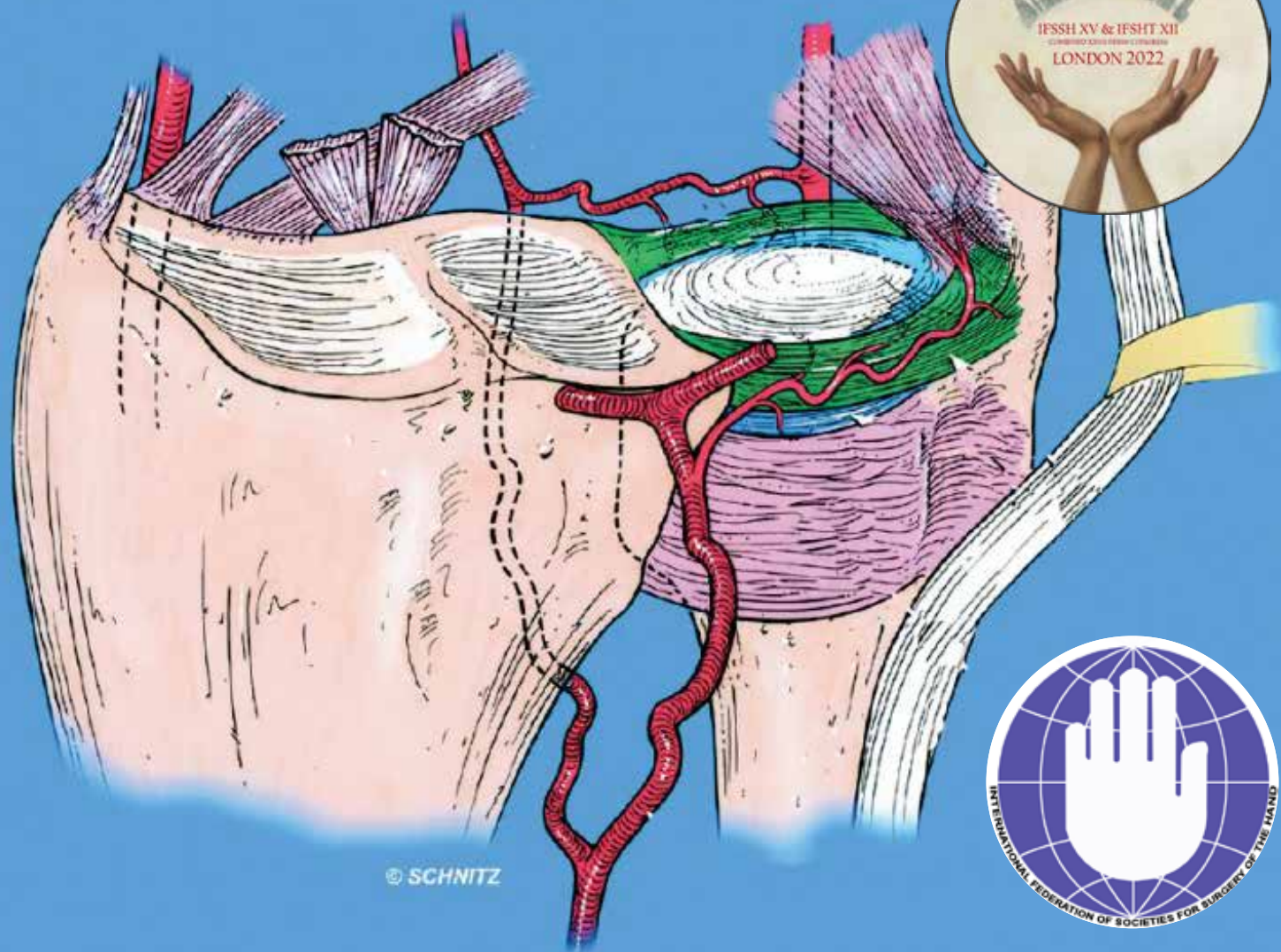


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FIBROCARTILAGE COMPLEX ANATOMY
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6-10 JUNE 2022

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THE INTERNATIONAL FEDERATION OF SOCIETIES FOR HAND THERAPY

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2022

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6 – 10 June 2022
ExCeL Conference Centre, London, UK



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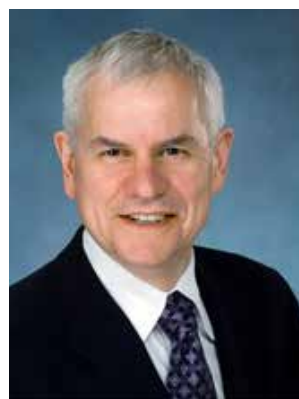
Guest Editorial*

WHAT DOES BEING AN AUTOMATIC MEMBER OF IFSSH MEAN TO YOU?

You may not know this, but we are all automatic members of the **International Federation of Societies for Surgery of the Hand** because we are members of ASSH.

What's in it for you? We have a great international meeting every 3 years. The latest will be in **London, England, 6-10 June 2022**. You might want to submit an abstract to present at the London meeting. You may just want to go there to learn and capture some of the joys of being in England! In 2025, the IFSSH Congress will be in Washington, D.C.!

You can also share your ideas and learn from international colleagues by publishing or reading articles in the **IFSSH Ezine**. This online hand surgery publication is free for you as a member. If you feel the urge to meet hand surgeons in other countries, you will see what hand surgery meetings are happening for you to attend!



Donald H. Lalonde, MD
Outreach and International Relations Director,
ASSH

* In the ASSH Weekly Member Update of 13 August 2021, Don Lalonde wrote the Volunteer Note. We reprint it here with his permission



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President's Message

Dear friends and colleagues:

When writing a message one needs to be careful not to appear unreasonably optimistic, nor to lean towards the opposite pattern of thinking. Indeed, being excessively pessimistic would not be judicious either. Needless to say, it is not easy finding the right balance between the two differing ways of facing adversity. The two first decades of this century have not been precisely a bed of roses. Does this mean that we should not expect a better future? Of course we should.

I guess that I am getting tired of headlines in newspapers that only express sad feelings of inevitable loss and failure: "Does the economy really re-start?"; "Should social distancing rules remain in place?"; "Why crisis does not give us a break?".

Call me naïf, but in the middle of such a pessimistic atmosphere, I do not see why we should get that discouraged. To me, the bottle should always be regarded as half-full and not half-empty. Yes, it is not all reality, but how much that part reality will affect us individually seems to count, doesn't it?

In the early 1970s, when I got into medical school, most citizens in Spain believed that the country was going through a golden age of prosperity. Yet, most homes didn't have complete indoor plumbing and a quarter didn't even have a flush toilet. Are we any better off now?

If we consider that most newly built houses have now at least two toilets and bathing facilities, yes, we are; but I don't think that these "signs of prosperity" make much difference to most people, particularly if we consider the first lesson of real economics.

According to Thomas Sowell, a 90-year old economist, from Stanford University, the first lesson of economics could be called the "rule of scarcity": There will never be enough usefull stuff to satisfy all those who want to buy it. If we do not keep an eye on how we spend our time, our energy, our attitude with respect to this planet, scarcity will always be our travelmate. Our bottle will then always look half-empty.

Best regards,



Marc Garcia-Elias
President : IFSSH

Message from the Secretary-General:



Dear Colleagues,

The Covid-19 pandemic still lingers on, but there are some positive signs. From the totally online meetings during the last some 18 months, we now have in many countries local in person meetings as well as some big meetings in hybrid format. We sincerely believe that by June 2022 we will all be able to travel to London for the IFSSH Congress.

Two aspects need to be highlighted.

First is the election for the council posts which will be held in June 2022 during the London Congress. An organization like the IFSSH needs dynamic leaders and this is a time for the Member Societies to propose their best hands for these posts to build a strong leadership line for the IFSSH.

Second is the opportunity for the Asian-Pacific Member Societies to bid for the 2028 Congress. Details about these and about many more topics are on the IFSSH website – www.ifssh.info. Please visit it often.

London 2022 Triennial Congress

The IFSSH-IFSHT Triennial Congress, which runs in conjunction with the FESSH Congress, will be held 6 – 10 June 2022 in London. The website contains information about the location, registration, scientific programme, social events, accommodation and more – www.ifssh-ifsht2022.com.

Abstracts are being assessed, as are the applications for the UK Travelling Fellowships.

The local Organizing Committee is preparing schedules to intrigue and challenge all. Options will be available to keep accompanying persons busy. The British Society has recently returned to face-to-face Congresses, holding its Autumn Scientific Meeting in Oxford in September. We are excited to have this opportunity to meet again in person.

2022 Pioneers of Hand Surgery: Call for Nominations

The IFSSH welcomes nominations for the 2022 IFSSH "Pioneer of Hand Surgery" honours. The IFSSH awards "Pioneer of Hand Surgery" status to any person who excels exceptionally, beyond what is normally expected in the field of Hand Surgery.

The guidelines for nomination and the application form are on the IFSSH website - https://ifssh.info/pioneers_hand_surgery.php. Applications must be received by the Secretariat (administration@ifssh.info) by 6 December 2021.

2022 Elections: Executive Committee and Nominating Committee members

At the 2022 Congress, the IFSSH Delegates' Council will elect the following officers to join the IFSSH Executive Committee:

- Incoming Secretary-General;
- a Communications Director; and
- 5 ExCo Members-at-large (regional representation)

In addition, outside of the Executive Committee, but to specifically be a part of the Nominating Committee only:

- 2 Nominating Committee Members-at-large

The full position, descriptions and application processes for these positions have been distributed to all Society Delegates. These are also listed on the IFSSH website <https://ifssh.info/2022-elections.php>. All Societies should consider the essential and desirable qualities for these positions when considering nominations.

Nominations may now be submitted. Applications must be received by the Secretariat (administration@ifssh.info) by 6 February 2022.

2028 IFSSH Congress: Call for Host Society Bids

The IFSSH Executive Committee has recommended that Member Societies from the Asian-Pacific region be invited to host the 2028 IFSSH Triennial Congress. This main scientific event of the IFSSH will be celebrated every three years in a Member Society country, which is in good standing with the IFSSH, including payment of their annual dues.

The Congress Guidelines have recently been updated and the revised information is now available on the IFSSH website: <https://ifssh.info/guidelines.php>

Any Asian-Pacific Member Society which is interested in hosting the 2028 IFSSH Congress should inform the IFSSH Executive of their intentions and ensure that the full bid is forwarded, as detailed in the instructions above, by 6 March 2022, for consideration at the London meeting (6-10 June 2022).

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:

XV IFSSH – XII IFSHT Congress –
London, United Kingdom
6 - 10 June 2022
www.ifssh-ifsht2022.com

XVI IFSSH – XIII IFSHT Congress –
Washington D.C., USA
29 March – 3 April 2025

Further information

Updates for all IFSSH matters will be provided regularly through the website (<https://ifssh.info/>), the Ezine (https://ifssh.info/ifssh_ezine.php) and our Twitter/Instagram feeds (@IFSSHHand). Please subscribe and share with your Society members.

With very best wishes



S. Raja Sabapathy

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

Letter from the IFSSH Executive

Explanatory Note:

The following letter by the IFSSH Executive is addressed to all the Member Society Delegates for further distribution to their Members. This letter is thus meant as an invitation to all Members of the National Member Societies. Dr. Larry Hurst has to be congratulated with a unique initiative which adds great value to our quest for academic excellence in the management of hand related issues. In order to ensure a high quality of the contributions, any interested Member who would like to participate academically, should first approach their Hand Surgery Society. Their name and field of interest should then be submitted to the Secretary-General of the IFSSH. The IFSSH Administration will then in turn liaise with Larry Hurst. The IFSSH is indeed excited to add yet another activity to its mission in promoting the best service to our hand patients.



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11th August, 2021

To: IFSSH Delegates

Re: Collaboration with the Hand Surgery Resource

The IFSSH Executive Committee is pleased to announce an opportunity for IFSSH Society members to collaborate with the Hand Surgery Resource (HSR) founded and led by Dr. Larry Hurst of New York. The Hand Surgery Resource is a **free**, well organized Internet-based, living document containing 450 chapters covering the fundamental principles of hand surgery (see below). The HSR has nearly 3500 registered users in 100 countries. More than 20,000 individuals receive the Hand Surgery Resource newsletter worldwide and last year Hand Surgery Resource had over 350,000 views!

The IFSSH Executive Committee and Dr. Hurst would like to invite IFSSH Societies to each nominate one to three of their members to become part of the Hand Surgery Resource's **International Hand Surgery Resource Advisory Group (IHSRAG)**. As members of the International Hand Surgery Resource Advisory Group (IHSRAG), your colleagues would be working with the HSR staff to review, edit and rejuvenate the Hand Surgery Source. Specifically, their duties would include the following:

Member-at-Large:
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jinbotang@yahoo.com

Immediate Past President:
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administration@ifssh.info

IFSSH website:
www.ifssh.org

1. Provide constructive comments (both positive and negative) regarding the HSR content particularly in regard to the identification of errors and omissions.
2. Notify HSR of new techniques and practices (less than two years old) that have the potential to significantly impact the practice of hand surgery. The literature supporting such innovations should be forwarded to Dr. Hurst.
3. Assist with updating the Hand Surgery Resource's content. The HSR has approximately 450 chapters (sections) which should be updated every five years. That means that 90 sections should be updated every year. If the International Hand Surgery Resource Advisory Group (IHSRAG) includes 90 members, each member would be asked to review only one section per year. Please note the International Advisors would not be expected to rewrite the sections. They would only be asked to advise the executive editorial committee regarding the need for additional images, videos and edits to the text and references needed to keep the section up to date. (Any new images or videos would, of course, need to be free of Copyright restraints.)

This is an opportunity to contribute to global hand surgery education. Participation in the International Hand Surgery Resource Advisory Group will help guarantee the integrity and accuracy of the information being distributed through the HSR to the global hand surgery community. In recognition of their contribution, those who participate as Advisors will have their name prominently displayed on the HSR website and Apps as well as in the IFSSH Ezine. In addition, participation in the IHSRAG will provide an opportunity to share unique techniques and procedures with hand surgery colleagues around the world. Selected techniques and procedures could also be considered for inclusion in the IFSSH Ezine.

The Executive Committee of the IFSSH and Dr. Hurst thank you very much for considering this opportunity. Please ask any of your society members who are interested in becoming Advisors to the IHSRAG to contact Dr. Hurst at: lhurst100@handsurgeryresource.org.

Sincerely yours,
IFSSH Executive Committee
Marc Garcia Elias, President
Daniel J. Nagle, President Elect
Raja Sabapathy, Secretary-General
Zsolt Szabo, Immediate Past President
David Warwick, Historian
Jin Bo Tang, Member-at-Large

XV Congress IFSSH • London, United Kingdom • 6th - 10th June, 2022
www.ifssh-ifsht2022.co.uk

Re-prints from Scientific Journals

INTERNERVOUS SURGICAL APPROACHES ON DORSAL AND RADIAL ASPECTS OF THE HAND AND WRIST

Further Knowledge on Featured Topics

JHS(E)

Internervous surgical approaches on dorsal and radial aspects of the hand and wrist

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[European Volume]
2021, Vol. 46(6) 690-693
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This article explains methods of avoiding incisions over the course of cutaneous nerves, particularly on the dorsal and radial aspects of the hand and wrist. The dorsal cutaneous nerves of the hand include the superficial radial and dorsal branch of the ulnar. Accidental division of these nerves will cause sensory impairment and neuroma formation. However, even with careful exposure, these nerves appear to be sensitive to handling and involvement in scar tissue, leading to altered sensation, hyperalgesia, allodynia and pain. In addition to localized pain and tenderness related to the nerve itself, there often appears to be a more generalized increase in pain levels, which may affect the overall outcome of procedures, and injury to small distal nerves may contribute to development of complex regional pain syndrome (Oaklander, 2010).

My own observations suggest that the incidence of these problems may be underreported and strategies for prevention not sufficiently considered when planning surgery and designing implants. When choosing an incision, consideration should also be given as to whether it can be safely used for secondary procedures, such as implant removal. While it may be possible to dissect and preserve small nerves at a primary procedure, the risk of damage will be higher for subsequent procedures when tissue planes are scarred.

Anatomical consideration

The superficial radial nerve runs down the forearm becoming subcutaneous on the radial aspect of the wrist where it divides. The branches fan out over the dorsal and radial aspects of the hand providing sensation to the dorsum of the thumb, index and middle fingers. These branches cross the anatomical snuff box and are closely related to the thumb extensor tendons. They extend on to the palmar aspect of the wrist innervating skin over the lateral part of the thenar eminence. At the level of the metacarpophalangeal joints the nerves lie in the grooves on

either side of the metacarpal heads, rather than directly over the extensor tendons.

The dorsal sensory branch of the ulnar nerve runs posterior to the flexor carpi ulnaris tendon to reach the ulnar aspect of the wrist, where it runs close to the ulnar styloid (Uerpaiojkit et al., 2019). It passes over the bases of the 4th and 5th metacarpals and branches over the dorsum of the hand to supply sensation to the ring and little finger. Having branched from the median nerve proximal to the wrist, the palmar cutaneous branch passes through the sheath of the flexor carpi radialis tendon, just medial to the tendon at the level of the wrist crease, to reach the subcutaneous tissue.

Why are some nerves more sensitive?

When operating on the palm of the hand and palmar aspect of the fingers, the digital nerves are regularly exposed and handled, for example during Dupuytren's fasciectomy, yet postoperative symptoms related to these nerves are unusual. However, the dorsal nerves, in particular, the superficial radial nerve, appear to be more sensitive with sensory change, tenderness and pain being common after procedures, such as De Quervain's release (Suresh and Zaki, 2009). This raises the question as to why nerves at some anatomical sites are more sensitive to injury and formation of neuromas.

In an anatomical study, Dellon and Mackinnon (1984) noted that the superficial radial nerve is tethered in the forearm where it lies deep to brachioradialis and passes between the tendons of brachioradialis and extensor carpi radialis longus. It only enters the loose subcutaneous tissue after penetrating the deep fascia. At the wrist, the nerve and overlying skin has to stretch with movement, particularly with dart throwing motion. The skin on the dorsum of the hand and fingers is also more mobile than on the palmar aspect. Scar from an incision or laceration creates a new area of tethering of the nerve and therefore increased tension (strain) in the nerve during movement. This mechanism may

explain the development of delayed neuroma formation, although the reason for the apparent sensitivity of the dorsal sensory nerves, even to exposure and retraction, is not clear.

Better internervous planes

Skin incisions should be placed, whenever possible, between the course of the cutaneous nerves. If the target of the exposure does not lie directly under the skin incision, the exposure can be developed deep to subcutaneous tissues. It has been my experience that nerve irritation is more likely when the incision and hence the scar overlies the course of the nerve. Therefore, spreading the tissue within the subcutaneous tissue is best avoided. The operators should go directly to the deep fascia, muscles or tendons to avoid irritating the cutaneous nerves and their branches. If the incision is made away from the course of nerves and subcutaneous tissue divided to reach fascia or tendon before elevating the wound edges, the nerves are exposed from their deep aspect and therefore not separated from the overlying skin.

Specific incisions and approaches

Dorsal approach to the wrist

During exposure of the dorsal or radial aspect of the wrist or distal radius, I recommend a dorsal longitudinal incision in the line of the dorsal tubercle in most circumstances. The incision may be a little radial or ulnar to this point providing it remains in the internervous plane. The subcutaneous tissues are divided down to the extensor retinaculum. The approach can then be developed laterally or medially staying just superficial to the retinaculum and hence deep to the superficial radial nerve (and its branches) (Figures 1 and 2) and the dorsal branch of the ulnar nerve. If the extensor retinaculum is to be opened, then the exposure is made in a deeper plane. When applying this approach to treat distal radial fractures, symptoms from the superficial radial nerve are rare (Hems and Rooney, 2010). The same approach has also proved safe for implant removal from the distal radius. The exposure is adequate for applying plates to the radial column of the distal radius (Figures 1 and 2) and procedures on the radial styloid, for example radial styloidectomy. While incisions close to the radial styloid have been described, these appear to be associated with a higher incidence of nerve damage and, where possible, should be avoided.

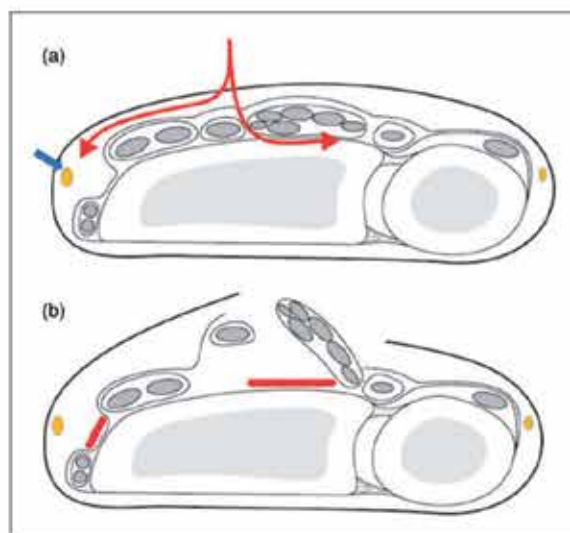


Figure 1. (a) Diagram showing the surgical approach for dorsal plate fixation of the distal radius. The radial column is exposed superficial to the extensor retinaculum and deep to the superficial radial nerve (blue arrow). (b) The position of the plates on the distal radius. The radial column plate is placed between the first and second dorsal tendon compartments. (Adapted from illustration by Hems and Rooney, 2010.)

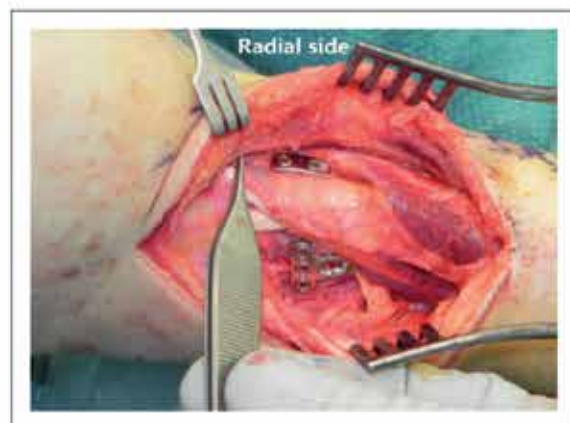


Figure 2. Operative photograph of the dorsal approach to the distal radius for dorsal and radial column plates fixation for the distal radial fracture. The superficial radial nerve (indicated by forceps) can be seen undisturbed in the subcutaneous tissues radial to the incision. The exposed tendons are extensor pollicis longus and extensor carpi radialis longus and brevis.

De Quervain's release

A transverse incision has been recommended but others favour a longitudinal incision (Gundes and Tosun, 2005; Kumar, 2016). Suresh and Zaki (2009) reported that nerve injury could be avoided using a technique of displacing the skin, including the nerve branches, anteriorly before making the incision. Another possibility is to place a longitudinal skin incision more dorsally and then expose the 1st dorsal tendon compartment sheath deep to the nerve branches, but this would require a much longer incision than one often used.

Exposure of finger metacarpals

For procedures on the metacarpal shafts, incisions close to the centre of the hand should be used. Incisions on the radial side of the 2nd metacarpal are particularly likely to result in damage to sensory nerves, and indeed prominent implants in this area often cause tenderness.

Thumb metacarpophalangeal joint

A midline dorsal longitudinal incision is suitable for most procedures around the thumb metacarpophalangeal joint. Even for repair of the ulnar collateral ligament, I use this incision rather than the dorsoulnar incision often recommended. The incision is deepened on to the extensor tendon and then developed medially, deep to the cutaneous nerves, by sharp dissection to expose the aponeurosis of adductor pollicis. I have found exposure to be adequate for reattachment of the ulnar collateral ligament and accessory ligament.

Scaphoid

For fractures of the waist of the scaphoid I have routinely used an anterior approach (Herbert and Fisher, 1984). The incision is placed over the flexor carpi radialis tendon and curved laterally over the thenar muscles distally. Despite being a prominent area of the wrist, which is regularly subjected to pressure, I have encountered few problems with scar tenderness. It is a true internervous incision, between the superficial radial nerve and the palmar branch of the median nerve. A dorsal approach is applicable for exposure of the proximal pole. A longitudinal incision in line with the dorsal tubercle of the radius should be used, keeping dorsal to the branches of the

superficial radial nerve. Although selection of the approaches depends on surgical needs and personal preference, branches of the superficial radial nerve are at the site of lateral incisions over the anatomical snuffbox, which is a consideration.

Trapeziectomy and the thumb carpometacarpal joint

Approaches to the thumb carpometacarpal joint and trapezium are potentially problematic, with even the anterior approach encroaching on branches of the superficial radial nerve. Sensory change after procedures on the thumb carpometacarpal joint are probably underreported. Ritchie and Belcher (2008) compared anterior and posterior approaches and found a lower incidence of sensory alteration and numbness around the scar with the anterior approach. My own preference is for an anterior approach.

The true incidence of compromise of cutaneous nerves after the surgical procedures and how the nerve damage affects the overall outcome of the procedures have not been established. This subject is not often discussed, but clinically the incidence of problems appears not uncommon. If skin incisions are made away from the course of nerves on the dorsal aspect of the wrist and hand and exposure made on their deep surface, then the skin directly over the nerve remains intact and not scarred. Subjective observation suggests that this approach leads to less irritation and neuroma formation. Formal study of outcomes is needed to provide supportive evidence. Optimal approaches for some procedures still need to be developed.

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EFFECTS OF COVID-19 ON THE MUSCULOSKELETAL SYSTEM

Orthopedic Research and Reviews


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REVIEW

Effects of COVID-19 on the Musculoskeletal System: Clinician's Guide

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Aryan Haratian
Ioanna K Bolia 
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Abstract: The global pandemic caused by SARS-CoV-2, or COVID-19, continues to impact all facets of daily life. Clinical manifestations of COVID-19 commonly include musculoskeletal symptoms such as myalgias, arthralgias, and neuropathies/myopathies. The inflammatory response and its impact on the respiratory system have been the focus of most studies. However, the literature is more limited regarding the inflammatory response and its implications for other organ systems, specifically the musculoskeletal system. Previous studies have described how systemic inflammation may play a role in bone and joint pathology. Furthermore, it is important to understand the effects current therapeutics used in the treatment of COVID-19 may have on the musculoskeletal system. In this study, we will review the current understanding of the effect COVID-19 has on the musculoskeletal system, provide an overview of musculoskeletal symptoms of patients infected with the virus, and address key issues for clinicians to address during the care of COVID-19 patients.

Keywords: COVID-19, musculoskeletal system, SARS-CoV-2

Introduction

The global pandemic caused by SARS-CoV-2, or COVID-19, continues to impact all facets of daily life. Those infected with COVID-19 can vary widely in presentation, ranging from asymptomatic to severely ill and in critical condition. While COVID-19 is primarily a respiratory disease, numerous studies have documented and reported the various extra-pulmonary manifestations and symptoms. Clinical manifestations of COVID-19 commonly include musculoskeletal (MSK) symptoms such as myalgias, arthralgias, and neuropathies/myopathies. One study observed that of 12,046 patients, myalgia and/or arthralgia were present in 15.5% of patients. Consequently, it is crucial for clinicians to understand further and investigate the musculoskeletal symptoms and presentation of those infected with COVID-19.

Additionally, it is imperative to investigate the pathology, and potential mechanisms of the impact COVID-19 has on the musculoskeletal system. Previous studies have demonstrated that infection with the virus induces a proinflammatory state in patients with systemic effects as a result. The inflammatory response and its impact on the respiratory system have been the focus of most studies. However, the literature is more limited regarding the inflammatory response and its implications for other organ systems, specifically the musculoskeletal system. Previous studies have described how systemic inflammation may play a role in bone and joint pathology. Inflammation has also been linked to damage and disease of skeletal muscle. Therefore, investigating the potential impact COVID-19 induced

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inflammation has on musculoskeletal health is essential to adequately understand and treat these symptoms.

Furthermore, it is important to understand the effects current therapeutics used in the treatment of COVID-19 may have on the musculoskeletal system. Current therapy for COVID-19 includes medications such as chloroquine, hydroxychloroquine, colchicine, specific antivirals, and corticosteroids. Many of these medications are associated with toxic myopathies, arthralgias, and other various side effects. Given that the side effect profile of many of these medications overlaps and can potentially mask symptoms that can present with COVID-19, it is important to keep these drug interactions in mind.

In this study, we will review the current understanding of the effect COVID-19 has on the musculoskeletal system, provide an overview of musculoskeletal symptoms of patients infected with the virus, and address key issues for clinicians to address during the care of COVID-19 patients.

Clinical Effects of COVID-19 Infection on Musculoskeletal System Neuromuscular Involvement: Neuropathies & Myopathies

Reports in the literature have described cases of COVID-19 causing neuromuscular damage and symptoms in patients, especially those that are critically ill or of older age with reports of myopathy, polyneuropathy, and Guillain-Barre syndrome. Notably, in a systematic review and meta-analysis of 11,069 patients infected with COVID-19, Abdullahi et al found that there are more neurologic symptoms than musculoskeletal symptoms in COVID-19 patients. Intensive care unit (ICU)-acquired weakness (ICUAW) is an umbrella term used to describe common neuromuscular symptoms in critically ill ICU patients, encompassing critical illness polyneuropathy (CIP), critical illness myopathy (CIM), and the combination of both, critical illness polyneuromyopathy (CIPM). This is especially relevant for COVID-19 patients admitted to the ICU that have undergone invasive ventilation and pronation cycles for respiratory distress, with reports describing cases of patients experiencing critical illness myopathy (CIM) and critical illness polyneuropathy (CIP) as a result. One case series reported that of 225 COVID-19 patients in the ICU in Spain, 12 patients were referred to the neurophysiology department for suspicion of ICUAW, and 11 cases of CIM and CIP were confirmed.

This reported rate of ICUAW in ICU patients with COVID-19 is thought to be underestimated due to patient death prior to diagnosis, the delay and cancellation of non-essential studies due to the infectious nature of the disease, and limited availability of neurophysiology staff and resources. It is essential that clinicians can identify and properly diagnose COVID-19 patients with ICUAW so that these patients may receive early rehabilitation and treatment to improve functional outcomes after recovery. Additionally, it is important to recognize that CIM has a better prognosis than CIP according to published studies and younger patients with CIM are found to have more positive outcomes and recovery of motor skills.

The exact pathophysiology of CIP and CIM is not well understood, especially as it pertains to COVID-19. Risk factors for ICUAW of general causes include multiple organ failure, sepsis, hyperglycemia, mechanical ventilation, and parenteral nutrition. These risk factors are highly prevalent in COVID-19 patients in the ICU. It has also been described how COVID-19-induced inflammation may result in a cytokine storm. CIM is thought to be caused by serious injury to the body with sequential overproduction of cytokines causing microvascular derangement, and metabolic and electrical (channel) alterations. It has been proposed that CIP may be caused by either a storm of systemic inflammation factors (cytokines, nitric oxide and oxygen radicals), creating hypoxic conditions that decreased circulation of local axonal survival factors or by increased vascular permeability from chronic inflammation causing vasogenic edema.

In COVID-19 patients, ICUAW can be diagnosed by assessing peripheral and/or respiratory muscles. The challenge in diagnosing infected patients is that the patients must be awake and cooperative. However, many COVID-19 patients are uncooperative due to sedation-induced delirium. In these cases, electromyography and single nerve conduction studies can be used for differential diagnosis. Cabanes et al reported on 12 COVID-19 patients in the ICU that presented with weakness in their upper and lower extremities, accompanied with elevated creatine kinase (CK) levels, elevated D-dimer and lymphopenia. The authors did not find any difference in the presentation of COVID-19-related CIM/CIP from other causes. However, they observed a noticeable degree of spontaneous muscle activity in patients COVID-19 patients with CIM.

In a single-center study looking into differences in outcomes for COVID-19 patients with ICUAW patients,

Van Aerde et al found that patients with ICUAW spent more days on ventilation ($p < 0.001$) and had longer stays in the ICU ($p = 0.008$), had higher average glycemia in the morning ($p = 0.041$), lower mobility scores at ICU discharge ($p < 0.001$), and more treatment with corticosteroids, sedatives and analgesics compared to patients without weakness. COVID-19 patients with CIM and CIP also tend to have difficulty weaning from a ventilator due to respiratory muscle weakness. COVID-19-related CIM studies have also highlighted symptoms of severe hypotrophy of the shoulder girdle and/or peroneal district. Studies have found that ICUAW of various etiologies is associated with lower physical functioning at 6 months after discharge from the ICU and higher rates of mortality after discharge from the hospital at 6-months and 1-year post-ICU. The likelihood of post-ICU mortality is even more striking with more severe weakness (MRC sum score < 36) or weakness that continues until the time of discharge. COVID-19 studies of ICUAW, however, have not found any difference in ICU readmission or ICU-related mortality rates between ICUAW patients and patients without weakness ($p = 0.225, 0.491$). More studies are needed to determine the long-term functional outcomes of COVID-19 patients with ICUAW.

Therapeutic intervention of COVID-19-associated CIM and CIP focus on both prevention and treatment with the goal of increasing patients' chances of returning to their baseline, pre-infection state of function. The prevention aspect of intervention focuses on reducing the time a patient spends in an immobilized state. The treatment aspect focuses on pulmonary rehabilitation and early mobilization. Interventions for pulmonary prevention include incentive spirometry and patient positioning to increase ventilation. Early mobilization of conscious patients and passive mechanical loading for unconscious or sedated patients have been found to increase post-discharge function. One meta-analysis showed that early rehabilitation with mobilization to reduce time spent immobile and/or neuromuscular electrical stimulation to lessen muscle atrophy was associated with a decreased likelihood of developing ICUAW. The authors also found that early rehabilitation had a better effect in studies with patients that spent more time in the ICU. They also found that length of stay in the ICU was numerically shortened in patients with early rehabilitation. Additionally, early rehabilitation in the ICU reduced the odds of developing ICUAW in 37% of patients that were screened and 29% in randomized populations. Caution should be taken for

patients suffering from sedation-induced delirium, as this can interfere with the ability to complete pulmonary and mobilization intervention due to decreased patient ability, motivation, and cooperation.

There have also been several documented cases of Guillain Barre Syndrome (GBS) arising in hospitalized COVID-19 patients. Studies have described how similar to typical GBS, COVID-19-related GBS affects a broad age range but has a higher reported incidence and less favorable outcomes in older patients. Patients with COVID-19-related GBS also tended to have accompanying pneumonia, acute respiratory distress syndrome, and more extensive demyelinating neuropathy.

Inflammation Impact on MSK

COVID-19-induced inflammation has been found to negatively affect the musculoskeletal system through numerous proposed mechanisms. SARS-CoV-2 utilizes ACE2, a receptor present on many tissue types including smooth muscle, synovial tissue, and cartilage, to enter cells and undergo viral replication. ACE2 has many functions including anti-inflammatory properties and restriction of bone resorption. Tao et al proposed that when SARS-CoV-2 uses the ACE2 receptor to enter cells and blocks receptor function leading to decreased bone mass and joint inflammation. Apoptosis of virally infected cells can lead to more local inflammation. Especially important for COVID-19 patients being treated with a ventilator, long times spent on a ventilator can cause proinflammatory signals that can lead to muscle and bone fragility measured by decreased bone mineral density. Furthermore, COVID-19 induces hypoxia which can cause the overproduction of inflammatory cytokines such as receptor activator of nuclear factor- κ B ligand (RANKL), vascular endothelial growth factor (VEGF), and macrophage colony stimulating factor (M-CSF). Studies have described how these hypoxia-induced molecules may activate osteoclasts and block osteogenesis of osteoblasts, which can lead to increased bone resorption and restricted bone formation.

The inflammatory response to SARS-CoV-2 in the respiratory tract may lead to systemic inflammation that impacts many organ systems including the musculoskeletal system. Studies have described how SARS-CoV-2 infection induces systemic elevations of cytokines and signaling molecules such as CKCL19, IFN- γ , IL-1 β , IL-6, IL-8, IL-17 and TNF- α . These inflammatory molecules have numerous potential mechanisms by which they may cause musculoskeletal symptoms. IFN- γ , IL-1 β , IL-6, IL-

IL-17 and TNF- α are known to directly impact skeletal muscle by inducing fiber proteolysis and decreasing protein synthesis. IL-1 β and IL-6 may cause fibrosis by inducing increased muscle fibroblast activity. IL-1 β and TNF- α have been described to inhibit the differentiation and proliferation of satellite cells, the progenitor cells involved in muscle fiber growth. CXCL10, IL-17 and TNF- α induce osteoclastogenesis and inhibit osteoblast proliferation and differentiation causing increased bone fragility. IL-1 β , IL-6, and TNF- α induce chondrolysis leading to arthralgia and/or the progression of osteoarthritis. IL-1 β , IL-17 and TNF- α may contribute to tendinopathy by impairing the biological activity of tenocytes. Therefore, these inflammatory molecules may be involved in the decreased muscle strength and endurance and increased bone fragility associated with COVID-19 infection.

COVID-19 may also be a cause of inflammatory reactive arthritis, which presents similarly to rheumatoid arthritis. One case report described 5 patients presenting with polyarthritis following COVID-19 infections with negative RA factor and anti-CCP, suggesting a diagnosis of inflammatory reactive arthritis. The authors proposed that the inflammatory reactive arthritis arose secondary to the involvement of pro-inflammatory markers, IL-6 and TNF- α , that are released due to COVID-19-related respiratory and musculoskeletal inflammation. These patients were treated with low-dose corticosteroids (prednisone 10 mg/d), etoricoxib, disease modifying anti-rheumatic drugs (DMARDs), leflunomide (20mg/d) and hydroxychloroquine (400 mg/d).

Corticosteroids may be given to COVID-19 patients for acute inflammation, but these medications can lead to muscle atrophy, muscle weakness, and decreased bone mineral density. Current studies are looking into the efficacy of tocilizumab, a monoclonal antibody against IL-6. This drug is currently approved for the treatment of rheumatoid arthritis and juvenile idiopathic arthritis to modulate joint inflammation, bone loss, and other manifestations of these diseases. Tocilizumab is being used in the treatment of COVID-19 because IL-6 believed to be a key cytokine leading to an inflammatory cytokine storm. The goal of this treatment is to reduce the effects of COVID-19-induced cytokine storms.

Arthralgias & Myalgias

Arthralgias or myalgias have been reported as symptoms in those infected with COVID-19, with one study finding that myalgia and/or arthralgia were present in 15.5% of

patients. A systematic review and meta-analysis of 11,069 infected patients found the prevalence of myalgia to be present in 19% of patients. However, reporting of these two symptoms in the literature have often wrongly been grouped together or used interchangeably. It is important to make the distinction between arthralgia and myalgia as they are unique in the locations they present and their underlying physiology. Arthralgia is localized to the joints, while myalgia is localized to muscle. The literature has described how arthralgia and/or myalgia typically present in the early course of the disease, with some studies observing they present more commonly in females. Studies have also suggested that the presence of arthralgia may have an association with disease severity, although the evidence for this is scarce. One study found that the onset of arthralgia sometimes occurred days before or after the onset of fever and pulmonary symptoms in contrast to myalgia which has been reported to coincide with the occurrence of viral illness, which is an important distinguishing factor for clinicians to recognize. Furthermore, in patients experiencing long-term effects of COVID-19 or a prolonged disease course, 27% report ongoing joint pain. Patients with arthralgia also reported higher pain levels and required more analgesia. Therefore, it is imperative for clinicians to recognize this when diagnosing and managing patients with a history of COVID-19 infection who present with arthralgia and to adequately discern this finding from reactive arthritis.

The prevalence of arthralgia or myalgia in infected patients varies in the literature. In a single-center retrospective cohort study of 294 patients hospitalized with COVID-19, Hoong et al observed that 30% of patients reported musculoskeletal complaints. The authors found that of those with musculoskeletal complaints, 37.5% had myalgia, 5.7% arthralgia, 6.8% new-onset backache and 50% generalized body ache. Interestingly, the authors also found that patients with musculoskeletal symptoms had a higher prevalence of fever ($p < 0.01$) and a higher CRP level ($p < 0.01$), and that the presence or absence of musculoskeletal symptoms was not a significant predictor of the risk of developing pneumonia. This highlights the importance of recognizing and understanding arthralgia and myalgia in patients at risk of COVID-19, even in the absence of pulmonary symptoms. In a retrospective study of 615 patients hospitalized for COVID-19 in Italy, De Rosa et al found that 2.8% of patients reported myalgia and/or arthralgia. Of note, the authors in that study did not find a statistically significant association with elevated serum creatine kinase (CK) levels.

The authors also found that patients with history of falls had higher CK levels ($p < 0.002$) even if there was no clinical evidence of muscle trauma on ER reports and consequently may be an important factor for clinicians to consider. In a prospective observational cohort study of 1150 patients hospitalized for COVID-19 in New York City, Cummings et al found that 26% of patients reported myalgia. Another epidemiologic study of 1420 patients in Europe with mild-to-moderate COVID-19 infections found that 62.5% reported myalgia.

The mechanism behind the presence of myalgia or arthralgia with COVID-19 infection remains poorly understood. As a close relative to COVID-19, studies on SARS-CoV-1 may provide insight into potential mechanisms of injury to the musculoskeletal system caused by COVID-19 infections. Previous studies on the SARS-CoV-1 virus have described how infection can lead to muscle damage or dysfunction, decreases in body mass, muscle fiber atrophy, or focal muscle fiber necrosis and immune cell infiltration. Studies have also described reports of patients with avascular necrosis, mostly in the femoral head, following SARS-CoV-1 infection, which may be due to the infection itself or the corticosteroid use in its treatment.

Furthermore, the inflammatory response to COVID-19 infection may be a contributor to myalgia and/or arthralgia in infected patients. Studies have described how those infected with COVID-19 can experience an aggressive inflammatory response, with elevated levels of proinflammatory signaling molecules such as CRP, IFN- γ , IL-1 β , IL-6, IL-17, and TNF- α . These inflammatory signaling molecules have been linked to muscle fiber damage and consequently may play a role in causing or contributing to arthralgia and/or myalgia during COVID-19 infection.

The management of myalgia and/or arthralgia in patients infected with or having a history of COVID-19 remains largely unchanged and consists of NSAIDs and/or rehabilitation such as physical therapy. Caution should be taken in determining the etiology of the arthralgia and/or myalgia, and other causes such as reactive arthritis or inflammatory disease processes should be adequately explored.

Musculoskeletal Sequelae of COVID Therapy

Understanding the potential musculoskeletal sequelae of therapies used to treat and manage COVID-19 is imperative. Numerous medications are being investigated as

potential therapeutic options for COVID-19 patients, including new investigational drugs and therapies being repurposed for COVID-19. Repurposed therapies, each with their unique side effect profile, include drugs such as chloroquine/hydroxychloroquine, Lopinavir/Ritonavir, Ribavirin, Interferon (IFN) - α and - β , and corticosteroid use. Studies have described how IFN- β and IFN- α are associated with arthralgia and myalgia in patients undergoing its therapy. It has also been reported that, rarely, myopathy and neuromyopathy may occur following treatment with chloroquine and hydroxychloroquine. Although rare, it has been reported that Lopinavir-ritonavir treatment is associated with arthralgia, back pain and osteonecrosis. One study on the pharmacological profile of ribavirin found that for patients being treated with the drug, >10% of patients reported arthralgia and musculoskeletal pain. Furthermore, a population cohort-based study in South Korea investigating pain medication use found that patients with comorbid musculoskeletal disorders who are infected with COVID-19 were not associated with increased in-hospital mortality. However, the authors found that strong opioid use was associated with higher in-hospital mortality among patients, whereas use of other pain medications (paracetamol, gabapentin, pregabalin, glucocorticoids, NSAIDs, weak opioid, and benzodiazepine) did not show a significant association with in-hospital mortality.

Corticosteroid use in the management of COVID-19 patients has increased, thus understanding its wide side effect profile is essential. Prolonged corticosteroid use, especially in critically ill patients, has been associated with a variety of effects on bone, including associations with osteonecrosis, reduced bone mineral density (BMD), and osteoporosis. Studies have described how corticosteroids can also lead to muscle atrophy and muscle weakness. Whether these effects are due to the use of corticosteroids specifically remains poorly understood, as it has also reported these effects occur in critically ill patients without the use of corticosteroids. As clinicians managing patients with musculoskeletal complaints, caution and consideration should be given to the use or history of corticosteroid therapy, and these patients should be monitored for long-term effects.

Rehabilitation and Recovery

Equally important for clinicians is understanding the potential long-term impact COVID-19 infection may have on patients and their recovery. In a single-center cohort study following the recovery of 300 patients

hospitalized from COVID-19 infection, Karaarslan et al found that 56.3% of patients reported musculoskeletal complaints 1 month after discharge. The authors also found that the most common musculoskeletal complaints of patients recovering from infection included fatigue, followed by back pain, arthralgia, myalgia, low back pain, and neck pain. Notably, the authors also observed that the persistence of fatigue, myalgia, and arthralgia was associated with a higher BMI. In another case series following patients discharged from COVID-19 hospitalization in Italy, Carfi et al found that 23.7% of patients had persistent complaints of joint pain over a month following discharge. Another study of 110 patients reported that 22.7% of patients experienced ongoing myalgia following infection. Therefore, it is important for patients to consider a history of COVID-19 infection when managing patients with musculoskeletal complaints.

Rehabilitation programs may prove beneficial for patients with persistent musculoskeletal complaints recovering from COVID-19 infection. Past studies investigating recovery following SARS-CoV-1 infection have observed improvement of symptoms in recovering patients. In one randomized control trial evaluating the effect of an exercise training program on cardiorespiratory and musculoskeletal recovery following SARS-CoV-1 infection, Lau et al found that exercise training program was effective in improving both the cardiorespiratory and musculoskeletal fitness. Consequently, there may be similar benefit for patients recovering from COVID-19 infection. Additionally, preventing prolonged physical inactivity in recovering patients may prove beneficial in preventing muscle disuse atrophy and loss in functional performance. Furthermore, long-term monitoring and follow-up chest imaging may be warranted for patients

Table 1 Summary of COVID-19 Effects on the Musculoskeletal System

| | |
|--|--|
| Neuromuscular involvement: neuropathies & myopathies | <ul style="list-style-type: none"> COVID-19 patients admitted to the ICU that have undergone invasive ventilation and pronation cycles are at increased risk of critical illness myopathy (CIM) and critical illness polyneuropathy (CIP), and more rarely Guillain Barre Syndrome. In cases of uncooperative or sedated patients, electromyography and single nerve conduction studies can be used for diagnosis. Management of CIM and CIP includes reducing the time a patient spends in an immobilized state and pulmonary rehabilitation/early mobilization. |
| Inflammation impact on MSK | <ul style="list-style-type: none"> COVID-19 induced proinflammatory state may lead to inflammatory reactive arthritis, muscle fibrosis, increased bone fragility, tendinopathy, and muscle weakness. |
| Arthralgias & myalgias | <ul style="list-style-type: none"> Arthralgia and myalgia commonly present early in COVID-19 patients, even in the absence of pulmonary symptoms, with myalgia occurring more commonly. Studies have suggested that arthralgia can precede the onset of fever and pulmonary symptoms in infected patients. Management of myalgia and/or arthralgia in patients with a history of COVID-19 consists of NSAIDs and/or rehabilitation. |
| Musculoskeletal sequelae of COVID therapy | <ul style="list-style-type: none"> The use of IFN-β and IFN-α as therapy for COVID-19 may be associated with arthralgia and myalgia in patients. It has been reported that in patients being treated with ribavirin, >10% of patients reported arthralgia and musculoskeletal pain. Care should be given with opioid use, as strong opioid use was associated with higher in-hospital mortality, whereas other pain medications did not show a significant association with in-hospital mortality. Prolonged corticosteroid use has been associated with various effects on bone and muscle, including associations with osteonecrosis, reduced bone mineral density, osteoporosis, muscle atrophy, and muscle weakness. |
| Rehabilitation and recovery | <ul style="list-style-type: none"> Musculoskeletal symptoms may continue to persist following recovery from COVID-19, with the most common complaints including fatigue, back pain, arthralgia, myalgia, low back pain, and neck pain. Rehabilitation can improve persistent musculoskeletal symptoms, including exercise training programs and/or physical therapy. Prevention of prolonged physical inactivity may assist in minimizing muscle disuse atrophy and loss in functional performance. |

recovering from severe illness. One study of patients recovering from both SARS-CoV-1 and Middle East respiratory syndrome (MERS) found fibrosis was a common finding in patients who experienced persistent pulmonary symptoms. Therefore, special attention should be paid to patients experiencing persistent pulmonary symptoms.

Conclusion

As the global pandemic caused by COVID-19 continues to leave its mark on the world, special attention must be given to its musculoskeletal effects. Infection with the virus can cause a range of musculoskeletal symptoms such as arthralgias, myalgias, neuropathies/myopathies, and potential bone and joint damage (Table 1). Importantly, current therapeutics used in the management of COVID-19 patients can also cause musculoskeletal effects that clinicians should be aware of. Finally, understanding the need for effective rehabilitation is critical in helping patients return to pre-infection mobility and function.

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IFSSH Ezine Submission Information



"For the members, by the members"

The IFSSH Ezine is the official mouthpiece of the International Federation of Societies for Surgery of the Hand (IFSSH), and is sent free of charge every three months (February, May, August, November) to many thousands of Hand Surgeons and Hand Therapists worldwide.

Member contributions

The magazine's philosophy is "For the members, by the members".

Any IFSSH Member Society may use the Ezine to announce their activities or share information regarding their Society. This is gratis.

Members are also encouraged to share hand related anecdotes, tips and techniques, art work or pearls of wisdom. We would like to share!

Advertisements

All announcements or advertisements which are not officially endorsed or sponsored by a Member Society may be placed in the Ezine as long as the

advertisement relates to the Hand and aligns with the IFSSH Charter. The current fee is US\$ 300 per full size page per issue, or US\$ 1000.00 for 4 issues. Specifications for full page adverts: Dimensions: 190mm x 272mm (216mm x 303mm with bleed). Format required: High resolution pdf (all photos in artwork must be CMYK, 300 dpi)

All advertisements have to be of high definition, ready to be published as is, and will be placed without editing. The advertiser thus takes full responsibility for the advertisement and the response that may flow from placing it in the Ezine. Furthermore, the IFSSH does not endorse nor take any responsibility for the content or claims made in such advertisements.

Deadline for submissions:

All submissions should reach us not later than the 10th of the month prior to publication ie 10 January, 10 April, 10 July and 10 October. Please note we do not send reminders.

All previous issues of the Ezine are available on the IFSSH website: www.ifssh.info.

All contributions should be sent to administration@ifssh.info.

We look forward to receiving your submissions.

Obituary Prof. Yasuo Yamauchi M.D., Ph.D.



It is with great sadness that we inform you of the passing of Professor Emeritus Yasuo Yamauchi. He passed away on 26 June 2021 at the age of 89, in the company of his wife and son in the special ward on the top floor of Juntendo University Hospital in Tokyo.

Yamauchi is known as one of the giants in the field of Hand Surgery not only in Japan but also in many other countries worldwide and will be remembered for his tremendous contribution to the development and progress of orthopedic surgery in Japan and other countries.

After graduating from the University of Tokyo Faculty of Medicine in 1956, Dr. Yamauchi received his internship training at the Naval Hospital Yokosuka, and then spent 1957 and 1958 in a surgical residency at the University of Michigan Hospital in the USA. During his stay in Michigan, he met Dr. Alfred B. Swanson at the Blodgett Memorial Hospital. After returning to Japan, he worked in the Department of Orthopaedic Surgery at the University of Tokyo for several years.

He returned to the USA in 1967 to work with Swanson at the Blodgett Memorial Hospital for two years and helped to develop the flexible implants for small joint reconstruction and biocompatibility studies of silicone in bone. Yamauchi became a pioneer of silicone implants for small joint reconstruction in Japan.

Yasuo Yamauchi was Professor of the Department of Orthopaedics at the Juntendo University Faculty of Medicine (1982-1997) and then Professor Emeritus in the same Department (1997-2021). He hosted the 25th Annual Meeting of the Japanese Society for the Surgery of the Hand as the Congress President in 1982.

He was the President of the Japanese Orthopaedic Association (1993-1994) and President of the International Federation of Societies for Surgery of the Hand (1998-2001). He received Honorary Memberships from the American Orthopaedic Association and as well as from SICOT in recognition for his long-term contributions.

Based on his extensive knowledge obtained from his vast experiences and his exposure to western-type medical education in the USA, Yamauchi had a great impact on Orthopaedics in Japan. He introduced the board certification system in the Japanese Orthopaedic Society. In addition, it was well known that he interacted with a wide range of people in Hand Surgery and Orthopaedics, as well as with many in other academic and artistic fields.

Last but not least, I sincerely appreciate the kindness of the IFSSH Members shown towards Yasuo Yamauchi during his life-time.

Muneaki ISHIJIMA, M.D., Ph.D.

Professor and Chairman, Department Medicine for Orthopaedics and Motor Organ, Juntendo University Graduate School of Medicine, Tokyo, JAPAN



Nicholas James Barton *b 1935*

Nicholas James Barton was born on 28 May 1935 in Ruislip, Middlesex, London, United Kingdom. He studied medicine at the University of Cambridge and the Middlesex Hospital Medical School in London.

While preparing to sit for his FRCS (Fellow of the Royal College of Surgeons) qualification, he was a Demonstrator in Anatomy at the University of Newcastle-upon-Tyne, where serial dissections of the hand kindled his lifelong interest in the hand. His orthopaedic training was at the Robert Jones and Agnes Hunt Hospital in Oswestry, Shropshire, as well as during 1967/1968 as Harkness Fellow at the Rancho Los Amigos Hospital in Downey, California, USA. with Vernon Nickel.

In 1971 Barton became Consultant Orthopaedic and Hand Surgeon at Nottingham University Hospital, as well as at the Harlow Wood Orthopaedic Hospital until his retirement in 1995. Two of the major activities were managing rheumatoid arthritis and hand fractures. From 1982 until 1995 he was Civilian Consultant in Hand Surgery to the Royal Airforce.

Nicholas Barton wrote many classical publications.

While he was still a medical student he published a well-researched book on "The lost rivers of London" in 1969. This book has seen numerous editions and is still available as a major reference. In the medical literature he published extensively, which includes 24 chapters in books and the well-read books "Fractures of the Hand and Wrist" (1986), and "Current management of scaphoid fractures" (2002).

His interest in the scaphoid was also reflected in many articles including "Twenty questions about the scaphoid" (JHS, 1992), and "Studying the scaphoid" (CME Orth, 2002). This interest earned him the honour to present the Royal College of Surgeons of England Huntarian Lecture on 14 September 2001. The IFSSH Nomenclature Committee requested Barton to compile the "Guide to Terminology for Hand Surgery". After his retirement he contributed the chapter "The development of Hand Surgery" in the book by Leslie Klenerman: "The Evolution of Orthopaedic

Surgery" (2002) (The Royal Society of Medicine Press)

He held many leading positions amongst others President of the British Society for Surgery of the Hand, Member of the Editorial Board of the British Orthopaedic Association (BOA) Journal of Bone and Joint Surgery, Examiner of the Royal College of Surgeons (Orthopaedics) (1981-1995), Chairman of the Educational Committee of the BOA, Member of the Special Advisory Committee in Orthopaedics for the Royal College of Surgeons on orthopaedic training in Great Britain and Editor of the Journal of Hand Surgery (British Volume) from 1987-1991.

Nicholas Barton was Visiting Professor in a number of countries and was asked to present various eponymous lectures including the Bradford Eaton, Pulvertaft, Samson Gamgee and the above mentioned Huntarian Lecture.

Nicholas James Barton was honoured "Pioneer of Hand Surgery" at the Tenth International Congress of the IFSSH in Sydney, Australia on 11 March 2007.



Andries Coetzee Boonzaier *1921-1988*

Andries Coetzee Boonzaier was born in Benoni, South Africa on 12 September 1921. After graduating as a medical doctor from the University of Witwatersrand in Johannesburg, South Africa he spent some years as General Practitioner. He then completed his orthopaedic training at the University of Pretoria, before gaining experience in hand Surgery with Daniel C. Riordan in New Orleans, the Carville Leprosy Hospital, and Robert E. Carroll and William Littler in New York, USA.

Back in South Africa he settled in Johannesburg where he practiced orthopaedic surgery. But his passion of Hand Surgery became his prime interest. Boonzaier then established the first Hand Surgery Service at the Chris Hani Baragwanath Hospital in Soweto (University of Witwatersrand) near Johannesburg.

He was instrumental in the formation of the South African Society for Surgery of the Hand (SASSH) in 1969, which then became the 9th Member Society of the IFSSH in 1972. He was elected the second President of SASSH. He also started a Hand Surgery Service at the large Westford

Leprosarium Hospital near Pretoria where he performed many hundreds of reconstructive procedures on leprosy hands. Boonzaier urged the Health Authorities in South Africa to establish Hand Units at all the major teaching hospitals.

Because of his contribution and encouragement to develop Hand Surgery, Boonzaier may be regarded as the father of Hand Surgery in South Africa and is honoured by the A. C. Boonzaier eponymous lecture at the annual SASSH Congress.

Boon, as he was affectionately known amongst his peers, had an exceptional understanding of the anatomy and biomechanics of the hand, and was ahead of prevailing thinking during his time. For this reason he loved reconstructive tendon surgery on leprosy, spastic and paralysed hands. When teaching he always complimented his wisdom with the most instructive colourful drawings while talking.

As a side-line, Boon enjoyed his large farm, and was a keen big-game hunter. On one hunting trip he severed all the flexor tendons and digital nerves of the four fingers in

his right hand when he struck his hunting knife into a table and the bloody hand slipped over the sharp edge. Fortunately Dr. Daniel Riordan, one of his erstwhile mentors, was in the country at the time as first visiting professor to SASSH (1970), and he successfully repaired all these structures. Knowing what was involved, Boon took the post-operative rehabilitation seriously. Even after this devastating injury to a young surgeon, he maintained that he still had the "best right hand in the surgical business"!

It may be this personal traumatic experience which contributed to his view that it is essential that any hand surgery service is only complete with a full complement of rehabilitative therapy, and insisted that Occupational- and Physiotherapists should always be present in Hand Clinics and ward rounds.

Boon passed away on 29 August 1988 in Johannesburg.

Andries C Boonzaier was honoured as "Pioneer of Hand Surgery" by the IFSSH at its 10th International Congress in Sydney, Australia on 11 March 2007.

A guide to Triangular Fibrocartilage

Complex anatomy & clinical assessment

The triangular fibrocartilage complex (TFCC) is a sophisticated ligamentous structure located on the ulnar side of the wrist.¹ It is highly susceptible to injury, with a documented incidence rate as high as 78 percent in patients following distal radius fracture.^{2,3}

A high prevalence is also found in people who play sports that involve repetitive or forced pronation/supination or axial loading of the wrist, such as golf, football, or baseball.⁴⁻⁸ The mechanism of injury can vary from low-energy trauma, such as repetitive overuse activities, to high-energy trauma, such as a fall onto an outstretched hand (FOOSH). The TFCC has multiple roles, some of which include: 1) providing stability to the distal radioulnar joint (DRUJ) during end range forearm rotation, 2) dispersing the forces generated between the ulnar head and the carpal bones during weight bearing or ulnar deviation, and 3) providing proprioceptive feedback during functional activities.^{1,9,10}

Presentation of symptoms following injury may vary depending on the location and severity of trauma. Symptoms may include decreased range of motion (ROM), decreased grip strength, increased ulnar-

sided wrist pain (USWP), impaired proprioceptive function, or a combination thereof. The aim of this review is to share practical information to assist health professionals who are not familiar with TFCC anatomy or assessment, with a particular focus on the components of the DRUJ, as this represents a common clinical presentation.

Some important anatomical structures to consider during TFCC assessment include: the palmar and dorsal radioulnar ligaments (both deep and superficial), the triangular fibrocartilage disc proper or articular disc, and the extensor carpi ulnaris (ECU) tendon and its associated sub-sheath (Figures 1 and 2). While other TFCC structures are acknowledged to be important, the above select structures will be covered in this review to form a strong foundational understanding.

The deep radioulnar ligaments provide DRUJ stability via the ligamentum subcruentum, or foveal insertion. The deep dorsal radioulnar ligament (dDRUL) and deep palmar radioulnar ligament (dPRUL) work in tandem to provide stability during end range forearm rotation.

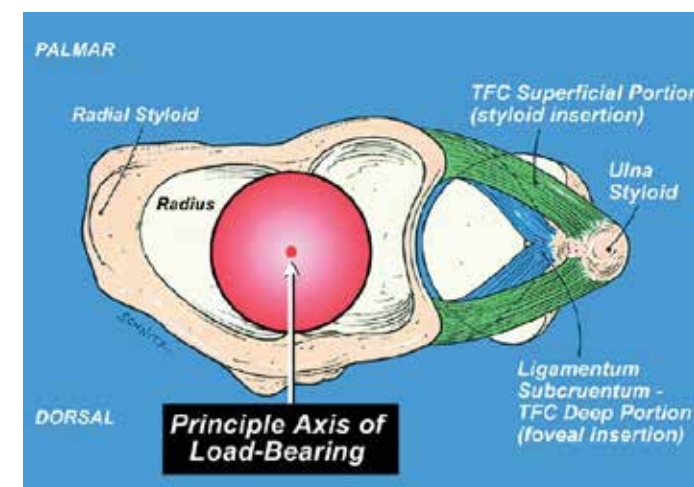


Figure 1: The deep and superficial radioulnar fibres of the TFCC, as pictured in Kleinman¹⁶ pg. 1093.

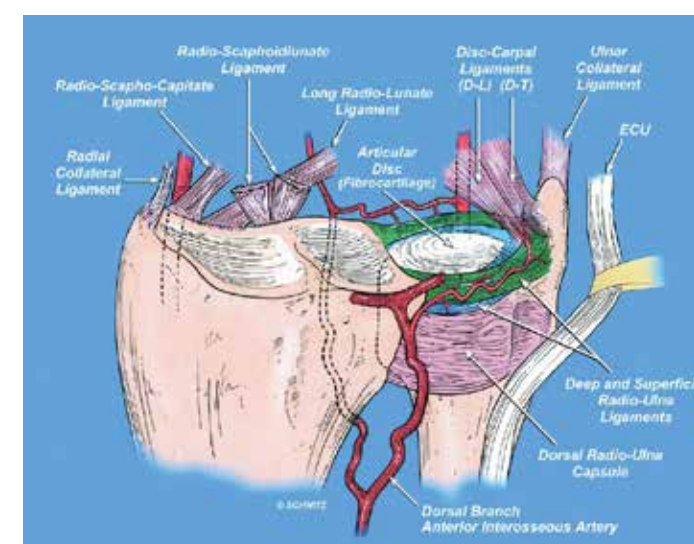


Figure 2: The Triangular Fibrocartilage Complex and surrounding structures, as pictured in Kleinman¹⁶ pg. 1091.

Injury to the deep foveal fibres is likely to cause instability during end range forearm rotation, when compared to the contralateral side. During end range supination, the dDRUL provides stability (is under tension), while the dPRUL is slack. Conversely, when positioned in end range pronation, the dPRUL is under tension, while the dDRUL is slack (Figure 3). In neutral or mid-range forearm rotation, both dDRUL and dPRUL are relatively relaxed. A useful statement to remember when assessing DRUJ stability in clinic is "the side you see is the ligament you test".

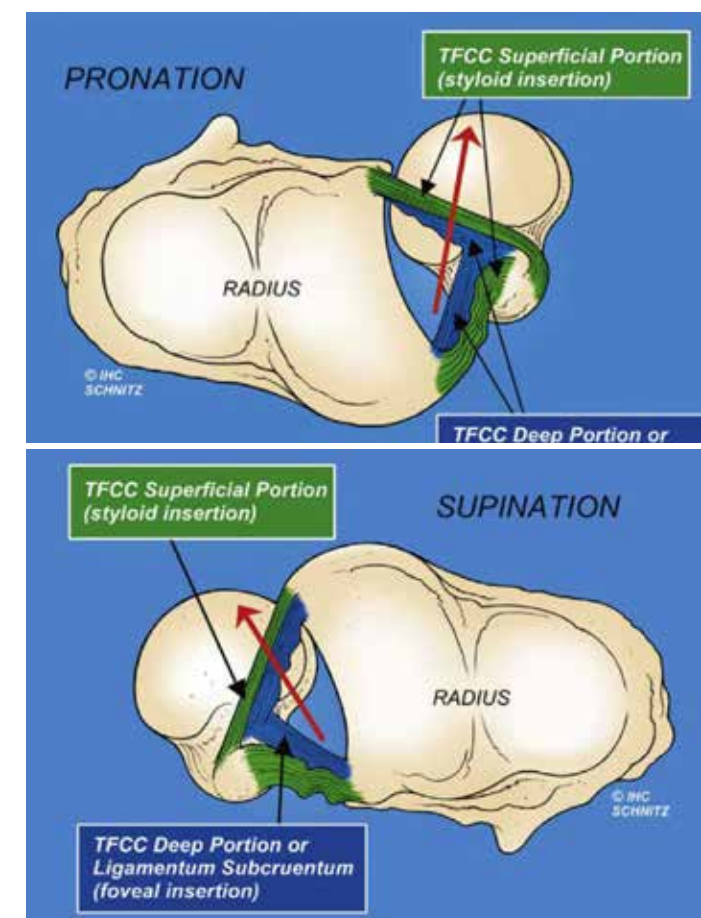


Figure 3: The reciprocal relationship of the deep (in blue) and superficial (in green) TFCC fibres during forearm supination and pronation, as pictured in Kleinman¹⁷ pg. 13. A: tightening of the deep palmar radioulnar ligament (dPRUL) as the forearm is positioned in pronation. The deep dorsal radioulnar ligament (dDRUL) is on slack. B: tightening of the deep dorsal radioulnar ligament (dDRUL) as the forearm is positioned in supination. The deep palmar radioulnar ligament (dPRUL) is on slack.

When the client's forearm is positioned in supination with the elbow and shoulder in flexion (Figure 4), the dorsal side of the wrist is observed by the health professional when facing the client, therefore the dDRUL is being tested and is under tension. Alternatively, when the client's forearm is positioned in pronation with the elbow and shoulder in flexion, the palmar aspect of the wrist is now visible to the health professional, therefore the dPRUL is now being tested and is under tension.

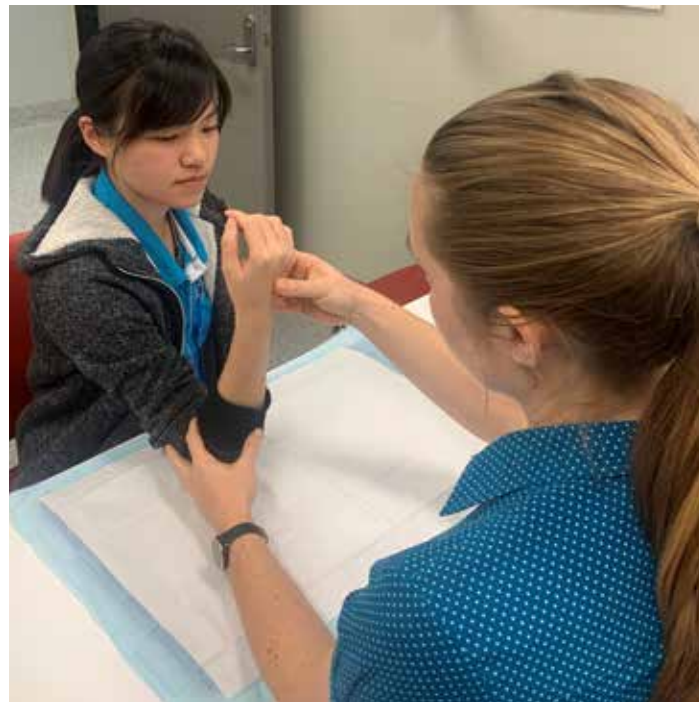


Figure 4: The health professional tests the deep dorsal radioulnar ligament (dDRUL), by positioning the client's wrist in a supinated position.

The superficial radioulnar ligaments are also divided into dorsal and palmar components and provide proprioceptive feedback during functional tasks. Injury to the superficial TFCC fibres may cause significant pain or present as dysfunction or clumsiness during activities that were previously completed without issue.

The articular disc is a cartilaginous structure, with similarities in tissue make-up to that of the articular surface of the knee or shoulder. Its role is to distribute the forces produced between the ulnar head and the ulnar carpus during ulnar deviation or weight bearing. This component of the TFCC is mostly avascular, with injury to this structure likely to present as pain during ulnar deviation or weight bearing. Lastly, the ECU tendon and its associated sub-sheath may be considered when assessing TFCC stability. The ECU contributes to DRUJ stability when the forearm is positioned in supination, by dynamically resisting dorsal subluxation of the ulnar head relative to the distal radius.

This assists the dDRUL by further stabilising the DRUJ during heavy lifting activities. Injury to the ECU tendon or sub-sheath may present as USWP, or an audible or palpable 'clicking' produced when the client rotates their forearm.

Clinical assessment of the TFCC can be categorised into 'Mechanism', 'Investigations', and 'Assessment', or M.I.A. Mechanism of injury involves a clear and detailed recount of the event, or events, leading up to and immediately following the presentation of symptoms. Important information may include whether a high energy or low energy injury was reported, or whether symptoms presented after repetitious activity or following FOOSH. Witness reports or collateral information may be useful to triangulate the clients recount of the mechanism.



Figure 5: Dorsal subluxation of the ulnar head relative to the distal radius, suggesting damage to the foveal fibres. Case courtesy of RMH Core Conditions, Radiopaedia.org, rID: 34363.

Investigations may include standard X-ray, Magnetic Resonance Imaging (MRI), or in some cases wrist arthroscopy. X-ray may rule out bony injury, such as a large ulnar-styloid fracture, distal radius or carpal bone fracture. It may also highlight DRUJ abnormality such as subluxation of the ulnar head (Figure 5), or symptomatic ulnar variance (positive or negative) when compared to the contralateral side. MRI has been shown to accurately detect TFCC trauma, when interpreted by an experienced clinician.¹¹ Wrist arthroscopy represents the 'gold standard' for TFCC assessment, although being invasive in nature; it may present some practical limitations for clients and surgeons.



Figure 6: The foveal sign, as pictured in Sachar¹³ pg. 1492. The health professional applies pressure over the foveal region, between the ulnar styloid and pisiform. A positive test will produce ulnar wrist pain when compared to the contralateral side.

Assessment or common special tests for the TFCC may include the 'fovea sign', 'DRUJ ballottement test' or the 'ulnocarpal stress test'. The fovea sign involves the health professional applying pressure to the ulnar wrist, above the TFCC foveal insertion (Figure 6).^{12,13}

A positive test is recorded when notable localised pain is reported by the client, when compared to the contralateral side. This suggests TFCC injury has occurred, although has poor specificity to identify the degree of injury or specific structures involved. The DRUJ ballottement test begins by positioning the client's forearm in end range supination or pronation. With the distal radius held stable by the health professional, the ulnar head is firmly moved in a dorso-palmar plane to create a shearing force at the DRUJ (Figure 7).¹²

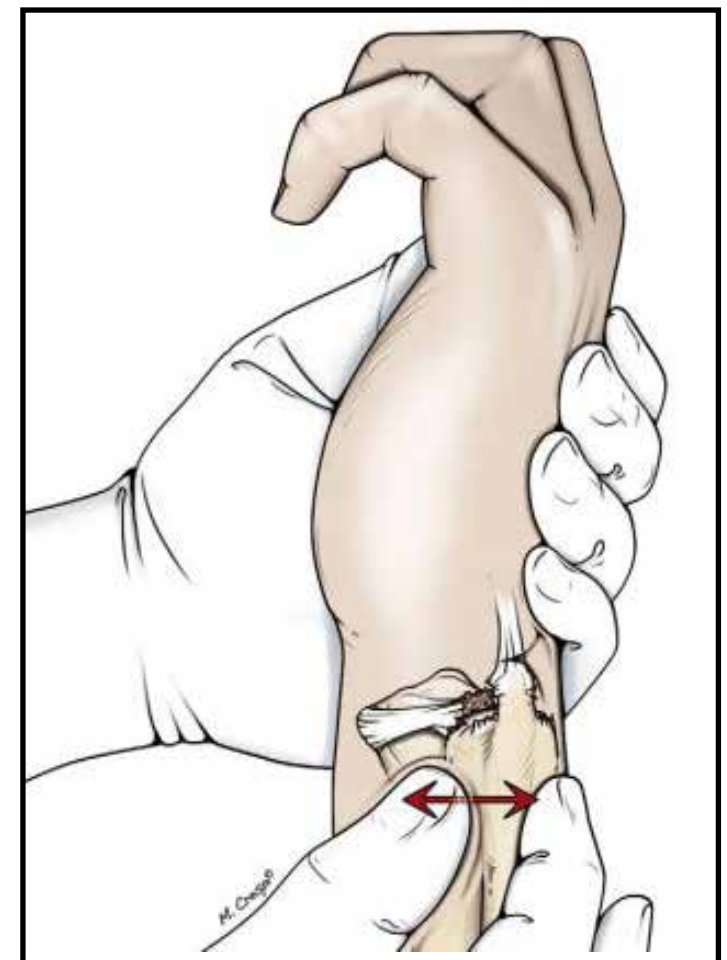


Figure 7: The ballottement test, as pictured in Atzei, Luchetti 12 pg. 265. The radius is held steady by the health professional, while the distal ulna is moved in dorso-palmar plane relative to the radius. The test is completed at end range supination and pronation, and then compared to the contralateral side. A soft end feel suggests disruption to the deep TFCC fibres at the foveal insertion.

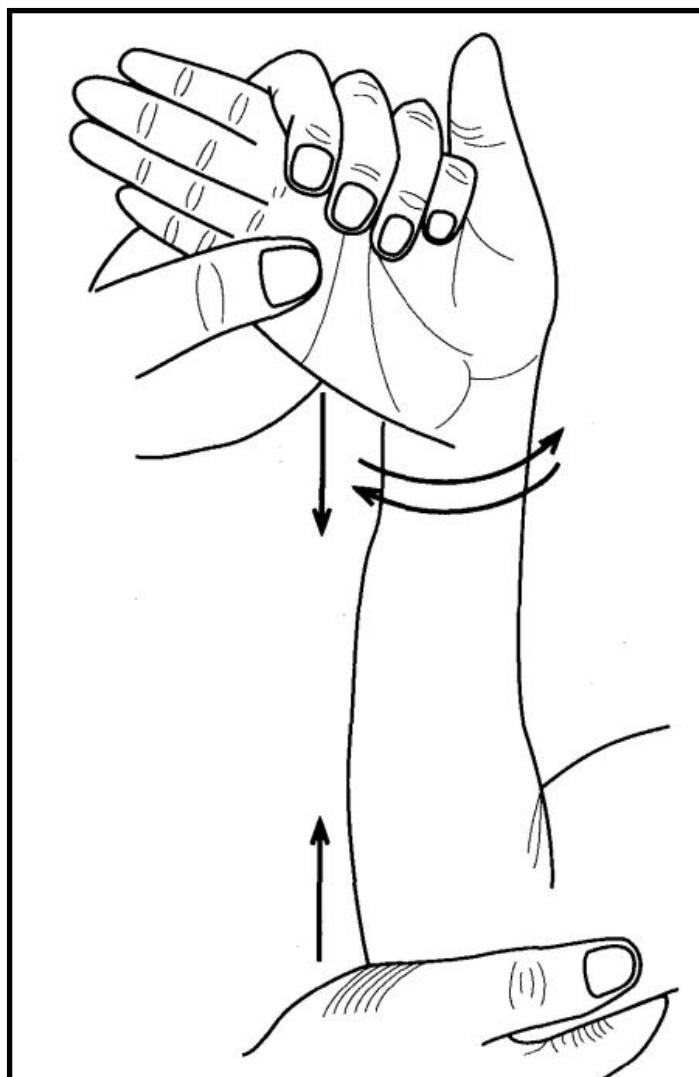


Figure 8: the ulnocarpal stress test, as pictured in Nakamura, Horii, Imaeda, Nakao, Kato, Watanabe 15 pg. 720. The health professional deviates the wrist into maximum passive ulnar deviation, then rotates the forearm between supination and pronation. A positive test will produce ulnar wrist pain when compared to the contralateral side.

Resistance to movement or a 'hard end point' is expected in an uninjured wrist, compared to the contralateral side. The test is then repeated in the opposite forearm position (supination or pronation) on both wrists. A positive test is recorded if some degree of DRUJ instability (soft end point) is assessed in the injured wrist compared to the contralateral side. This would suggest injury to the deep radioulnar fibres.

Pain without increased laxity may suggest injury to the superficial radioulnar ligaments, without deeper foveal involvement. Lastly, the ulnocarpal stress test involves passively ranging the client's wrist into maximal ulnar deviation and passively rotating the forearm from supination to pronation (Figure 8).^{14,15} A positive test can be recorded if notable pain is reported, when compared to the contralateral side. This test suggests injury to the articular disc, ligament sprain, or ulnocarpal abutment or impaction.

This brief review of TFCC anatomy and assessment is provided to assist health professionals when conducting ulnar sided wrist assessment for a suspected TFCC injury. This is a complex topic that has been simplified for the purpose of this review. As such, this article is intended to be used as an educational platform, to improve anatomy understanding, share practical information, guide clinical reasoning, and fuel meaningful discussion. It is hoped that this article sparks interest in this important but under-researched injury topic, leading to improved client outcomes.

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International Federation of Societies for Hand Therapy
www.ifsht.org
IFSHT News October 2021

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VOLUME 1 , No. 2 - SEPTEMBER 2021

R.E.A.C.H.

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Research, Education, Achievement and Clinicians in Hand and Upper limb therapy around the world.

THE IFSHT IS EXCITED TO PRESENT EDITION TWO OF THE NEW QUARTERLY NEWSLETTER, REACH.

This new publication aims to collate Research, Education, Achievement and Clinicians in Hand and upper limb therapy around the world.



IFSHT Newsletter

REACH VOLUME 1, NO. 2

[HTTPS://IFSHT.ORG/ PUBLICATIONS](https://ifsht.org/publications)

The IFSHT is excited to present the second issue of the new IFSHT newsletter available here:

REACH Vol 1, No. 2

This new publication aims to collate Research, Education, Achievement and Clinicians in Hand and upper limb therapy around the world.

With the new newsletter we introduce a competition for our members to come up with a logo for REACH. Entries can be emailed to informationofficer@ifsht.org by 31 March 2022. The winner will be announced in Volume 2 Number 3.

We also call on hand and upper limb therapy clinicians and researcher to submit any contributions for consideration to informationofficer@ifsht.org.

CALL FOR NOMINATIONS

The IFSHT call for nominations for executive committee members (process can be viewed on the IFSHT website here) and chairs of standing committees for the next triennial term (3-year: 2022-2025).

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

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

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

- Chair - Education Committee
- Chair - Bylaws Committee
- Chair - Financial review Committee
- Chair – Publications Committee (NEW!)
- Members – Social Media Committee
- Members – Lifetime Achievement Award Committee
- Members – Christina Allegri Award Committee
- Members – Publications Committee (NEW!)
- Members – Sponsorship Committee
- Members – Education Committee
- Members – Bylaws Committee
- Members – Silent Auction Committee

Please review the job descriptions and apply here by 15 December 2021. Contact Anne Wajon, Chair of the IFSHT (2022-2025) Nominations Committee at pastpresident@ifsht.org for more information.

Accessible Hand Surgery

YOU AND I CAN MAKE HAND SURGERY MORE ACCESSIBLE TO THOSE WHO CANNOT AFFORD IT.

A struggling poor farmer with small children accidentally cuts flexor tendons at the wrist while sharpening his tools. Perhaps he suffers severe scissoring with unstable finger fractures while trying to repair his plough. He cannot afford to have surgery. He will still get by, but life will be even harder than it was. Such events strike so many people every day. You and I are privileged to have friends and money to get us through problems like this. More than half of the world is not as lucky as we are.

What makes hand surgery expensive? Not the sutures or the scalpel blades. Not even the surgeon's fee. The two most expensive parts of conventional hand surgery are 1) intravenous sedation and 2) main operating room sterility. And yet, the massive costs surrounding intravenous anesthesia and full sterility are no longer necessary for tendon repair and K wiring unstable finger fractures.

In 2017, we started an affordable WALANT field sterility minor procedure room in an old unused burn unit room just outside the main operating room in Kumasi, Ghana. For patients, this is less than half the cost of traditional main operating room sterility with "must have" sedation in that hospital. Since then, they have been doing 500 cases of accessible surgery per year in that minor procedure room[i]. Hand surgeons in Kenya have started minor procedure room surgery in 4

hospitals at Thika, Kijabe, Machakos, and Mwala. This type of change is not expensive. In fact, it costs much less than what most of us are still doing now. It just takes a little work to help change minds. We already have the science to back us up. Surgeons in less fortunate countries need us to back them up!



Unnecessary trash from main operating room sterility for a minor procedure

How can you and I help? 1) By starting evidence based sterility where we work at home Evidence-based Sterility: The Evolving Role of Field Sterili... : Plastic and Reconstructive Surgery – Global Open (lww.com). 2) By starting to use WALANT for some small hand operations wherever we do surgery. Wide-awake Local Anesthesia with No Tourniquet: An Updated R... : Plastic and Reconstructive

Surgery – Global Open (lww.com). The developing world emulates what we all do. If we start to eliminate unnecessary costs and trash production with our hand surgery, so will they! They will be able to afford the surgery which is not expensive at all on its own.



Anesthesiologist starts IV while I finish field sterility case under general anesthesia

Expensive trash goes into our landfills and oceans after unnecessary main operating room sterility for a small hand operation. I could have done this operation in a minor procedure room for much less cost with no increased risk of infection. I have stopped this behavior as much as possible.

I try to never do this anymore. We established a field sterility policy in our main operating room to eliminate unnecessary costs and trash production when general anesthesia is unavoidable. In the image below, the anesthesiologist is starting his third attempt at an intravenous insertion in a sleeping child who needed general anesthesia in the main operating room. Meanwhile, I am almost finished a field sterility facial minor surgical procedure that does not require gowns and full patient draping. We can all do this. If we the surgeons do not generate these changes, who will?

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Consider lending a helping hand to those who cannot

www.touchinghands.org

Member Society



THE HONG KONG SOCIETY FOR SURGERY OF THE HAND

33rd HKSSH Annual Congress and 35th Anniversary of HKSSH

This year HKSSH is celebrating the 35th anniversary. The main theme of our 33rd HKSSH Annual Congress was "Hand in Hand through the Years".

We had invited our past presidents to share their experiences in different aspects of hand surgery. It was held on 27th and 28th of March 2021.



In view of the COVID-19 pandemic, the meeting was held in a hybrid format where the participants can join via Zoom or face-to-face. It was a cozy and warm gathering.



The Hand-Print Ceremony of our past presidents to celebrate the 35th anniversary of HKSSH

34th HKSSH Annual Congress

Our upcoming Annual Congress will be held on 19-20 March 2022 with AAHS as our guest society and Prof. Alex Shin as our visiting professor. Please stay in tune for further details.



BID ANNOUNCEMENT

Warm Greetings from Sunny Singapore!

Singapore is bidding to host the IFSSH-IFSHT meeting for 2028. We have a legacy of Hand Surgery and are one of 3 countries in the world where Hand Surgery is a separate established speciality. Our congress mascot and logo is Singapore's unofficial National Bird, 'the Crimson Sunbird'. We call him 'Shǒu' (手) with his wings depicted as hands flying towards a greener future for all of us.

Singapore is an exotic cultural melting pot of East and West, boasting fascinating ethnic and international cuisines, colourful festivals, unique attractions and excellent shopping. We are the gateway to Asia and well connected globally. We are also Asia's fastest growing Biomedical Centre, an International Healthcare Hub, and its Top Convention City.

We promise all delegates for IFSSH-IFSHT 2028, the opportunity to connect, collaborate, innovate and forge impactful and sustainable change in Hand Surgery and Therapy. We look forward to your support for our bid to host you in 'Singapore - The Heart of Asia'.

Stay Safe.

Dr Mark Edward PUHAINDRAN
President, Singapore Society of Hand Surgery (SSHS)
secretariat@sshs.sg



GUATEMALAN SOCIETY FOR SURGERY OF THE HAND

The COVID-19 pandemic has forced us to suspend all face-to-face academic activities, but in an effort to maintain medical education and academic activities, we held our meetings in virtual mode. This has been on a monthly basis and has become a wonderful opportunity to invite and listen to international and national teachers.

Our Society had a major re-organisation during 2021. We currently have 19 members under the leadership of current President Juan Carlos González.



Members of the Guatemalan Society for Surgery of the Hand

Standing: Gabriel Hernandez, Giovanni Lopez, Marco Sanchez, Horacio Lopez, Carlos Quintero, Fernando Romero, Rodrigo Bolaños, Luis Urzua, Samuel David.

Seated: Federico Rosales, Lionel Foncea, Victoria Choquin, Ernesto Cofiño, Heydi De León, Juan Gonzalez, Francisco Hernandez, Jose Arce.

Absent: Carlos Rios and Carlos Del Valle.

IRANIAN SOCIETY FOR SURGERY OF THE HAND



Historical practices of Hand Surgery in Iran:

Avicenna (980–1035) is the most famous Iranian physician. Among his many fundamental descriptions in the field of hand surgery, Avicenna was the first to differentiate between

tendons, nerves and ligaments in his anatomic descriptions. He is credited as the first to recommend repairing cut nerves and described neuroma as a consequence of the nerve lacerations. He presented the first concepts of compression neuropathy and its examination. Avicenna described the ominous consequences of swelling and a tight dressing on an injured limb and also recommended draining hematomas beneath the nail plate due to the crushing of the nail bed to prevent nail deformity. He advised the tying of bleeding vessels and inferred that vascular repair might be possible. He differentiated between hand infections between human bites and those of other animals.

Present day Hand Surgery in Iran:

Modern hand surgery in Iran was founded through the endeavors of Professor Jamal Gousheh (1930–2016) and Dr Sheikholeslamzadeh (1931–2014). Professor Gousheh was a French trained plastic surgeon; he established a hand and microsurgery ward in Shahid Beheshti University in 1980. Dr. Sheikholeslamzadeh, an American-trained orthopaedic surgeon, founded a hospital to treat disabled people in 1971. In that hospital, a separate ward was devoted to hand and upper-limb surgeries. Both surgeons were recognized as Pioneers in hand surgery by the International Federations of Societies for Surgery of Hand (IFSSH).

The Iranian Society for Surgery of the Hand (ISSH) has 50 active affiliated members who practice hand surgery

as a substantial percentage of their work. Seven hand surgeons are women. The members of ISSH can be plastic, orthopedic or general surgeons. The ISSH has monthly conferences and quarterly scientific seminars.

The ISSH has scientific collaboration with the Iranian Orthopedic Association and the Iranian Association of Surgeons. Annually, the ISSH organizes a 2-day specialty symposium for members and non-members of the Iranian Orthopedic Association and the Iranian Association of Surgeons. Iranian hand surgeons actively participate in congresses of the IFSSH, the Federation of European Societies for Surgery of the Hand and the Asian-Pacific Federation of Societies for Surgery of the Hand.

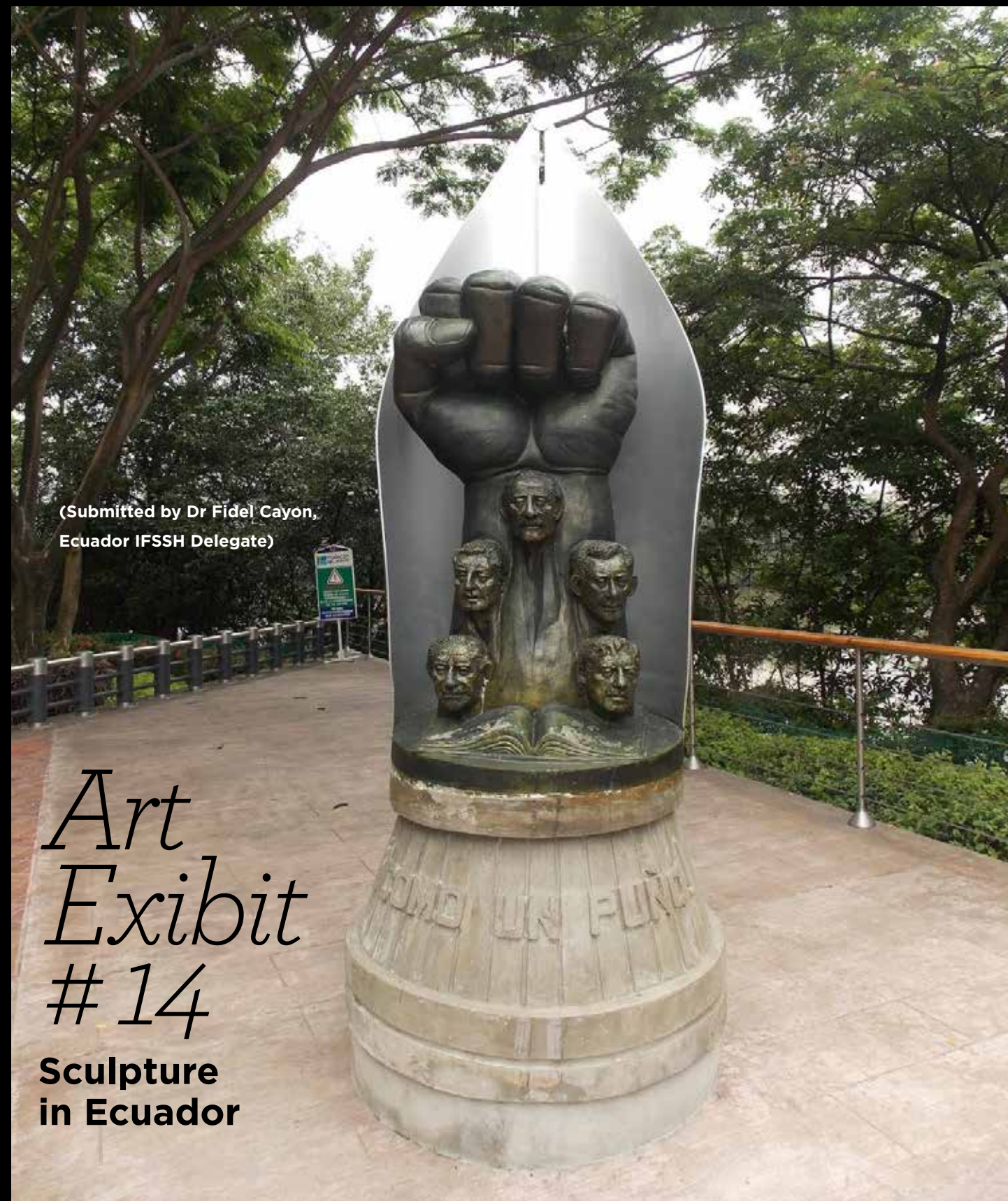
Although hand surgery has a fellowship training system for orthopedic and general surgeons, hand and micro-vascular surgery is a part of the curriculum of plastic surgery. Hand Surgery is not a separate specialty in Iran. In Tehran, three universities (Tehran, Shahid Beheshti and Iran Universities of Medical Sciences) have training programs affiliated with four hospitals. The program includes a unified 18-month formal fellowship curriculum for training in hand surgery.

Iran has more than 80 million people. Iranian hand surgeons practice surgical and nonsurgical treatments in all areas of hand surgery, including bone and soft-tissue trauma, congenital differences, degenerative diseases, rheumatoid deformities, arthroplasty for the hand and upper limb conditions, tumour surgery, burns, arthroscopy, and reconstructive surgery for obstetric palsy. Valuable experience was gained on brachial plexus as well as peripheral nerve injuries, and necessary tendon transfers from the casualties of the Iran–Iraq war between 1980 and 1988. Farm injuries and industrial incidents which result from carelessness are common. Iran has one of the highest rates of driving and road accidents in the world. A majority of these include upper-limb injuries.

Volkman ischaemic contracture following the treatment by a local bone setter is not a rare occurrence. Dupuytren's contracture is less prevalent and less severe than in northern Europe.

Microsurgery, including toe transfers, and major and minor replantation are being performed with increasing frequency over the past 40 years. The first successful hand transplantation in Iran was performed in 2013. Iranian hand surgeons have published many papers on hand surgery in recent decades.

Babak Shojaie MD, FA(ortho & Tr), FEBHS
Delegate of Iranian Society for Surgery of the Hand



(Submitted by Dr Fidel Cayon,
Ecuador IFSSH Delegate)

Art Exhibit #14 Sculpture in Ecuador

The "Group of Guayaquil" were five novelist writers from Ecuador during the 1930s and 1940s.

The monument is a metaphor of the group:

"Reality and nothing else but reality. We were five, as a fist" (Cino como un puno)

The monument stands on the pier of the Salado Estuary in the Parish of Urdaneta, Ecuador. It is made in bronze, with the images of the five writers above an open book, against a fist and a fountain pen tip as the background.

The Second Combined ASEAN Hand Society Meeting

Date: 10th - 12th Dec 2021

Venue:
Kuala Lumpur Convention Centre,
Malaysia



Call for Abstracts (Free papers and e-poster)

Abstract Instructions

- Abstracts must be submitted in English
- Only plain text is allowed: do not use tables, tabs, listings, any other formatting (bold, colours, etc).
- Maximum word count of the abstract is 500 words (including title).
- The abstract needs to be structured as follows:

Objective:

this section should contain 1-2 sentences that clearly indicate the scientific question of the study and its clinical (or other) importance.

Methods

this section should contain sufficient information to be able to understand the experimental design, the analytical techniques and the statistics used in the study.

Results

this section should contain objective data to answer the scientific question(s).

Conclusion

this section should provide only conclusion of the study directly supported by the results, along with implications for clinical practice, avoiding speculation and overgeneralization.

- The format for case reports would be
- Introduction • Case Report • Conclusion



Submission to be uploaded to: <http://bit.ly/ASEANhandsoc-abstract>
Deadline : 15th Nov 2021



Scan QR code for
abstract submission

- A scientific committee will select appropriate abstracts and results will be notified via email by 20th Nov 2021.

IFSSH/IFSHT/FESSH Congress London 2022



Next year the UK will host the joint Congress of the International Federation of Societies for Surgery of the Hand with the International Federation of Societies for Hand Therapy and the Federation of European Societies for Surgery of the Hand in London. This congress takes place only every three years and is, of course, the most prestigious hand surgery event... on the planet.

The venue is the ExCeL Conference Centre in Docklands, East London, one of the venues for the London Olympics. It is booked for 5 – 11 June 2022, with the Congress proper running 6 – 10 June.

<https://ifssh-ifsht2022.com>



We have a core organising committee which has been in place for some years now. We regularly meet up, remotely at present, every couple of months to discuss developments. Everyone has been working very hard and the pandemic has not made things easy. Bookings and visits were on hold for a long time, but as things are opening up so we have been able to secure the various other venues.

We also have a programme committee led by Jonathan Hobby and assisted by Wee Lam with an international representation from each of the continents.

We have engaged the services of Asszisztencia to help us organise and run the Congress. I have had experience in dealing with Asszisztencia over the last few years during my time on FESSH Council and I have found them to be extremely competent and fantastically efficient. They are a great asset.



The venue, the ExCeL Centre, which is situated in London Docklands, was one of the venues for the 2012 London Olympics.

It has significant functional advantages. ExCeL has a horizontal footprint and so will be very easily navigable during the Congress. It is a huge, versatile venue, with easily enough space to accommodate 4000 delegates, or more, if necessary and crucially can provide a vast central space for industry.

The area that we have reserved is outlined in blue in the picture, with the West Entrance on the left and the Platinum Suite with various sessional rooms immediately inside the entrance, overlooking the Victoria Dock.

The West Entrance is literally 10 yards from a Dockland Light Railway station.



We have now carried out several site visits and it is apparent that we have secured what is easily the most desirable and sought after area of ExCeL. We are just inside the entrance with the best access and Victoria Dock views from all the balconies outside the meeting rooms.



Here is a view of one of the bigger rooms for plenary sessions.



Accommodation (and restaurants) for delegates in the vicinity of ExCeL are plentiful and will be less expensive than in central London. If delegates decide that they would prefer to stay in central London, then transport options from the centre to ExCeL are good. There is the Docklands Light Railway (DLR) and also an underground tube connection (Crossrail Custom House station), due to be completed hopefully soon.

And there are river boats departing from major London piers every 20 minutes, if you want to take a scenic route in an



There will be a core series of plenary instructional lectures, the topic for which is "Tendon Disorders of the Hand and Wrist". A publishing deal has been negotiated with Thieme to produce an accompanying book, edited by Grey Giddins, Dean Boyce and myself, which will be included in the registration fee for surgeons. Invitations to chapter authors/speakers have been sent and have all been accepted. The chapters are now starting to come in for editing. There also will be a huge range of other instructional courses and symposia covering the whole spectrum of hand surgery.

The two prestigious named IFSSH lectures, the Swanson and the Presidential Guest lectures will be presented by Prof Tim Davis and Prof Gus McGrouther. They have been invited to deliver these and David Ring will be giving the BSSH Douglas Lamb lecture.

There is also a keynote talk on Diversity to be given by Niki Moffat CBE, the first woman to make the rank of Brigadier in the British army.

Linked to the congress are several short fellowships at various UK centres and applications for these are currently being assessed.

The Gala Dinner will be on the Thursday evening. We have booked the Old Billingsgate Market for this. This is a fantastically characterful and historic venue, in a great location. We met with the catering manager and we will visit again in the New Year to choose from the menus which sound excellent. We are looking into the possibility of river transport from ExCeL to the venue. Maximum seating is 1800 but it is likely to be heavily subscribed – book early!



There is a terrace overlooking the docks water, which will be ideal for a drinks reception. It is all air conditioned and maximum seating is 1800:



We are also planning a less formal social event for the Wednesday evening with music, dancing, food and drink at the Revolution Bar ...



Finally, with Assisztencia we have produced a cinematic "trailer" video to whet the appetites



Here is the link: https://www.dropbox.com/sh/z5h8h1rpbnt62/AABmrmxbeBQ2sDL3RAyzNhw1a/videos?dl=0&preview=Promotional_video_Long.mp4&subfolder_nav_tracking=1

Registration is now open! We hope that you are looking forward to it as much as us.



David Shewring
Consultant Hand Surgeon, University Hospital of Wales, Cardiff
Chair, Organising Committee IFSSH/IFSHT London 2022



Jonathan Hobby
Consultant Orthopaedic Hand Surgeon, North Hampshire Hospital, Basingstoke
Chair, Programme Committee IFSSH/IFSHT London 2022



6-10 JUNE 2022