

# The History of Hand and Microsurgery in Malaysia

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Hand surgery in Malaysia began as management for leprosy. A leprosarium was set up in Sungai Buloh, a suburb 15 minutes drive from our capital, Kuala Lumpur (Fig 1). The set up included inpatient facilities and residences for patients requiring long term management. Many patients decided to reside around the hospital to escape social stigma, and group together economically, to grow and sell flowers and potted plants. The area became known for selling plants and flowers, admittedly not an ideal occupation for those with insensate hands. Nevertheless it helped patients to make a good living and in some cases, to prosper.

The late Dr K. Thambyrajah was a pioneer in Malaysian hand surgery. He worked in Sungai Buloh Hospital in the 1960s. He remembers Dr Dakshiamoorthy and himself performing 20 to 30 procedures a month on hands and feet. The main problem they encountered was the high ulnar nerve lesion. Today, Leprosy is still the world's main cause of high ulnar nerve palsies. They performed Brand's many tailed transfer, as an anti-claw procedure. They also performed opponensplasties for median nerve lesions at the wrist. Sadly, they were not able to restore the debilitating loss of sensation. We are little better at that, even today.

There was also help available from overseas including visits from the legendary leprosy surgeon, Dr. Grace Warren, from Australia. They examined and operated on patients and guided young surgeons. "The Leprosy Mission of England" also helped by sending physiotherapists to rehabilitate these unfortunate patients. Dr Thambyrajah did two fellowships with Mr Pulvertaft at the Derbyshire Royal Infirmary and on return joined the Orthopaedic Department of the University of Malaya. With encouragement from Prof. P. Balasubramaniam the head of the Orthopaedic Department and advice from Professor Pesi Chacha, a visiting examiner from Singapore, a microsurgical practice laboratory was set up using the rat carotid artery model. Today, the Department of Orthopaedic Surgery at the University of Malaya, National Orthopaedic Centre of Excellence for Research and Learning (NOCERAL) runs a continuous Basic Microsurgery Course. It has been successfully continued for the past 17 years, and carries on educating potential microsurgeons.

Dato' Dr. Abdul Hamid bin Kadir did a fellowship with Hand Surgeon Dr Campbell Semple in UK. Dato' Hamid joined the second medical school in Malaysia, UKM, the Universiti Kebangsaan Malaysia (National University of Malaysia) and set up microsurgery there. In 1983, he organized a Hand Surgery Course under the banner of the Malaysian Orthopaedic Association (MOA) and the College of Surgeons of Malaysia (Fig 2).

The distinguished faculty included Dr S. P. Chow and Dr P. C. Leung from Hong Kong, Dr Venkataswami from India, Dr Campbell Semple from UK, Dr Chehab Helmi from Indonesia and Dr Robert W. H. Pho from Singapore. Dato' Hamid and Dr Khaw Joo Hwa represented Malaysia. Over the years, there has been much cooperation and transfer of skills from nearby and distant countries. Dr P. C. Leung performed the first two toe-to-thumb transfers, in Malaysia, (one in each of the two medical faculties) in 1985.

Over the years, many more young surgeons developed an interest in Hand and Microsurgery and several did training abroad. Dr. V. Pathmanathan and Dr. R. A. Vaikunthan were the first to do fellowships at the Christine Kleinert Institute of Hand Surgery, Louisville, Kentucky, USA. After their return, enthusiasm was high and the Malaysian Society for Surgery of the Hand (MSSH) was formed. It was registered on the 3rd of March 1993. Dato' Dr Hamid became the protem President and Dr V. Pathmanathan was secretary. The motto of our society is "Excellence through Hand Surgery".

The surgeons worked closely with therapists and decided to make therapists full members of the society, a very unique cooperation not seen in any other country. Several therapists, especially Mr. Nathan Vytialingam, were active in the committees in the early days. However, later on it was decided to revert to an association membership similar to those overseas, with surgeons as full members and therapists as associate members. We ran joint "Roadshows" with therapists, in most of the states of Malaysia, where surgeons would talk about various topics covering mainly hand trauma, and therapists would hold splinting and therapy workshops.

In 1993 the Malaysian Society for Surgery of the Hand (MSSH) organized the 1st Malaysian Conference on Surgery and Rehabilitation of the Hand (Fig 3). This was a successful international course. The guest speakers included internationally renowned therapists such as Judy Colditz, and top surgeons including Dr Robert W.H. Pho, Dr Tsu Min Tsai, Dr David Green, Dr Teoh Lam Chuan and Dr James Hunter. The next conference was entitled "The 2nd Malaysian Conference on Surgery and Rehabilitation of the Hand" but quickly become known as the "2nd Hand Meeting"! We invited in addition to the previous regional guests, Dr Jean Pillet, the famous prosthetist, from France, and other famous hand surgeons such as Dr Venkataswami and Dr B. B. Joshi from India. It was again very successful, although on a visit to the Tropical Jungle Learning Centre (Rimba Ilmu) in the University of Malaya, a thunderstorm broke out and a bolt of lightning struck a few feet from Prof Dr Robert Pho!

Since those two big international conferences, the specialty of hand surgery has been slowly and quietly gaining strength. There have been circle meetings at least three times a year. These meetings are loosely based on the circle meetings held in Liverpool, UK and the concept was brought back by Master Ch. Orth. (Liverpool) candidates. The meetings are held traditionally in homes of surgeons, and are casual meetings where exchanges of ideas occur and discussions on difficult problems are held. These casual and warm meetings are in line with Malaysian culture and have been readily accepted and proved to be an invaluable source of learning and camaraderie. Yearly annual scientific meetings are held in conjunction with the MSSH annual general meeting and have been well attended. In addition, other courses that have been held are the Universiti Malaya (UM) cadaveric flap course 2007, the Universiti Putra comprehensive course 2008, UM Basic Microsurgery Course and the Kuantan National Course on Hand Trauma for several years.

Since then, many courses have been carried out, including the tendon repair course by The Hand Department in the Ministry of Health, and various surgical technique courses, brachial plexus courses and courses to introduce young doctors to hand surgery as well as involvement in MOA meetings. In the current climate, many have learned the art of online courses and future meetings in the "new normal" may use the virtual format.

Tunku Sara Ahmad designed a logo which was adopted by the MSSH in 2007 (Fig 4). The weaving motif was used, as much food and handicraft in Malaysia uses this method. This was meant to reflect the many different cultures and disciplines that are interwoven and working towards excellence in hand surgery.

The Department of Hand Surgery in the Ministry of Health was setup in the Kuala Lumpur Hospital in 1986. It moved to Selayang Hospital in 1999. It was headed by Dr V Pathmanathan, a pioneer who has been involved tirelessly in the training of Hand Surgeons since the department was established. This department was transferred back to Orthopaedics in June 2016.

On the 18th of May 2000, a team led by Dr V Pathmanathan at the Department of Hand Surgery, Selayang, performed the world's first 'arm and hand transplant' on a one-month-old baby girl from her twin, who was born with a brain which was incompatible with further life. Since the twins were identical, there was no need for anti rejection drugs. It was also the world's 9th successful hand transplant. The child did well and celebrated many birthdays with her doctors and medical team.

When the Ministry of Health began four year subspecialty postgraduate courses, Hand and Microsurgery was included. The first graduates from this course in 2011 were Dr Chuah Chee Kheng and Dr Rashdeen Fazwi.

When FESSH (Federation of European Societies for Surgery of the Hand) opened their Hand and Microsurgery examination to non-Europeans, Dr Vaikunthan Rajaratnam sat and won the Churchill Livingstone prize. Prof Dr Sharifah Roohi Syed Waseem Ahmad also topped her batch. Prof Dato' Dr. Tunku Sara Tunku Ahmad Yahaya passed the exams in 2009 and Assoc Prof Dr Shalimar in 2010. Malaysian hand surgeons will continue to seek international benchmarking and this may be one venue.

The trauma seen in our country has attracted fellows in Hand and Microsurgery from abroad such as: Dr Tracey Horton (U.K. 2006), now Consultant Hand Surgeon in Derby, UK; Dr Simon Tan (U.K. 2007), now a consultant hand surgeon in Birmingham, UK. This exchange of ideas and also culture is excellent for our local surgeons. We need to benchmark our standards with international standards. Many more fellows have come to Malaysia since then, from several countries such as Indonesia, Iran, Bangladesh, Saudi Arabia, Turkey and Sudan.

The congress of the 10th Asian Pacific Federation of Societies for Surgery of the Hand (APFSSH) and 6<sup>th</sup> Asian Pacific Federation of Societies for Hand Therapists (APFSHT) was held in Kuala Lumpur from 2<sup>nd</sup> to 4<sup>th</sup> October 2014 (Fig 5 & 6). It was held at KL Hilton and Meridian Hotel and was hailed by all as highly successful including the hand therapy section. There were over 1000 participants (641 delegates were overseas) with 223 talks, 114 free papers and 98 posters. The Organising Chairperson was Prof Roohi Ahmad and the Scientific Chair was Assoc Prof Shalimar Abdullah.

MSSH members try, as far as we can, to keep up with useful advances. The WALANT (Wide Awake Local Anaesthesia No Tourniquet) technique as described by Dr Don Lalonde, as one advancement, arrived in Malaysia in 2014 when Dr Shalimar Abdullah, as Scientific Chair, invited him as a plenary speaker for the APFSSH 2014 meeting. This meeting was a turning point as WALANT was introduced for the first time to the Asia-Pacific region. In 2015, she was selected as the ASSH Junior Travelling Fellow and visited Dr Lalonde's practice in Canada. On her return she began practicing WALANT and taught Dr Amir Adham Ahmad, her fellow in training (Fig 7).

In 2016, a well-organised and successful symposium with live surgeries was held by the Hand Unit of General Hospital Kuala Lumpur under the auspices of the Ministry of Health and MSSH headed by Dato' Dr Rashdeen Fazwi. There were live surgeries performed in 3 operating theatres including wrist arthroscopy.

Dr Amir Adham Ahmad was constantly frustrated that hand surgeries were always last on operating lists and in 2018, began observing hematoma blocks and evolved it to include distal radius fractures. The technique was successful and bony WALANT was born. He further expanded it into the ulna, radial head, olecranon, clavicle and down into malleoli and distal tibial. He published his surgical technique for distal radius in the Journal of Hand Surgery (Am) 2019.

In 2018 the society attempted to reduce the number of hand injuries caused by firecrackers especially during Chinese New Year and Aidil Fitri celebrations, a notorious cause of severe injuries due to explosions. An online appeal was launched with strong pictorial deterrents. We hope this reduced the number of injuries and will continue to strive to prevent injuries and other pathology in our field. Dr Rashdeen as the AO Hand & Wrist delegate for Malaysia conducted an AO Course in Malaysia in 2019.

As the pandemic began in early 2020, many courses were held online. The MSSH Annual Scientific Meeting held in March 2021 was hybrid with approximately 200 participants. At the same time, with limited inter-state movements, 6 tendon course was held concurrently at 6 different

locations throughout Malaysia with a broadcasted lectures and QA sessions. In October 2021, an on-line WALANT symposium attracted a record-breaking 400 participants from all over the world followed by a hands-on WALANT workshop.

In December 2021, MSSH hosted the 2<sup>nd</sup> ASEAN Hand meeting at Kuala Lumpur Convention Centre. As the pandemic prevented international travel, it was a hybrid conference with physical participants from Malaysia and on-line participants and speakers from the ASEAN region. In 2022, a 3-day cadaveric fracture fixation, brachial plexus and flap course was held as part of the Silent Mentor programme.

Our MSSH members are also active in attending APFSSH and IFSSH meetings – APFSSH Hong Kong 2008 (Fig 8), IFSSH Berlin in 2019 (Fig 9) and IFSSH London in 2022 (Fig 10). Dr Hanifah Jusoh was selected as the IFSSH fellow and was a team member in the Fellows team in the University Challenge (Fig 11). This was a fun, quiz competition between Fellows versus Professors with questions on Hand Surgery and general knowledge. It was very sporting for the Professors as it could be quite embarrassing if they lost but needless to say the Professors won.

Two emeritus members of the MSSH have been appointed so far; Dato' Dr Abdul Hamid Abd Kadir (2011) and Professor Dato' Dr Tunku Sara Tunku Ahmad Yahaya (2012).

The Past Presidents are as follows:

Dato' Dr Abdul Hamid bin Abdul Kadir  
Professor Dato' Dr. Tunku Sara Tunku Ahmad Yahaya  
Professor Sharifah Roohi Syed Waseem Ahmad  
Professor Manohar Arumugam  
Dato Dr Rashdeen Fazwi Muhammad Nawawi

To date, MSSH currently has 52 members. The current committee for 2022 consists of:

|                    |   |
|--------------------|---|
| President          | Dr Mohd Iskandar Mohd Amin                        |
| Vice President     | Dr Jeremy Prakash Silvanathan                     |
| Honorary Secretary | Assoc Prof Dr Shalimar Abdullah                   |
| Honorary Treasurer | Dr Shams Amir Shamsul Bahar                       |
| Committee Member 1 | Dr Aniza Faizi Anoar                              |
| Committee Member 2 | Dr Ruban Sivanoli                                 |
| Committee Member 3 | Dr Mohamad Sallehuddin Hassan                     |
| Committee Member 4 | Dr Vijay Gopal                                    |
| Auditor 1          | Professor Dr Sharifah Roohi Syed Waseem Ahmad     |
| Auditor 2          | Professor Dato' Dr. Tunku Sara Tunku Ahmad Yahaya |

The aims of the MSSH are

- to have a uniformly high standard of care for hand conditions and injuries throughout the country, by training a sufficient number of good specialists.
- to have a high standard of local postgraduate training in hand and microsurgery.
- to aid, catalyze and foster formation of hand therapists groups for training and learning, nationally and internationally.
- to form and maintain closer international links in the subspecialty.
- to carry out more useful cutting edge research.
- to look into prevention and treatment of hand injuries in the local context.
- to be a presence at all international conferences.
- to publish pioneering work in all major hand surgery journals.

With a dynamic group, a critical mass of members and God's grace, we hope these goals can be achieved.

Our web address : [http://www.mssh.org.my/about\\_us.html](http://www.mssh.org.my/about_us.html)

**FIG. 1** Sungai Buloh Leprosarium Ward.

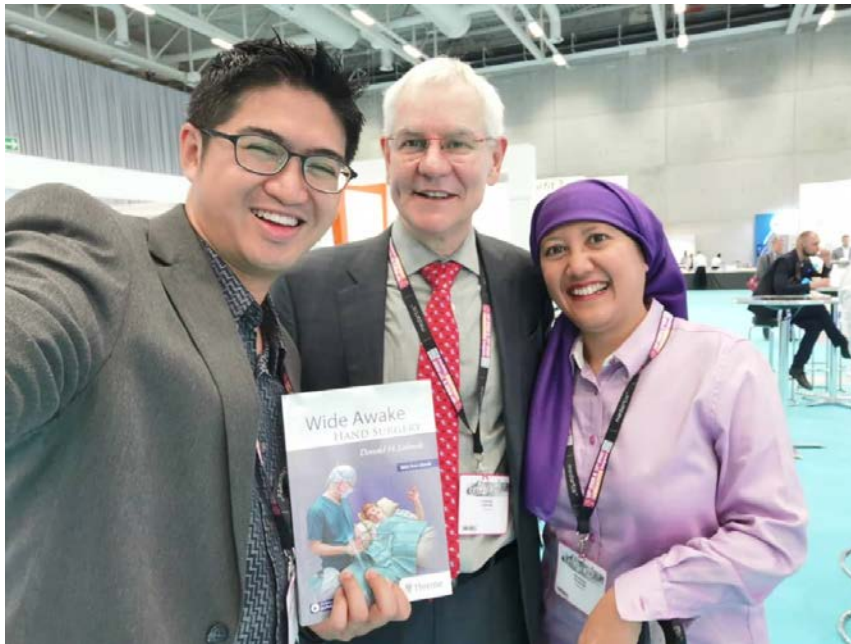
**FIG. 2** Malaysian Orthopaedic Surgery Association / College of Surgeons of Malaysia National Course on Hand Surgery – left to right: SP Chow, Venkataswami, PC Leung, Campbell Semple, Chehab Helmi, Robert WH Pho, Khaw Joo Hwa, Abdul Hamid Abdul Kadir.

**FIG. 3** 1<sup>st</sup> Malaysian Conference on Surgery and Rehabilitation of the Hand in 1993.

**FIG. 4** Logo reflecting different cultures and discipline interwoven and working towards excellence in hand surgery designed by Tunku Sara Ahmad. Based on the Malay traditional craft of weaving.

**FIG. 5** APFSSH Council Meeting 2014.

**FIG. 6** Cover of programme for the APFSSH and APFSHT 2014 Meeting in Kuala Lumpur.



**FIG. 7** Amir Adham Ahmad and Shalimar Abdullah with Dr Donald Lalonde at the 70th Annual Meeting of the ASSH in Seattle, USA.

**FIG. 8** Malaysian Hand surgeons and friends at the APFSSH Hong Kong (2008) posing at the hand print of Jackie Chan. Left to right: Roohi Ahmad, Saw Kim Beng, Iskandar Mohd Amin, Tunku Sara Ahmad, Md Nawar Arrifin, Ng Eng Seng, Kamil Mohd Kasim, Shalimar Abdullah



**FIG 9.** Malaysian delegates in IFSSH Berlin 2019. Left to Right : Jeremy Prakash, Chai Siau Chiu (therapist), Liew Siew Khei, Roohi Ahmad, Shalimar Abdullah, Amir Ahmad, Ruban Sivanoli, unnamed PhD student.



**FIG 10.** Malaysian delegates in IFSSH London 2021. Left to Right: Shalimar Abdullah, Roohi Ahmad, CY Ng, Abdul Nawfar Sadagatullah, Iskandar Mohd Amin, Michelle Lim, Elaine Soh, Khoo Saw Sian, Hanifah Jusoh.