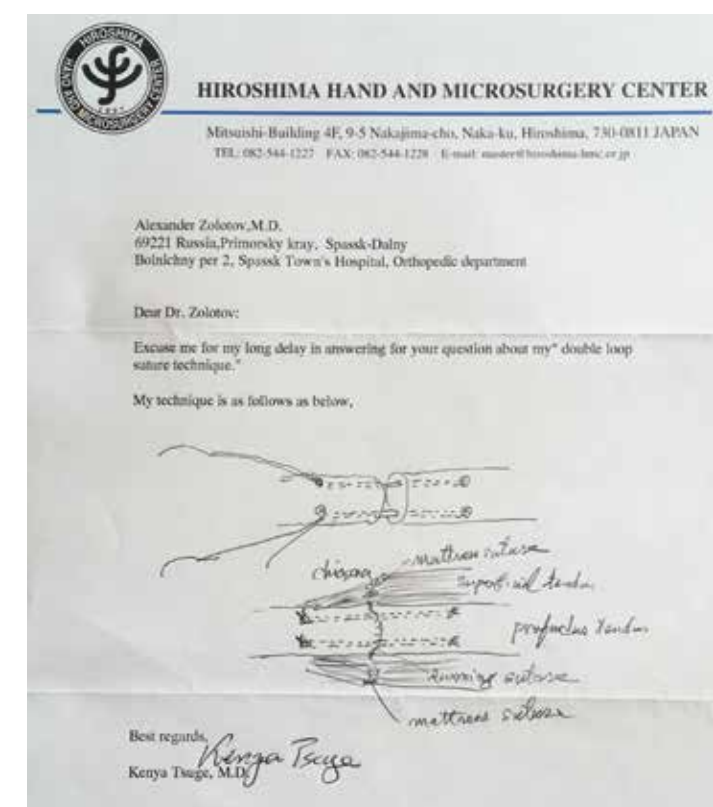
For several years the Ezine has become a friend and a teacher for hand surgeons around the world. I appreciate your contribution a great deal.

I sincerely regret the passing of Kenya Tsuge. Actually, Kenya Tsuge was my pen friend and "distant" teacher for a long time. In the 80's I have known about his original loop tendon suture technique and sent him a letter with plenty of questions concerning the practical details. I received an answer from this famous Japanese surgeon very soon. It was a parcel with copies of Tsuge's articles, a chapter from the author's surgical atlas, as well as several boxes with original loop needles. Kenya Tsuge shared his knowledge and experience generously. He helped me with advice in complicated clinical cases, and was interested in my articles about using his tendon suture technique which I published in Russian and international journals. Professor Tsuge was proud that his method was spread around the world.

Michael Tonkin (IFSSH President) formulated the chief purposes of the IFSSH in the last issue of the Ezine. One of them is to promote the free and full exchange of knowledge, to improve and widen the opportunities for study and observation of Hand Surgery in the various countries. According to that, Kenya Tsuge was a real Pioneer of the Hand Surgery.

Below is the letter from 2004, in which Kenya Tsuge made a pencil drawing of his suture technique. This drawing has historical significance and can be of interest to readers of the Ezine.

Best regards,
Alexander Zolotov,
Vladivostok
www.drzolotov.com



Pearls of wisdom

Marc Garcia-Elias

Reconstruction of the central band of the radioulnar interosseous membrane using a length adjustable bone-tendon-bone graft

On June 15th, 1951, the untimely death of the British Orthopaedic Surgeon Peter Gordon Essex-Lopresti put an end to a remarkable career (McGlinn et al., 2013). Trained in Orthopaedic Surgery at the London Hospital, he worked at the Birmingham Accident Hospital where he earned an excellent reputation as orthopaedic surgeon and prolific investigator. On May 1951, few months before passing away, he was awarded a Hunterian Professorship at the Royal College of Surgeons in recognition of the huge amount of work done on the diagnosis and treatment of the fractures of the Os Calcis. Oddly enough, his name would not be remembered for that enormous contribution. His name would be forever linked to a 3-pages long article in which he described, for the first time, one of the most challenging fracture-dislocations of the forearm: an injury characterized by the presence of an unstable radial head fracture, a complete disruption of the radioulnar interosseous membrane (IOM), a detachment or disruption of the triangular fibrocartilage complex (TFCC), and a

dislocation of the radius relative to the fixed ulna (Essex-Lopresti, 1951). Known as the "Essex-Lopresti injury", this condition is one of the most difficult forearm derangements to treat, and one of the most disabling, if missed or underestimated (McGlinn et al., 2013).

To understand and treat this condition, it is useful reviewing some kinetic concepts. The so-called "forearm articulation" is a polyarticular, load bearing structure composed of two slightly curved bones (radius and ulna), linked by two trochoid (pivot-like) articulations (proximal and distal radioulnar joints) interposed between the two segments of the elbow joint (radiocapitellar and ulnotrochlear) and the two segments of the wrist (radiocarpal and ulnocarpal). From a kinetic perspective, a normal forearm articulation is the one that is able perform full pronosupination under load, that is, while the hand carries substantial amount of weight (Garcia-Elias M., 2008).

Forces transferred across the forearm are not evenly distributed among its different articulations. In normal conditions, most centripetal forces generated in the hand enter the forearm through the radius. The

proportion of load that leaves the forearm through the ulna (across the trochlea) or through the radial head (across the capitellum) varies substantially depending on a number of factors (Farr et al., 2015). If the axial load gets into the forearm while the elbow is forced in valgus, the radiocapitellar joint carries most of that load, and the IOM remains undisturbed. By contrast, if the elbow is stressed in varus, the trochlea gets most of that axial load. In between the two extremes, the amount of force transferred from the radius into the ulna, and from there into the humerus, varies considerably as long as the IOM is intact. (Figure 1). In the absence of a competent IOM, both TFCC and the radial head become overloaded in all elbow positions. If these two structures are also damaged, the radius becomes grossly unstable, and migrates proximally, unable to move or carry load normally (Figure 2A). Certainly, the Essex-Lopresti injury is not a forgiving condition.

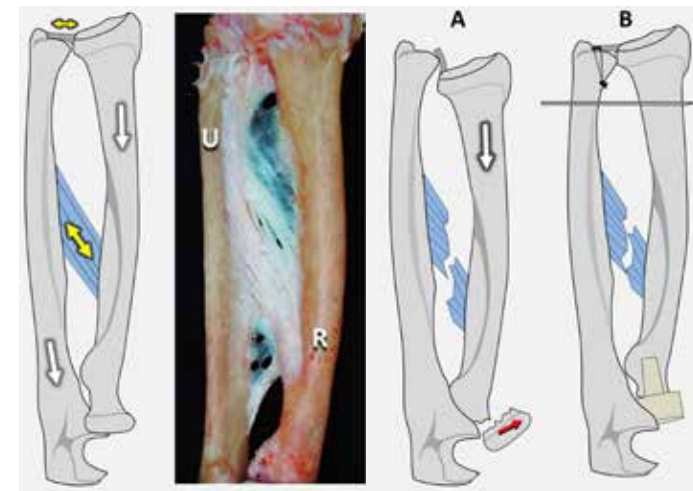


Figure 1

Figure 2

For this combination of injuries to appear, there is a need for: 1) a longitudinal shear stress large enough as to disrupt the different bundles of the IOM, 2) a substantial torque, most often hyperpronation, causing a distal radioulnar dislocation, and 3) an axial radiocapitellar compression stress plus valgus of the elbow causing an unstable radial head fracture. Fortunately, such a combination of factors is infrequent, and so it is that combination of injuries.

Treatment of an Essex-Lopresti injury is not for the novice in upper limb surgery. It requires an experienced surgeon with good understanding of the pathoanatomy of the forearm. This is not a forgiving injury that tolerates suboptimal surgery. Lack of surgical determination is not acceptable either. All components of the injury need to be properly addressed: the TFCC detachment needs to be fixed or reconstructed, the radial head must be anatomically restored or substituted by an implant, and the continuity of the IOM must be somehow re-established (Figure 2B)(Adams et al., 2010). In the presence of longitudinal radioulnar instability, radial head excision is a harmful procedure to be avoided at all costs: it makes things worse. Distal radioulnar resection arthroplasties (Darrach, Kapandji-Sauvé,...) are not adequate either: they also tend to further destabilize the joint (McGlinn et al., 2013). This article will not discuss the overall treatment of the Essex-Lopresti injury nor the wide range of options that exist to reconstruct the radial head. This paper will concentrate only on how to restore function of the disrupted IOM.

Reconstruction of the radioulnar IOM

No matter how recent the injury is, a disrupted IOM seldom can be repaired (McGlinn, 2013). The tissue is usually torn through its mid-substance, the ends being thin, irregularly retracted, and difficult to access. To overcome this problem, different reconstructive alternatives have been suggested. Some authors propose reconstructing the central band of the IOM using a palmaris longus tendon autograft (Tejwanj et al., 2005), others recommend a pronator teres rerouting technique (Chloros et al., 2008), and others advocate the use of allografts (Miller et al., 2016). Technically demanding, none of these reconstructions have proved if they will pass the test of time. Another problem is how to ensure solid graft fixation onto the thick cortices of radius and ulna. To enhance healing, some authors recommend securing a bone-patellar tendon-bone autograft with screws onto the decorticated origin

and insertion sites of the two diaphyses (Adams et al., 2010). Unfortunately, improving graft fixation does not answer all the questions. There is a need for a bone-tendon-bone graft matching the length of the original IOM. It is important to ensure that the obliquity of the graft is anatomically correct. How much tension is to be applied to the graft to mimic the normal situation? What follows is a description of a technique that we have developed in an attempt to solve these problems. Unfortunately, our experience with the technique is limited, and although our early results are more convincing than with previously used techniques, caution is still recommended

Surgical technique

As stated above, reconstructing the central band of the IOM is only one step, usually the last one, in the process of fixing all what needs to be fixed in an Essex-Lopresti injury. We do not start reconstructing the IOM until the radial head has been restored, the TFCC reattached, and the reduction of the two forearm bones has been neutralized at about 45° supination with a 2 mm K-wire across the two bones.

This part of the operation begins by obtaining a bone-tendon graft. An Achilles' bone-tendon allograft is an option, another is to use the Extensor Carpi Radialis Brevis (ECRB) harvested together

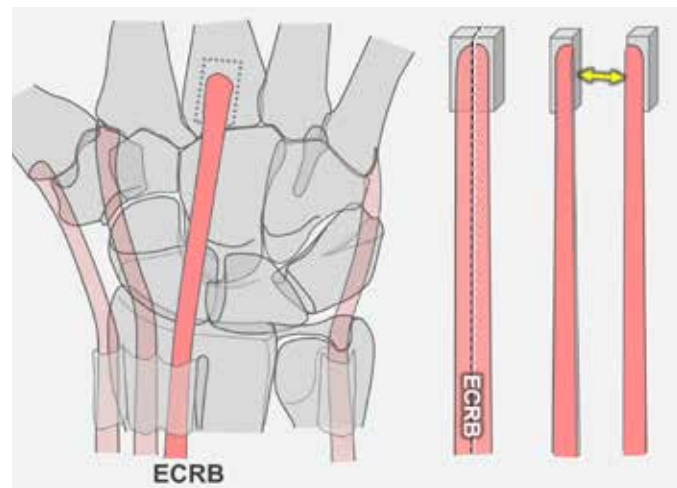


Figure 3

with a corticocancellous non-articular portion of the base of the third metacarpal (Figure 3). Two small incisions, proximal and distal, are necessary to do so. Once removed from the distal incision, the bone-tendon graft is divided longitudinally into two symmetrical hemitendons, each keeping a portion of corticocancellous bone from the base of the third metacarpal.

To prepare the two tunnels that will accommodate the graft, two skin incisions are needed: an 8 cm longitudinal incision along the ulnar border of the ulna, and a 2 cm lateral incision along the radius. According to the anatomical studies by Chandler et al. (2003), and later validated by Noda et al. (2009), the insertion site of the central band is located on its lateral edge (the one facing the radius) at the junction of the middle and distal third of the bone. The insertion site of the radius is about 2 cm proximal to the middle of the bone, on the ridge that faces the ulna. If the two (radial and ulnar) insertion sites have been correctly identified, the angle formed by the main axis of the ulna and a virtual line connecting these two insertion sites must be about 25 degrees.

Once the two insertion sites have been identified, and marked on the surface of the bone with a sterile marker, one K-wire is obliquely inserted into the ulna, entering the bone through its medial edge, from distal to proximal at an angle of approximately 25 degrees. The wire must exit where the marker indicates it was the ulnar origin of the IOM. A second wire, inserted from proximal to distal across the lateral border of the radius, with the same obliquity as the first one, and exiting medially at the radial IOM insertion site. These wires are used to guide a 2,7 mm cannulated drill across the bone, and a second 4,5 mm drill to enlarge the outer end of the two tunnels as to create a chamber to hold the bony portion of the two hemi-bone-tendon grafts. The grafts are then passed across the two tunnels to emerge in the interosseous space. (Figure 4B). While

the two ends of the grafts are tightly pulled, side-by-side, in opposite directions, several non absorbable sutures are placed, uniting the two hemi-tendons into one solid bone-tendon-bone graft, mimicking the original central band of the IOM (Figure 4C)

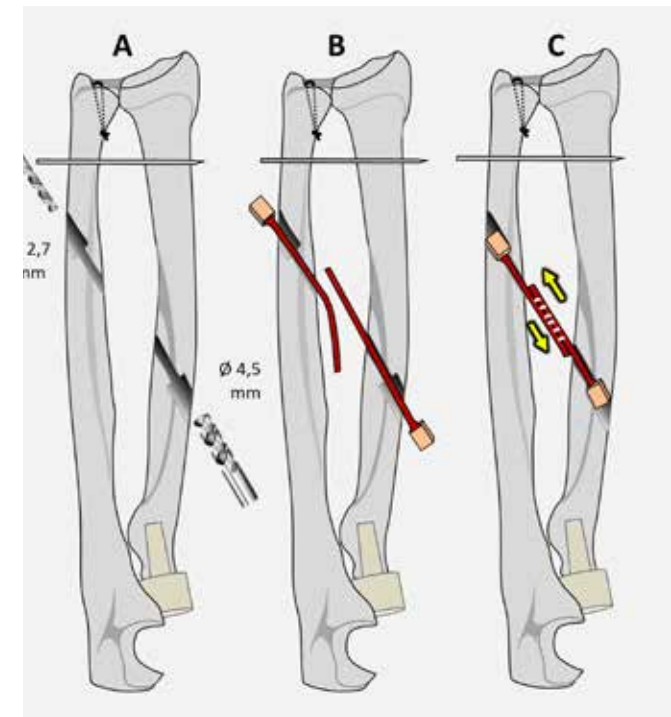


Figure 4

The post-operative regime is characterized by a prolonged immobilization. The arm is kept in an above elbow plaster cast, elbow at right angle, forearm at 45 degrees supination (fixed by the wire). The radioulnar neutralization K-wire is removed at 4 weeks, and a posterior long arm splint is maintained for 6 more weeks, followed by intensive upper limb re-education.

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- Trends in the Utilization of Total Wrist Arthroplasty versus Wrist Fusion for Treatment of Advanced Wrist Arthritis
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Bryan Marascalchi,
Richard M. Hinds,
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- Distal Radius Hemiarthroplasty
Brian D. Adams,
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- Three-Dimensional Carpal Kinematics after Carpal Tunnel Release
Jonathan R. Schiller,
Jeffrey J. Brooks,
P. Kaveh Mansuripur,
Joseph A. Gil,
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- Arthroscopic Resection of Distal Pole of the Scaphoid for Scaphotrapezotrapezoid Joint Arthritis: Comparison between Simple Resection and Implant Interposition
L. Pegoli,
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G. Pivato,
R. Luchetti

- Bilateral Complete Osseous Coalition of the Capitate and Trapezoid
Alexander B. Christ,
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- Multiple Volar Carpometacarpal Dislocations: Case Report/Review of the Literature
Robert A. Cates,
Peter C. Rhee,
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- Single-Incision Carpal Tunnel Release and Distal Radius Open Reduction and Internal Fixation: A Cadaveric Study
Michael P. Gaspar,
Blane A. Sessions,
Bryan S. Dudoussat,
Patrick M. Kane

HAND CLINICS

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- An Update on Upper Extremity Tendon Transfers
R. Glenn Gaston

- Principles of Tendon Transfer
Danielle Wilbur,
Warren C. Hammert

- Biomechanics of Tendon Transfers
Andrew Livermore,
Jonathan L. Tueting

- Restoration of Shoulder Function
Chelsea C. Boe,
Bassem T. Elhassan

- Restoration of Elbow Flexion
Bryan J. Loeffler,
Daniel R. Lewis

- Radial Nerve Tendon Transfers
Andre Eu-Jin Cheah,
Jennifer Etcheson, Jeffrey Yao

- High Median Nerve Injuries
Jonathan Isaacs,
Obinna Ugwu-Oju

- Low Median Nerve Transfers (Opponensplasty)
Robert Christopher Chadderdon,
R. Glenn Gaston

- A Comprehensive Guide on Restoring Grasp Using Tendon Transfer Procedures for Ulnar Nerve Palsy
Rafael J. Diaz-Garcia,
Kevin C. Chung

- Ulnar Nerve Tendon Transfers for Pinch
Shane Cook,
R. Glenn Gaston,
Gary M. Lourie

- Tendon Transfers for Combined Peripheral Nerve Injuries
Christopher A. Makarewich,
Douglas T. Hutchinson

- Tendon Transfers for Tetraplegia
Michael S. Bednar

- Free Flap Functional Muscle Transfers
Ryan M. Garcia,
David S. Ruch

- Tendon Transfers in the Rheumatoid Hand for Reconstruction
Michael Brody O'Sullivan,
Hardeep Singh,
Jennifer Moriatis Wolf

- Tendon Transfers for the Hypoplastic Thumb
Lindley B. Wall,
Charles A. Goldfarb

- Cerebral Palsy Tendon Transfers: Flexor Carpi Ulnaris to Extensor Carpi Radialis Brevis and Extensor Pollicis Longus Reroutement
Anchal Bansal,
Lindley B. Wall,
Charles A. Goldfarb

Preliminary Program, Registration & Housing
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Register for Multiple Meetings

Register for AAHS

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Register by Monday, November 7, 2016 to avoid increased fees.

Make your housing reservation online or contact the hotel directly and refer to the AAHS/ASPN/ASRM Annual Meetings. Rooms and rates are limited and will be confirmed on a space available basis until Friday, December 2, 2016 or until the block is full, whichever occurs first. We encourage you to make your reservation as soon as possible to ensure room rate and availability.

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www.peripheralnerve.org | 978-927-8330



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ALL HANDS ON DECK

Farewell Symposium Steven Hovius

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www.esserstichting.nl/esser-course

European Federation of Societies for Hand Therapy

Executive Committee (Ex.Com)

During the Council Meeting in Santander the main issue discussed was the Combined Triennial congress of the European Federation for Societies of Hand Surgery (FESSH) and the European Federation for Societies of Hand Therapy (EFSHT).



Website address
www.eurohandtherapy.org



The theme will be Evidenced Based Hand Surgery and Therapy. The therapists' program, including focus sessions and workshops, will be held over the first day and a half, whereas the remaining Friday afternoon and Saturday morning are entirely for combined sessions with the surgeons. Updates and new information will be posted on the EFSHT Facebook, Twitter and LinkedIn accounts when available. Or just check the website: <http://www.EUROHAND2017.com>.

The Executive Committee of the EFSHT has a new president-elect Mr. Ali Kitis, from Turkey. He will be shadowing our new president Saara Raatikainen. The EFSHT expresses great gratitude to Mrs. Gabriela Versuemer for her work on the Executive Committee, her initiative and help in developing a stronger structure for EFSHT.

Education Committee (EC)

The biggest news to celebrate this year are that six more countries have formulated their national certification processes with help from the EC as required. They are Austria, Belgium, France, Italy, Portugal and Spain. Congratulations to all these countries on reaching this milestone! Eleven out of nineteen member countries now have national certification. This is very exciting as national societies have looked at the ECHT and formalized their national certification processes to fit in with the ECHT. Applicants who eventually wish to apply for the ECHT have a clear pathway. The EC are keen to support the rest of the EFSHT member countries to develop their national certification too and we would urge you to get in touch for any help needed.

As the number of new European Certified Hand Therapist is increasing we will in the future publish them on our social media accounts.

Paul De Buck
Secretary, EFSHT

EFSHT Executive Committee

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Saara Raatikainen, Finland

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Ali Kitis, Turkey

Past-president 2016–2018
Turid Aasheim, Norway

Treasurer 2006–2017
Glykeria Gounaropoulou, Greece

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Veronique van der Zypen, Switzerland
Nikki Burr, UK
Jolanda ten Brinke, The Netherlands
Rose Luciano, Italy

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Nomination Committee

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LANGUAGE
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4th European Symposium on Pediatric Hand Surgery and Rehabilitation

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First Announcement

