

The Past Decade of Diagnostic Radiology in Singapore: How Much Progress Have We Really Made?

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It has been 10 years since the first ever issue of *Annals* dedicated to “Radiology” was published in Volume 22 No. 5 September 1993. Keeping in mind the tremendous growth in the development and applications of Imaging for both Diagnosis and Intervention, this second theme issue is long overdue. Like the previous issue, this issue of *Annals* showcases advances in the specialty with contributions from distinguished foreign experts and the cream of our local talent. It is gratifying to note that a few authors from 1993 are still actively contributing 10 years on. While special theme journal issues such as this do positively highlight a particular specialty, they do not accurately reflect whether a specialty has made real progress. I will attempt to review whether Diagnostic Radiology in Singapore has really progressed over the past decade or whether progress has been merely illusory. The following broad areas will be evaluated: clinical radiology development, teaching and training, and academic radiology.

Ten years ago, most radiologists in Singapore were general radiologists, with a few having pet interests in certain specialised areas. Formal development of radiology subspecialties began with subsequent reorganisation, along subspecialty lines, of the Department of Diagnostic Radiology at the Singapore General Hospital. Other departments in Singapore have since followed suit. The restructuring of the KK Women’s and Children’s Hospital, and creation of the National Neurological Institute and National Cancer Centre have strengthened the subspecialties of women’s imaging, paediatric radiology, neuroradiology and oncology imaging. The establishment of radiology subspecialties, and with resultant growth and development of individuals and departments, has led to an increasingly number of foreign radiologists opting to do their higher training in Singapore, particularly in the recent 2 to 3 years.

The national specialist training committee (STC) in Diagnostic Radiology was reorganised 3 years ago, with an injection of fresh blood (and ideas). The STC has attempted to identify areas of national diagnostic radiology manpower need, direct closer coordination among the various institutions and make recommendations for overseas subspecialty training. Although this is a marked improvement from the old days, there is however still much strategic planning work in store. For example, cardiac imaging, “lost” to our cardiology colleagues many years ago, has now been given a second chance for revival in radiology departments as a result of the development of cardiac magnetic resonance (MR) imaging. Unless our specialty becomes leaders and initiators rather than just followers, this second opportunity is in real danger of being lost again.¹ To be recognised and respected as subspecialised radiologists, we have to add value to diagnostic imaging and imaging-guided intervention of patients referred by our clinical colleagues. This means being proactive, and continuously upgrading and re-inventing ourselves.

A decade ago, there was little rotation of radiology trainees across hospitals. Even with the formation of the 2 national clusters, the current STC has ensured that all basic and advanced trainees undergo a formal rotation to all teaching hospitals. Trainees now gain exposure to a comprehensive range of imaging modalities and subspecialty areas, and more importantly, have the opportunity to expand their minds to assimilate a greater range and variation of radiological practices and experiences. A structured training programme for basic and advanced trainees has now been developed, and is currently still evolving to meet the needs of the future. The Master of Medicine (MMed) in Diagnostic Radiology was non-existent 10 years ago. After a rather slow start, the MMed (DR)’s initial teething problems have now been settled and the local examination has stabilised in the recent 2 years. We have also established closer links with the Royal College of Radiologists (RCR) over the past 3 years, with senior RCR examiners coming across as external examiners for the revamped M Med (DR) examination. The new First and Final Part A examinations for the Fellowship of the RCR are now conducted in Singapore. The recent 2 sittings of the new First RCR Fellowship examination have seen a large number of overseas candidates, particularly from Asian countries, attempting the examination in Singapore in preference to other centres.

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Over the past 3 years, the teaching of radiology to medical students has made tremendous progress. Medical students are now taught or exposed to diagnostic radiology during virtually every year of the restructured undergraduate medical curriculum. More importantly, an increasing amount of the relevant imaging is taught during their clinical specialty postings, and with the future inauguration of Graduate Medical School at the Outram campus, greater emphasis on integrated clinico-radiological teaching will be expected. We are seeing a rising number of medical students who have expressed an interest in taking up radiology as a career, something that rarely occurred in the past. There is no doubt that the recent expansion of clinical teaching appointments among radiologists in restructured hospitals by the Faculty of Medicine of the National University of Singapore, including the appointment of 2 full Clinical Professors, has contributed positively to this progress.

The 3rd Annual Scientific Meeting of the Singapore Radiological Society (SRS) was organised jointly with the Chapter of Radiologists, Academy of Medicine 10 years ago in 1993. The meeting was a small affair then, with mostly local participants. Recent editions of this meeting, now solely organised by the SRS, have grown into regional affairs with not only international-standard speakers and presentations but also and probably more importantly, regular participation by radiologists from neighbouring countries. The SRS has established close links with not only major regional and international radiological organisations but also with numerous national radiological societies and regional subspecialty societies and groups. A number of these subspecialty societies and groups have been founded over the past 5 years, with key involvement of radiologists from Singapore. The SRS has evolved to be the *de facto* educational and scientific national radiological body while the Chapter has, by default, served as a link between the radiological community and the Ministry of Health. Both bodies jointly organise continuing medical education activities, which have also expanded greatly over the past decade, and have worked closely together to produce a number of radiological guidelines. As long as the leadership of both local radiological bodies continue to recognise and accept their complimentary roles, the future of professional education and development in our specialty remains positive.

Recent regional radiological meetings that have been hosted in Singapore include the Congress of the Asean Association of Radiology (1997) and the Asian-Oceanian Congress of Radiology (2001). The latter meeting will again be held in Singapore in 2004, while Singapore has been selected as the venue for the first ever Annual Scientific Meeting and Refresher Course of the International Skeletal Society to be held in Asia in 2005. The collective experiences gained in organising the SRS annual scientific meetings have helped us in successfully bidding for and hosting these major meetings. Ironically, a host of local subspecialty and institutional groups have also gained enough confidence to start their own courses and meetings. The view from some quarters is that the success of some of these splinter groups has been at the expense of diluting and competing for our limited pool of resources and talent. Hopefully, common sense and national interests will eventually prevail.

Academic radiology is the one area where we have probably made the least progress over the past decade. While inroads have been made regionally in terms of invitations to teach and lecture, with the exception of a few, our radiologists are mostly unknown at international level. Radiological research projects, mainly at department and institutional levels, have steadily increased over the last few years. The only true measure of academic productivity remains publication in international peer-reviewed journals. I have taken the liberty of analysing our contributions to 4 of our most respected general radiology journals, namely, *Radiology*, *American Journal of Roentgenology*, *Clinical Radiology* and the *British Journal of Radiology*. In 1994, 1 year after the previous *Annals* theme issue, there was only 1 publication from Singapore in these 4 journals, while in 2002, 7 articles from Singapore were published. While some improvement has been made, our publication track record pales in comparison to contributions by our Japanese and Korean colleagues and the knowledge that some 1500 articles appear in these 4 journals annually.

In summary, diagnostic radiology in Singapore has certainly made progress compared to a decade ago. We have put our house in order with regards to training and teaching. In terms of professional and subspecialty development, we have more or less kept up with developed centres in the West, although greater proactivity and a higher rate of improvement are desirable. There is a need to lead, analyse and innovate rather than merely follow and repeat what is already known. Academically, we have made up ground regionally but should aspire to be more than just a dot on the international radiological map. It remains for the current cohort of local radiology leaders to ensure that the next generation of young radiologists is equipped to bring Singapore radiology to a higher level.

REFERENCE

1. Peh W C G. Diagnostic radiology in the new millennium [editorial]. *SGH Proceedings* 2001; 9:231-2.