

Higher Surgical Training in Hong Kong: A Singaporean Trainer's Perspectives

By Dr Keith Goh

Specialist training in Hong Kong has evolved over the past decade in a remarkable way, with the formation in the 1990's of 15 colleges of specialists under the umbrella of the Hong Kong Academy of Medicine. Training programmes, exit examinations, specialist registration and continuous medical education have been established, based largely on the United Kingdom (UK) systems, and standards are closely monitored by the Academy and individual colleges.

For someone who has been a surgical trainee in Singapore, Hong Kong and the United States, this past year spent on the other side of the fence as a trainer in neurosurgery at the Prince of Wales Hospital, the teaching hospital of the Chinese University of Hong Kong, has been an eye-opener – sometimes amusing, occasionally frustrating, but always interesting.

OUTLINE OF SURGICAL TRAINING IN HONG KONG

Surgical training in Hong Kong is administered by the College of Surgeons. Anyone who aspires to be a surgeon must first register with the College as a basic surgical trainee, complete two years of basic training, then sit for the Membership of the College of Surgeons of Hong Kong (MCSHK) examination, which is an entry-level examination for higher surgical training. Following the handover to China in 1997, there is no longer automatic recognition of overseas qualifications, but the MCSHK is conjointly offered with the Membership of the Royal College of Surgeons in Edinburgh (MRCSE). After this examination is successfully completed, the trainee can then apply for higher surgical training in one of six specialties: general surgery, paediatric surgery, plastic surgery, cardiothoracic surgery, urology or neurosurgery. Each has its own specialty board and individual training programme. If the trainee wishes, the programme in general surgery by the Australian College of Surgeons is also available. For those who wish to specialise in ENT surgery or A&E medicine, applications have to be made to the College of Otolaryngology and College of Accident and Emergency Medicine respectively.



Examiners (Professor Ian Whittle and Dr James Steers from the Royal College of Surgeons of Edinburgh, and Professor Wai Poon, Chairman, Neurosurgery Specialty Board, College of Surgeons of Hong Kong) and successful candidates of the 2004 Conjoint Exit Examination in Neurosurgery.

COMMON FEATURES OF TRAINING PROGRAMMES

These generally follow the recommendations set forth by the Hong Kong Academy of Medicine (HKAM), which is a 2+4 format (two years basic training and four years higher training). At the end of four years or more, the trainee undergoes an exit examination and if successful, is recommended by the College to the Academy for the award of Fellowship of the Academy.

All six training programmes have the following common features:

1. Formal structure – approved by Council of the College
2. Supervision – by respective Specialty Boards
3. Continuous evaluation of trainees – regular performance assessments
4. Accredited training centres – inspected and monitored by the College
5. Accredited trainers – set qualification criteria
6. Minimum trainer-trainee ratio – no worse than 1:3
7. Limited number of trainee positions per programme
8. Logbook – for operative experience and academic activities
9. Exposure to research activities
10. Exit examination with overseas and local examiners

In recent years, conjoint exit examinations in general surgery, urology, paediatric surgery and neurosurgery have been established with RCSE. These examinations are similar in content and standard to those conducted by the Intercollegiate Examination Board of the Royal Colleges in

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UK and are held at regular intervals, with conjoint diplomas awarded from both colleges to the successful candidates.

SUPERVISION OF HIGHER SURGICAL TRAINING

The trainee's performance and competence are assessed in the following ways:

1. Logbook – provides information on (a) operative statistics – including range of cases, emergency content, supervised experience and complications; and (b) academic activities – including presentations, publications, journal club, courses, workshops and seminars.
2. Regular in-training evaluation – a “flagging criteria” to monitor trainees is enforced. Three-monthly meetings with trainers and six-monthly with the respective specialty boards occur, in which logbooks are reviewed and performance assessment forms filled out and reviewed. If serious deficiencies are evident, these have to be reported in writing to the Chairman of the respective boards, and the trainee advised on how to improve his performance. If performance remains poor for two further consecutive six-month evaluations, he can be removed from the training programme.

NEUROSURGERY TRAINING

For neurosurgery, the training programme generally requires a minimum of five years (60 months), in which six to 12 months can be done before passing the MCS examination. The remaining 48 months is the minimum requirement to qualify for the exit examination in neurosurgery, which is now a conjoint examination administered by both HKAM and RCSE. All candidates of the exit examinations conducted by the College must undergo local training of not less than 12 months at a training centre accredited by the CSHK or supervised by a similarly approved trainer in that specialty.

Training is conducted in modular format and in general, covers the following broad areas: (i) adult neurosurgery; (ii) neuro-critical care and paediatric neurosurgery; (iii) general neurosurgery in a district hospital; (iv) overseas neurosurgical training. In each module, the trainee is taught the principles of general neurosurgical management, operative techniques, neuroradiology and pathology as applied to each field.

The modules are structured as follows:

- (I) At least 24 months are spent in adult neurosurgical modules, the main objective being to learn about general and operative management of adult patients, as well as rehabilitation programmes.
- (II) Six months are spent on neuro-critical care and paediatric neurosurgery. The trainee spends time attached to the adult and paediatric intensive care units as well as the high dependency unit. He is expected to understand and apply multi-modality monitoring techniques for managing severely ill neurosurgical patients. He is also exposed to treating children with neurological conditions and malformations.

- (III) Six months are spent in general emergency neurosurgical training in a district general hospital, that is, the Northern District Hospital (NDH).
- (IV) Six months can be spent attached in a neuro-related specialty such as neurology, neuroradiology or neuropathology. During this time, the trainee is expected to participate in a research project or study, either for presentation at a conference or for publication.
- (V) Six to 12 months are usually spent on overseas neurosurgical training in the fifth year of neurosurgical training. The training will be in a specific subspecialty, such as spine surgery or neuro-oncology, in an internationally recognised neurosurgical centre, preferably in a funded fellowship programme.

Throughout the entire training period, all the trainee's activities and surgeries must be entered into his logbook. It is mandatory to perform or assist in more than 100 major operations in each six-month training period. It is also required that the trainee perform, as chief surgeon, 20, 30, 40 and 50% of the major operations during the first, second, third and fourth years of advanced training respectively. Furthermore, a performance assessment is made every six months by the trainer and specialty board, as previously indicated.

A DAY IN THE LIFE...

The trainee's day usually begins at about 8.00 am, unless it is operating day, when he has to be in the operating theatre (OT), ready for surgery by 8.30 am. Patients in the wards are allocated according to the senior staff members, who comprise two academic neurosurgeons from the University, and two consultants from the Hospital Authority. Each of these specialists has his own subspecialty interests, such as paediatric neurosurgery for the author, pituitary surgery for Professor Wai Poon, skull base surgery for Dr Joseph Lam, and functional and pain surgery for Dr Zhu Xian-Lun.

As in other fields of surgery, the neurosurgical trainee's daily life revolves around surgeries, out-patient clinics, on-call nights and whatever sleep he can get in-between. Sometimes, sleep deprivation is so severe that trainees have reportedly been heard snoring during lengthy tumour resection cases, even while standing for craniotomies! For our female readers, this is a phenomenon which is physiologically possible as any male Singaporean who has done national service, will attest to. I just never thought that I would encounter it in an OT in Hong Kong – the great difficulty is what do you do, as a trainer, when you realise that your trainee's breathing has become deeper, slower and sometimes much louder? In this situation, I usually bark out what all neuro OT nurses know very well: “Squirt more water!”

In our unit, we provide emergency neurosurgery cover to the district general hospital, NDH in Fanling, which is in the northern New Territories. This is very close to the border with China and the first stop for Hong Kongers who have





A giant lobster takes centrestage at the celebration seafood dinner at Sai Kung waterfront.



The author and his wife, Dr Jennifer Teo, at the Christmas Ball.

fallen ill or sustained injuries while on the mainland. Not surprisingly, since it is also next to the main highway leading into China, a significant number of road trauma victims are admitted to NDH.

Here, trainees have fantastic exposure to all kinds of emergency neurosurgical patients, and they hone their operative skills doing many head trauma and stroke surgeries. I have seen trauma craniotomies completed within an hour and large haematomas efficiently removed. Of course, some of these "gung-ho" surgeons tend to over-operate, and I once had to stop a trainee from attempting to clip a vertebral artery aneurysm in a 92-year-old farmer! An unfortunate consequence of these cavalier attitudes is that a significant number of patients survive these catastrophic conditions, but with severe disabilities. This poses a huge social problem because they cannot be discharged home, and instead fill up beds in our rehabilitation and convalescence homes. As one of our nurses commented: "Why are neurosurgeons so keen on becoming vegetarians?!"

Due to the proximity of NDH to the border, trainees have also had to master the complexities of a third language

(first – Cantonese; second – English; third – Mandarin) so as to be able to communicate with mainland Chinese patients. The cacophony of words and pronunciations can be quite interesting, and this author is quickly learning the nuances of Hong Kong-style "pu tong hua". For once, being a Singaporean has some advantages (although not much for this ex Anglo Chinese School boy). Yes, I am still struggling with the nuances of Cantonese, and when I do a ward round at NDH, my trainees sometimes have a hard time stifling their laughter. For example, I once asked an elderly (and somewhat deaf) lady, the day after her surgery, in a well-meaning way, whether she was "tou ngorr" (hungry), which she apparently heard as "tou orrr" (diarrhoea). Her reaction was bewilderment, which made things worse because I had to repeat myself quite loudly, for the whole ward to laugh at!

Nevertheless, I have had many good times with the trainees and have found them "hungry" to learn new things. Rarely performed operations are always well attended, with crowds of people in the OT. And they bring an adventurous, daring spirit to their surgeries. Never mind if the vegetable patch is overflowing!

COMPLETION OF TRAINING

Recently, four of our trainees completed their training and successfully passed the exit exams. Two diplomas were conferred, the Fellowship of the Hong Kong Academy of Medicine (FHKAM) and the Fellowship of the Royal College of Surgeons of Edinburgh (FRCSEd Surgical Neurology), after which they will be placed on the Specialist Register of the Hong Kong Medical Council.

Exam success celebrations take an interesting form here in Hong Kong – immediately after results are announced, the successful candidates are invited into the surgical library, and a congratulatory toast of port wine (the Department Chairman's) is shared with the examiners. In the evening, a huge and expensive dinner is organised for everyone in the department at the usual favourite seafood restaurant, which is on the waterfront of Sai Kung fishing village. Later in the year, a diploma conferment ceremony will be held during the Annual Scientific Meeting of the College of Surgeons. This is usually a formal black-tie affair, unlike the Christmas party which is much more fun!

REFLECTIONS

Neurosurgical training in Hong Kong has evolved into a well-rounded programme, encompassing extensive surgical experience and some exposure to research activities. The trainees are blessed with much clinical material and the opportunities to operate on a high volume of cases. The College of Surgeons has done well in ensuring that the traditional high standards of surgery, established by UK colleges, have been maintained and enhanced in Hong Kong. I am proud to be recognised as a trainer in this system. ■