

A Brief Introduction to the Early History of Surgery in Singapore (Part I)

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(This article has many quotations from primary sources. The author believes that this is a more interesting mode of presentation than a re-hash of the results of his research.)

This article traces briefly the early development of surgery as a "specialty" in Singapore.

Some explanation is necessary at the outset regarding the term "surgeon". In early Singapore's history, the term "surgeon" designated rank among the doctors serving in the army. Army doctors were of the following ranks: surgeon-major, surgeon, assistant surgeon, sub-assistant surgeon. They were not necessarily surgical specialists. In the civil service, the term "surgeon" was part of the designation of the various grades, eg colonial surgeon, assistant colonial surgeon, house surgeon. Once again, the holder of one of these titles was not necessarily a surgical specialist.

The designations in the civil service were later changed to principal civil medical officer, chief medical officer, senior medical officer and medical officer. Non-British doctors were known at different periods of time as apothecaries, assistant surgeons and assistant medical officers.

Therefore, to avoid confusion, in this article, I shall use the term "surgeon (specialist)" when someone holds the title "surgeon" as a surgical specialist.

The Straits Settlements comprising Singapore, Penang and Malacca were British possessions for more than one hundred and thirty years. Penang and Malacca are now constituent states in Malaysia, and Singapore is an independent sovereign Republic.

In 1786, Sir Francis Light acquired Penang from the Sultan of Kedah. On 6th February 1819, Sir Stamford Raffles hoisted the Union Jack over Singapore, and in 1824, by the Anglo-Dutch treaty, Malacca was transferred over to the British in exchange for Bencoolen on the west coast of Sumatra. Thus by 1824, the three British Settlements were established, and by 1826, were known as the Incorporated Settlements of Prince of Wales Island, Singapore and Malacca, with Prince of Wales Island (Penang) as its capital. In 1832, the capital was transferred to Singapore because of its strategic position and rapid growth.

The headquarters of the medical department of the Settlements was in Penang where the senior surgeon had his official residence. The government medical services were very modest. There was a senior

surgeon (sometimes called the superintending surgeon) who was the professional and administrative head of the service in Penang, and an assistant surgeon at each of the three settlements.

The first doctors who practised in the Straits Settlements were all medical officers in the army of the East India Company. They came when their regiments were posted from India to the various Settlements. Ranks held by them were surgeon-major, surgeon, assistant surgeon and sub-assistant surgeon. These army doctors were assisted by a few medical subordinates in the performance of their duties. In the earlier years, these duties were both military and civil, and if a greater portion of their duties was civil, the doctors were also known by the designations of their civil posts, eg senior surgeon in the Straits or residency assistant surgeon. Later on, there was a separation of duties, the civil or residency surgeon in government employed at each Settlement did not do military duties, and the garrison or cantonment surgeon only looked after the troops and their families.

Army medical officers could also be appointed to the civil side of the East India Company's government service.

Sir Stamford Raffles arrived in Singapore on 28 January 1819, with a detachment of European and Indian troops in seven ships. One medical man, sub-Assistant Surgeon Thomas Prendergast, was responsible for the health of this expedition.

In May 1819, the 2nd battalion of the regiment garrisoning Singapore arrived to relieve the 1st battalion. The medical officer of the 2nd battalion was Assistant Surgeon William Montgomerie, who was to play a prominent part in the medical history of early Singapore. He was much younger than Prendergast, but was his senior in rank, and became responsible for the medical care of the young settlement. Over the years, other regimental medical officers took over the duties whenever they were posted to Singapore.

The senior surgeon left Penang when the headquarters of the medical department was transferred to Singapore in 1835.

Over the years, the Straits Settlements, especially Singapore, prospered, and its medical service expanded and improved. The doctors in the medical service were not "specialists". They were expected to be 'all-rounders' and they performed whatever duty was expected of them. They worked in hospitals. They dealt with outbreaks of smallpox and cholera. They

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treated cases of leprosy, tuberculosis, malaria, fractures, wounds, injuries, etc. They performed minor and major operations, post-mortems and did medico-legal work. Public health duties were also within their purview, eg quarantine, port health and vaccination. They were responsible for the care of local prisoners and convicts from India, and had time for private practice.

They served in all the three Settlements and transferred according to the exigencies of the service and for promotion prospects.

On 1 April 1867, the Straits Settlements were transferred from the India office to the colonial office, and they became a crown colony. The titles of the senior doctors were changed to colonial surgeon and assistant colonial surgeon and later to principal civil medical officer and chief medical officer.

Even as late as 1880, there were no specialists. All were generalists. They even practiced dentistry. Dr M F Simon (who later became principal civil medical officer) when he applied for the post of resident surgeon, General Hospital, Singapore, was strongly recommended by the governor, who in his despatch to the Secretary of State for the Colonies stated:

".... In the event of Your Lordship deciding to appoint Dr Simon, I would suggest that he be allowed to practice dentistry, but all other private practice should be prohibited. Dr Simon has for some time past, I understand, been studying this branch of his profession, and as its practice will not take him away from his post, he might be permitted without detriment to the interests of the service to continue it."

Junior appointments to the medical service were also made by the colonial office (appointments as medical officers). The doctors were expected to have a basic medical degree, eg MBBS, MBChB, MRCS LRCP, and later when it was realised that knowledge of tropical medicine was essential, in addition, the DTM & H. They had on-the-job training and could rise to the higher echelons of the medical service.

From 1870, promising young men were sent from the Straits Settlements to the Madras Medical College to be trained as doctors. These non-British doctors were to man the subordinate branch of the medical service. Later, Queen's scholars were sent to the United Kingdom, some to study medicine in London and Edinburgh.

Some reports of surgical interest are quoted as they paint a vivid picture of the years gone by:

"General Hospital (1874) native ward injuries: Two hundred and ninety five (general public 281, police force 14) cases of injuries of various degrees of severity were admitted, 14 proving fatal. The fatal cases were due to:

Compound fracture	2
Ruptured bowel	2
Ruptured spleen	1
Fracture of ribs	1
Cut throat	2
Fracture of skull	4
Starvation	1
Multiple injuries	1

The causes of these injuries are grouped as below:

Accidental	109
Homicidal	181
Self-inflicted	5

Most of these cases of injuries were incised wounds and contusions, and many of them, though severe, made very good recoveries ..."

"Outdoor dispensary (1885).... The number of operations exceeded that for 1884. They may be classified into major and minor.

Major

This includes such operations as necessitated the detention of the patient, or his attendance daily though otherwise, strictly speaking, they were minor operations in themselves. They are as follows:

Removal of fibroid tumour (external ear)	3
Removal of fatty tumour (gluteal region)	1
Removal of cystic tumour of throat	1
Removal of naevus of lip	1
Iridectomy	3

Minor

Under this classification come the opening of abscesses, lancing of boils, extraction of teeth, tapping of hydrocoeles, etc. One hundred and twelve such operations were performed.

The year 1884 showed 58 operations in all, while no less than 121 were performed in 1885 "

"General Hospital (1886) One death followed an operation in a case of resection of the bowel, done with the hope of relieving an extremely distressing condition ensuing on a strangulated hernia...."

"General Hospital (1899) Repairs to the house surgeons' quarters have been carried out chiefly owing to the ravages of the white ants that infest it. Since the occupation of these quarters in 1898, they have been infested with white ants There has been a good deal of sickness among the staff during the year. The house surgeons have complained a good deal of diarrhoea in the morning, making them late for their ward round"

"General Hospital (1901) Native police The only case of special interest was that of Chellembam, Police Constable 590, who was stabbed in the side on 11 November, while attempting to apprehend highway robbers. The wound was found to penetrate into the abdominal cavity and into the cardiac end of the stomach, and laparotomy was performed and the wounds sutured. Anti-streptococcus serum was given afterwards in this case and put a stop to all symptoms of peritonitis, and Chellembam was ultimately discharged cured, but, in my opinion, unfit for further active service. (J Leask, Colonial Surgeon Resident) "

"General Hospital (1902) Towards the beginning of the year I (J Leask, Colonial Surgeon Resident) used the injection of anti-tetanic serum into the spinal canal by lumbar puncture in cases of tetanus.

Under this treatment, the tetanic spasms were stopped in one case, but the patient some time afterward became suddenly convulsed and died. In the second case, all tetanic spasms ceased and the patient some days later became insane, was sent to the asylum and was ultimately discharged from there recovered. The third case improved a little only, and died of the tetanus.

Two cases of insanity following operation have come under my notice lately, and both occurred after suprapubic cystotomy, one for stone in the bladder and one for enlarged prostate. The former died maniacal, the latter was sent to the asylum and in the end recovered. In his case, the mania was not so acute ”

“**General Hospital** (1903) Operations. There were 200 surgical operations performed requiring the administration of an anaesthetic. The anaesthetic used was chloroform. Besides these, there were numerous minor operations performed, a local anaesthetic, ethyl chloride, ether spray or cocaine being used.

Ethyl chloride has been used for several years and has proved most efficacious, and has saved a very great deal of time. The supply, however, has not been up to the demand.

As far as I am aware, chloroform has only proved fatal in one case in this hospital, a year or two ago, though it has been administered many thousand times.”

“**General Hospital** (1904) Injuries. The most numerous general injuries were multiple injuries – 35 cases with 10 deaths, burns and scalds – 31 cases with 8 deaths, heat stroke – 5 cases with 1 death.

Of the 650 local injuries, the most important were wounds – 480 cases with 4 deaths, compound fractures – 64 cases with 14 deaths, simple fracture – 45 cases with 5 deaths – these last were in cases of fracture of the spine

Operations

There were 226 surgical operations requiring the administration of a general or local anaesthetic,

performed during the year.

The most numerous and interesting were: Tumours (3), Abscess (31), Excision of Glands (23), Removal of Sequestra (13), Excision of Shoulder (1), Amputations (20), Trephining Skull (2), Harelip (1), Enucleation Eyeball (5), Suturing divided tendons (3), Paracentesis Thoracis (1), Excision of ribs for Empyema (1), Exploratory Puncture of Liver (2), Gastrostomy (Francke's) (1), Hepatic Abscess (12), Abdominal section for suturing wounded intestine (1), Strangulated Hernia (9), Fistula-in-ano (12), Circumcision (17), Hydrocele Radical Cure (3), Removal Lymph in Scrotum (1), Elephantoid Labium (1), Curetting Uterus (3), Ovariectomy (1), Abdominal section for Pelvic Haematocele (2), Typhlitic Abscess (1).

During the last 24 years (since 1880), it has been my practice (J Leask, Colonial Surgeon Resident) to give from 25 to 30 minims of tincture of Belladonna a quarter of an hour or twenty minutes before the administration of chloroform and I have had no case of death from chloroform in my practice during all these years. The active principle of this drug has a paralysing action on the cardio-inhibitory fibres of the vagus and so prevents reflex inhibitory impulses from affecting the heart's action.

An Asiatic will just as soon part with his life as with a limb, a great deal of the surgery in this hospital is necessarily ultra-conservative and the death toll is consequently heavy and the stay in hospital long.

On the other hand, the most wonderful recoveries take place sometimes.

House surgeons

Dr Ford and Dr Barrack have been house surgeons, and on 1 September, Mr A P Dantes, MRCS, LRCP (Lond), Assistant Surgeon, took on duty in addition as acting house surgeon, thus placing a great deal more time for purely professional work at the disposal of the house surgeons.

It would be to the advantage of the hospital to have three house surgeons permanently, there being too much work for two” (To be continued.)