

# HAND SURGERY IN HONG KONG FROM PAST TO PRESENT

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Although Surgery on the Hand has not gained sufficient enthusiastic support and recognition to earn its establishment as a unique specialty in Hong Kong, it is by now, undoubtedly, well developed in all the local major hospitals possessing orthopaedic and traumatology divisions. Orthopaedic teams are taking care of patients with hand and wrist problems and each and every orthopaedic team has a subdivision designated for this duty. With this level of achievement in the organisation of services given to the Hand, it is interesting to look back, in the past thirty years, how Hand Surgery has developed, academically as a knowledgeable entity, and structurally as an amalgamation of different expertise and different disciplines.

When orthopaedic surgery was first established as a separate, independent service unit in the early 60's, first at Queen Mary Hospital, then at Kowloon Hospital, light industry in Hong Kong was at its take off stage, hand injuries related to working procedures started to demand attention at the two acute hospitals. That was an era when Hand Surgery became developed in the US and started to develop in Europe and the United Kingdom. Professor Hodgson told me he had a few prominent visiting Hand Surgeons during this period, including Dr. Boyce, Dr. Kilgore and Dr. Riordan. Dr. K P Chan from Queen Mary, told me, he was the first orthopaedic surgeon in Hong Kong keen

at surgery of the hand and was subsequently sent for training under Dr. Boyce at Los Angeles.

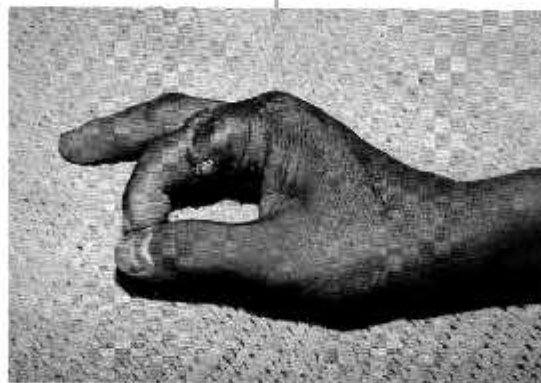
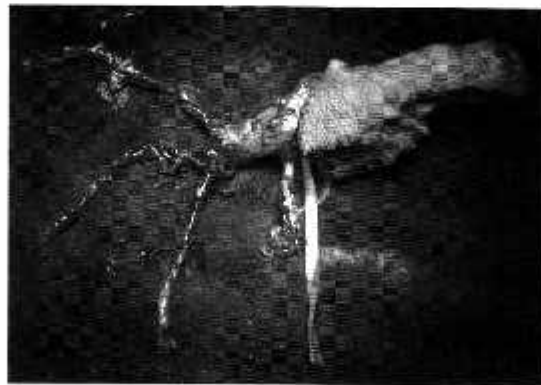
During the following years, the mid 60's through 70's, Hong Kong experienced a bloom over finance and industry which brought the city wealth and affluency, as well as the infrastructure that was required for any affluent city, e.g. hospitals and public facilities. Hospitals were particularly needed to take in the sick people among the huge population and the victims of accidents, related

either to work, traffic or other processes. The major hospitals were flooded with these victims, among which, injuries of the hand formed 30 to 50%.

When I started my orthopaedic career in 1970 at the Queen Elizabeth Hospital, I found myself in the midst of an urgent demand for an effective service on hand injuries. We took in twenty to thirty patients daily with hand injuries of different severities. The minor ones like finger tip injuries and lacerations were treated and discharged

immediately in the wards by the junior surgeons and interns. The more severe one were dealt with by middle rank surgeons (meaning : those with 2-4 years orthopaedics experience). The senior surgeons were too busy doing other jobs. My interest in Hand Surgery was sparked off when I, the

first time in my life, realised the complexity of the hand : the complicated tissues, and the sophisticated functions of the components. My interest



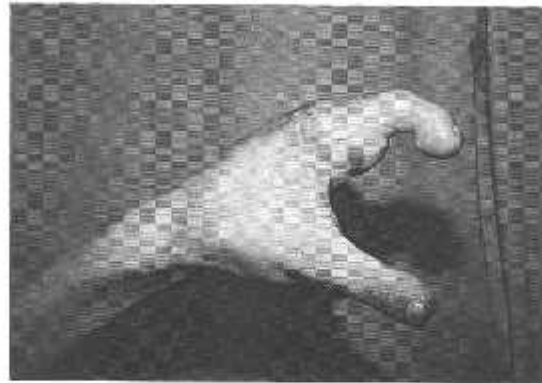
was some what shaken by my observation that functional restoration was difficult and not infrequently, apparently minor injuries might lead to significant functional impairments.

As a first year orthopaedic resident, I was given the chance of repairing a cut flexor tendon at 'no man's land'. A third year resident took me through the operation, supervising me on every step and making convincing and comforting remarks throughout. Pulvertuft's method of repairing the slippery deep flexor tendon was certainly too complicated for me. I intended to make one finger of 8 stitch on the shorter distal end of the tendon but my supervisor insisted that I should use two, while patiently assuring me : "don't worry, no matter how well you do, the result is about the same - stiffness! It is most important to ensure mechanical strength of the approximating stitches, otherwise the ends will separate. Some puckling is acceptable. The ends must not separate." I wish the standard of tendon surgery in the early 70's in Hong Kong, could be effectively illustrated by this true story which gave me scepticism.

Whether my first repaired flexor tendon did well or not, I do not know. Nevertheless, my struggle throughout the repair attempt gave me a vivid idea of the sophisticated nature of hand surgery and laid down the seeds for my determination to get engaged in this field of surgery.

By the mid 70's, another new hospital was put into action - the Princess Margaret Hospital. The volume of hand injuries certainly kept the orthopaedic ward active. Two important visitors came to this hospital during this period. Prof. JIP James and Dr. Lloyd-Roberts. James was impressed with a parade of operated hands dressed in his favourite 'boxing glove' fashion, elevated on hanging 1/2 pillow cases. Lloyd-Roberts was amazed with the varieties of congenital anomalies of the hand that he encountered during his two hours visit. Indeed with more interested young

surgeons, better trained nurses, keen and skilful therapists, Hand Surgery Units were gradually built up in Hong Kong.



Princess Margaret Hospital always commanded a good regiment of injury cases with or without the need for microsurgical procedures. It also ran a Congenital Hand Anomaly Clinic at the Queen Elizabeth Hospital. It was about this time, that one or two rheumatologists started to establish their special service. The hand

units thus conveniently liaised with them for the care of rheumatological hands.

While injuries were common, infection should exist in parallel. Although a system of fracture fixation had been suggested, the method apparently failed to meet the need for rigid fixation and quick functional restoration.

I remember when Dr. Hellal was our distinguished visiting hand surgeon, I asked him : "what is the most important advance in the treatment of hand fractures?". I raised this question because I witnessed so many case with poor functional results. Hellal told me after a long pause, " I guess it must be power-tools for the introduction of K-wire." During the seventies, rigid fixation for long bones was well known and practised, but concerning hand fractures, rigid fixation was virtually unknown. Indeed, when the first AO course was run in Hong Kong in 1978 at the Princess Margaret Hospital, the lectures and discussions were all concerning long bones alone.

We waited another six years for a course of internal fixation of the hand bones, supported by the French surgeons, Merle and Foucher.

As China pioneered and popularised replantation surgery, the admiration of the Hong Kong surgeons was aspirated into similar successes of limb and digital replantation followed by the transplants and composite tissue transplants. The peak of microsurgical work in Hong Kong must be in the late seventies when light industries experienced

blooms while preventive mechanisms on occupational hazards were not up to the quality one would wish to attain. The high incidences of occupational hand injuries initiated many concerned surgeons in Hong Kong to study the medico-social implications of injuries sustained at work.

The development of Hand Surgery in Hong Kong since the 70's, had been initiated by the efforts of a few deeply committed surgeons who took the events of occupational injuries and occupational infections as social issues that deserved close scrutinies from all concerned workers. It was not uncommon in those days to find surgeons making personal trips to the factory sites or working places, to identify the machine responsible for disastrous hand injuries. Enthusiastic surgeons would like-wise go to the suspicious sites for the spread of odd hand infections to verify the origin of the bacteria responsible.

The development of Hand Surgery in Hong Kong, therefore, has very much arisen out of the need to care for the injured. The proportion of injured patients compared with elective hand problems had always been on the high side ever since Hand Surgery was realised to be a Speciality.

When orthopaedic training in Hong Kong became active and standardised, hand surgery became one of the essential areas required. In 1984 when the Australasian College of Surgeons started its first examination in Hong Kong, the training requirements were adopted as follows: general orthopaedics and trauma 2 years, hand surgery half year, paediatric orthopaedics half year. These training requirements, undoubtedly, endorsed the development of the Speciality.

By the mid-eighties, therefore, all orthopaedic departments have made appropriate arrangement for a few of their staff to devote more time to the work on hand surgery. The nature of work, as inherited from the past, had been trauma and related problems at the main core, congenital anomalies, rheumatoid deformities, infections and

other pathologies at the periphery. The peripheral components are in great need for additional attention.

Since the mid 70's, colleagues in the physiotherapy and occupational therapy departments run joint clinics together with the surgeons. Unfortunately this arrangement is yet not uniform, but however, hand rehabilitation is thoroughly endorsed by all, and fervently practised with real team spirit. Our occupational therapy departments are capable of producing the best pressure gloves and the best hand splints in the world.

Currently, as I look back the past, I have witnessed all the changes which have brought Hong Kong to real world standard. What we still lack at this moment is uniformity. Uniformity of high practical treatment goal, uniformity of technique and uniformity of rehabilitation quality. The areas that require special attention because of common place negligence are the same old areas demanding emergency service viz, soft tissue trauma, fractures and infection. Rheumatological hand surgery service remains under-developed.



*Toe-to-hand transfers*

Thirty year of joint efforts have brought us to a well established, solid platform on which we could further build up a leading role. As the quality of service moves to a higher and higher level, we will be in a better and better position to offer ourselves as

an international training centre. Perhaps the main efforts should concentrated over South East Asia and China. As China is moving slowly away from the concept and practice that Hand Surgery is equivalent to replantation surgery, Hong Kong has a lot to offer in the day to day practice, the basic essential techniques in fracture fixation, tendon repair, anomaly correction, and above all, hand rehabilitation and research. It is certainly exciting to realise how Hong Kong is now capable of further improvement and at the same time, offer its facilities to distant colleague who are responsible for the protection and maintenance of function of this most skillful organ - the Hand.