The Future - Part 1

are beginning to appear commercially, and may set the scene for the future.

Interventive Radiology

Smaller, smarter, slicker will be the bywords here, but political pressure and the relationship with other minimally invasive procedures may be the pivotal aspects. The number of invasive procedures may well expand, despite the increased involvement of clinical colleagues. This may be partly as a result of the incorporation of previously unguided procedures.

The promise of routine remotely-performed procedures appears a long way off, despite huge investments in the technology, particularly feedback transducers.

The specialty

Turf wars, clinical re-alignments, and reimbursement issues may overshadow technical advances. A major split of the specialty into the hands-on and remotely conducted components may occur, with centralised or home reporting facilitated for the latter.

Organ-specific teams will probably emerge from the turf wars, becoming the rule in the bigger centres. Medical training may adjust to this concept, with, for example, a career neuroradiologist or technique specialist commencing training straight after school, in the same way that dentistry splits from general medicine.

Could we witness a backlash against the sterile and remote digital environment, with close personal attention and professional interaction becoming a selling point for some centres, rather than technical prowess?

Conclusion

Tissue-specific imaging remains our unreachable objective. Non-harmful intervention is the ideal. In the attempt, many promising new technologies will go the way of kymography, electron radiography and thermography, while others, at present unknown, may dominate. Gradual stepwise progress will hopefully be interspersed by exciting new developments, sending us all back to being students again.

The Future - Part 2

The Future - Part 2: Training radiologists—past, present and future

Radiology is one of the most popular specialities in medicine. It is not difficult to understand why. Few radiologists regret making the decision! However the future is not what it used to be! Radiology faces challenges both in South Africa and internationally which will certainly affect the number and profile of future trainees entering the speciality. Has the "golden age of radiology" truly gone?

Doctors training in radiology in South Africa have followed a traditional postgraduate programme as registrars in departments of radiology at the three English language medical schools. They write the College of Medicine fellowship exam within four years of training. At the three Afrikaans language medical schools, registrars write the MMed exams within four years. The medical council requires four years of training in an academic department for specialist registration. In many ways the current South African fellowship follows the UK fellowship exam structure in the late seventies and early eighties with essay type questions, film viewing and long cases. Today the South African Qualifying Authority (SAQA) will effect the curriculum structure, entry and exit points and

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student assessment of all postgraduate training, such as the radiology fellowship. One important change will be the necessity for continual assessment as part of the final exam mark. Another major impact is the move by the overseas colleges, especially the UK college, to introduce accreditation as the exit qualification after five years as a registrar in training posts. The UK fellowship exam therefore becomes an intermediate and not an exit qualification as it is in South Africa. Accreditation is compulsory for specialist registration in the UK.

Currently many South African exam candidates are writing the college fellowship exam in their fifth year of training, so making the training in this country de facto five years. The volume and depth of knowledge required to pass the fellowship today requires at least four years training. It is heartening to see that many registrars from the Afrikaans speaking medical schools are writing the College fellowship in addition to the MMed - this is a very positive sign and bodes well for the future of the College. The College is looking at introducing a number of changes to the syllabus and exam structure to update the course and examination. A log book will shortly be introduced to ensure candidates have performed or at least observed a number of radiological procedures before writing the final exams. Macropathology will be introduced into the final exam to ensure that exam candidates have a good foundation in pathology. More multiple choice questions and short essay questions will be introduced into the final written exam. The number of long cases has been increased from the traditional four to eight and possibly ten cases in future. Many candidates are weak in plain film interpretation and exam emphasis on this area of radiology is required.

What of the future? There is no doubt that South Africa and most Western countries will require increased numbers of radiologists, not less as was anticipated recently in the United States. I predict that the "brain drain" of radiologists from South Africa will continue and may increase. Currently there are 450 radiologists registered here, however it is likely that South Africa will face a shortage of newly qualified radiologists within the next five years unless the number of radiology training posts available is increased. A natural trend will be training registrars in private sector hospitals. It is my belief that the tremendous knowledge and experience of private radiologists needs to be better utilised by medical schools to train registrars especially in high technology areas such as MR imaging. Future radiologists will work increasingly with digital images on workstations to improve productivity and cost effectiveness. The widespread enthusiasm for teleradiology in this country is the forerunner of our move to the digital world. With these rapid technological advances, the future registrar will need to be computer literate and be comfortable working and learning in the digital world. The days of swotting from three volumes of "Grainger and Allison" will disappear and be replaced by one CD-Rom. Perhaps registrars will be tutored or lectured by academic radiologists from a US medical school via a videoconference or satellite link, making the dwindling number of local professors of radiology obsolete! Such is the price of progress.