A short history of surgical training in eastern Africa

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The history of surgical training in Eastern Africa has been closely interwoven with the activities of the Association of Surgeons. One of the early objectives of the Association was to consider surgical training. Bill Kirkaldy-Willis, the first secretary of the Association, wrote a memorandum on higher surgical training, quoted in the Historical Notes in the first issue of the *Proceedings*. Kirkaldy-Willis said,

"If, as would seem to be the case, both Directors of Medical Services and Surgeons are agreed that Higher Surgical Training is highly desirable, then we should go forward together into the future in mutual trust and confidence, in the faith that together we can achieve something that is infinitely worthwhile for medicine in East Africa, in the building of a great tradition here."

These words were spoken fifty years ago. At that time in the six English speaking countries of the region and in Zanzibar, the conditions prevailing were similar. Mozambique was different for several reasons: the Portuguese had been there for hundreds of years; Lourenço Marques and Beira were much more sophisticated towns than the towns in the rest of eastern Africa.

The early surgeons of East Africa
The surgeons working in our English speaking countries fell into five categories. Most numerous were the government surgeons. These were exclusively male white Britons or of British descent, born in some corner of the Empire, an occasional Irishman and a few "Asians". All these surgeons were Fellows of one or other of the Royal Colleges.

The second category were the surgeons in private practice. There was a surprising number of these, particularly in Nairobi, Mombasa, Salisbury and Bulawayo. Most of them were Britons or at least British trained, whether white or Asian.

Thirdly, there were surgeons who were working for various industries, mostly in mines in Northern and Southern Rhodesia. The majority were British with a sprinkling of South Africans and all had British qualifications.

The surgical work force had been kept so homogenous by the simple device that the colonial government refused to register anyone who did not have a British degree or an "equivalent" and the equivalents were exclusively from the Empire. Even American degrees were not registrable.

In the fourth category were the surgeons who worked in mission hospitals. Among these one could find a few Americans and continental Europeans. This was allowed by means of a device called "licensing": if an institution had proven that it tried to find a registrable medical practitioner but failed in this endeavour, then it was allowed to employ a non-registrable individual.

The smallest group of surgeons were the university teachers, at that time a handful of men only, all of them at the then only medical school, in Kampala. They were led by Ian McAdam, since the late fifties the Professor, and his principal assistant John Cook. Much of what has happened in surgical training in these fifty years happened because of McAdam's foresight and perseverance and Cook's influence.
Among the English speaking countries, only Nyasaland was different. There, in Blantyre, ensconced since 1962, was Jan Borgstein, the exception to the rules. A Dutchman, Dutch trained, working in government, privately and in missions, he was the only surgeon in Nyasaland.

Disregarding Mozambique, Uganda was the most progressive and liberal country in the region, least concerned with race and foremost in education. At Makerere Medical School, much effort had been exerted to upgrade undergraduate education and to obtain recognition for the qualification. At the beginning of the fifties this was a Diploma, later it was a Licentiate, then a University of London degree and finally an MB ChB of the University of East Africa, recognised by the General Medical Council.

Having fought for recognition for the East Africa degree and accomplished that difficult feat, the Makerere establishment began to think about specialist training.

In Kenya, there was dichotomy of attitudes towards African doctors and African specialists. The government was not keen, yet the founders of the Association were convinced that the future of surgery would depend upon Africans being recruited into the speciality.

The Tanganyika and Zanzibar governments, generally more liberal than the Kenyan, because less bothered by settlers, were ready to sponsor selected nationals for training. Makerere spearheaded the negotiations with the Royal Colleges, the General Medical Council and various hospital authorities in Britain and the first indigenous East Africans were placed into positions that had been arranged by the large network of Makerere connections.

The first East African surgeons
The first two East Africans with an FRCS were Ugandans, Alex Odonga and Sebastian Kyalwazi, who returned from Edinburgh in 1960. Wilson Warambo was the first Kenyan with an Edinburgh Fellowship that he obtained in 1963, whilst Mica Majali was sent to study surgery in France. The first Tanzanian, John Omari, went to the United States, then to Edinburgh and, finally, he obtained an Irish Fellowship.

In Northern Rhodesia and Nyasaland, the educational situation for Africans was even less progressive. An occasional African did go to medical school, mostly in South Africa, Shakes Nalumango of then Northern Rhodesia being an example. Kamuzu Banda studied in America and had his Edinburgh qualifications and was by this time on his way to join Kwame Nkrumah in Ghana. He was struck off the register later by Charles Easmon (the first Ghanian surgeon, also an Edinburgh fellow and the Chairman of the Medical Council of Ghana) for illegal business practices and thus became available to lead Nyasaland to independence.

The first Southern Rhodesia born surgeon appears to have been Mr Isidore Rosen, whose Edinburgh fellowship was dated from 1928. Southern Rhodesia had about 60 African doctors at the time of independence. The first African surgeon was Oliver Munyaradzi who obtained his FRCS in Glasgow in 1971. The first African surgeon in Zambia was John Masange who returned from the United States in the early seventies and there was none in Malawi until Sam Mwale returned with an MMed (Surgery) degree from Nairobi in 1980.

The advent of local training programmes
In the early to mid sixties, a larger second batch of east Africans were selected and placed in training positions. By this time it was obvious to McAdam and to the Council of the Association that a local programme was needed. There were a number of compelling reasons for this. To send everyone abroad for several years was too expensive. The competition from the Commonwealth was considerable and less resilient people tended to get pushed into peripheral jobs where the likelihood that they pass the examinations was less. Even if they did pass the examinations, they may have gained little surgical experience and this circumstance caused problems upon their return home.

Yet another reason for the establishment of a local training scheme was that surgeons coming back from overseas often had great difficulties in readapting to local conditions. Indeed, some never managed to recover from the cultural shock of coming home and a few fell by the wayside.
The first signs of what later was called the "Brain Drain" became visible. Some Africans did not return or, after returning, they left again, attracted by better salaries and conditions. The "Brain Push" started in the later sixties and in the early seventies when educated Africans began to become victims of politics in both the direct and indirect sense.

There was one more reason for training surgeons locally; the pathology differed greatly from the metropolitan disease pattern. In those days the difference was much greater than today for cosmopolitan diseases had not become prevalent yet in African populations.

The foresighted people at Makerere agreed that local training arrangements were necessary but no one was quite sure what the arrangements should be. Some thought that the Association ought to be in charge of surgical training. Others, most prominent among them being Ron Huckstep, wanted an East African College of Surgeons. I was the main opponent of the College idea, arguing, perhaps wrong headedly, that colleges grew from the culture of the European Middle Ages and that they would not flourish on African soil. McAdam believed that the programme must be associated with a strong, already thriving and reputable institution, otherwise it would not be recognised and would falter. He believed that Makerere, the University, must identify itself with the programme and hence the qualification should become a postgraduate degree.

The first difficulty was to persuade the University. The assorted mathematicians and natural scientists, not to speak of the professors of arts and humanities assembled in the Senate, were of the opinion that, whereas Makerere was wonderful for undergraduates, postgraduate education was not within its reach, for postgraduate studies require much higher educational standards. Long discussions ensued, largely centring on the question of what is education and what is training and what is professional and what is vocational.

Sir John Croot, the Chief Government Surgeon and former professor (he and McAdam having "swapped" jobs) and, for a short time Minister for Health, was not in favour of the programme and the younger lecturers and senior registrars, many of them Asians, were sceptical. The Africans thought that the whole "local business" was a ruse: that its primary aims were to save money, to counteract the Brain Drain and to aggrandise the Makerere establishment. They believed that they were going to be given a second class qualification that would not be recognised elsewhere, that it would be looked down upon and would effectively bar them from working outside East Africa.

If McAdam was not particularly good in the endless deliberations of Faculty Board and Senate, he was certainly good with students and had the ability to inculcate his enthusiasm into them. McAdam's entire concept of education, training, surgery, sports and anything else important to him, was based on enthusiasm and slowly he was able to persuade some young people to accept the idea of an "MMed (Surgery)" degree.

The Royal Colleges, although they never spoke about this, were conscious of the loss of income they would suffer if MMeds (Surgery) degrees mushroomed everywhere in the tropics. The Scots were the more enlightened. John Cook had returned from Kampala to Edinburgh and acted as ambassador. Sir John Bruce, the Regius Professor of Surgery in Edinburgh and President of the College, put his weight behind the Makerere project. Supporters and sceptics alike came to visit.

The University was persuaded, the fears of the prospective candidates were assuaged and the Colleges were recruited to help. The curriculum had to be shaped and the Government prevailed upon to release medical officers and pay their bursaries whilst they were postgraduates. Everyone had some grudge. The University cherished the basic science course - was that not real studying? - but the Government did not like the idea of paying salaries to students. McAdam wanted six months of the two clinical years to be spent in an up-country hospital but the University objected. The up-country surgeons to whom the postgraduate student would be exposed might not be qualified to teach! The Government did like the up-country rotation, it would have captive registrars this way. The crop of young African lecturers with recently obtained fellowships were the last to accept the new arrangements.
MMed (Surgery)
Finally, the course started. Unforeseen difficulties arose. Questions arose such as the provision of housing during the basic science year, where the postgraduates were going to eat, who would buy the books and the white coats, would will pay for transport and so forth.

The first group of MMed Surgeons graduated in 1970: Stanley Tumwine of Uganda, M K Jeshrani of Kenya and Surjit Singh Sahota of Tanzania. The test was yet to come when an MMed Surgery graduate went to Britain. Would the Colleges honour the agreement and let the Makerere graduate sit the FRCS finals without primary? They did. How would the Makerere surgeons do in the College examinations? They did well.....

(McAdam won, against all odds. It was at that time that he told me, he would have liked to bolster the reputation of the MMed (Surgery) degree by examining some FRCS holders in Kampala - and fail them!)

By this time there was a medical school in Nairobi and another in Dar es Salaam. The University of East Africa became defunct and it was obvious that MMed programmes should be duplicated in the other schools.

National MMed programmes
The first Nairobi Group graduated in 1975 (Ben Mbinding, Peter Ochola-Abila, Peter Odhiambo and Gerishom Sande) and the first Dar es Salaam surgeon William Mahalu graduated in 1976.

I went to Lusaka at the end of 1969. Maurice King, Gordon Cook and I, and later Eddy Gregg, were recruited by the University of Zambia at Makerere to clone that famous (and then already declining) medical school. The Zambian Government at the same time contracted the Soviet Government to do the same. The ensuing melee had disastrous consequences for all, especially for the medical school. One victim was the notion of an early MMed programme. I, a lesser victim, had, among other things, this to say in my valedictory address in 1975.

"A medical school which does not have definite plans to establish a postgraduate degree structure, is in a rather hopeless situation. I shall not repeat the more obvious reasons why I think that there must be a local postgraduate degree in the main specialities. Only in passing do I wish to make reference to the manpower situation, the advantage of assimilation of local problems and to the rather obvious fact that postgraduates are guarantors of the quality of undergraduate training. The arguments in favour of instituting formalised curricula and degree structures for postgraduate training, for instance in surgery and obstetrics, which I wish to propound here today, are of a more basic character. I do urge you to realise that the lack of confidence in your own institution is exceedingly detrimental to its self-esteem, without which no educational establishment can develop. I do want you to realise that the type of broadly based training which is needed to provide surgeons, paediatricians and physicians throughout the country for the provincial and district hospitals is not available in the developed countries of the northern hemisphere.

My successors, particularly Anne Bayley, did prevail. In the event, the first Zambian surgeon Girish Desai graduated 1985.

By this time Zimbabwe had a medical school too and, eventually, introduced an MMed programme, largely due to the efforts of Lawrence Levy. The first graduate was Salathiel Mzezewa who graduated in 1988.

Hence, within the span of some 20 years, the idea conceived and pursued by McAdam's genius and enthusiasm was realised in five countries.

Other regional training programmes
The Mozambicans have had a higher surgical training scheme since the late 70s. This training was organised under a Ministry of Health umbrella by a postgraduate committee and leads to a certificate. Part of the training takes place overseas. The first certificate holder in general surgery was Ricardo Barradas who received the certificate in 1982.

Malawi have made arrangements with the Edinburgh college, according to which Malawians will train in Blantyre where they attend a course supervised by
an Edinburgh fellow, sit the written ARCS examination in Blantyre and, if they pass, will proceed to Edinburgh. There they are guests of the college for three months after which they complete the examinations there.

**The present state of surgical training**

Makerere and Mulago have disintegrated again and again and are now slowly trying to recover themselves. Kenyatta and Muhimbili are tottering on the brink. Peculiar to all three are, in addition to the common problems of health services and teaching hospitals in Africa, that private practice has lured away the teaching staff and that the postgraduates are therefore largely self-taught. When I examined a group of them a while ago in Nairobi as the External Examiner, I was humbled to witness how much these young people knew, how much they were able to assimilate from books, journals and from teaching each other. But it was also quite obvious that they were not taught how to operate and operative techniques one cannot learn from a book. Our teaching hospitals have become registrar's hospitals with the attendant complication rate.

The University Teaching Hospital in Lusaka is also at an advanced stage of disintegration for obvious reasons. It is impoverished, without supplies and maintenance. Having started out by imitating everything western and wanting to overtake everyone in Africa, it has fallen deep.

It is not my brief to judge and compare programmes but it is unavoidable that I should make a value judgement. Presently, the most intact of the MMed programmes is offered in Zimbabwe. But Zimbabwe as a country is in trouble and this will have repercussions on surgical training as well. Uganda seems to be regenerating. On our continent, both decay and regeneration can happen at a fast pace, yet stasis can persist for a long time, as in Kenya and Tanzania.

Mozambique seems to be progressing, although, in economic terms, growth is not as spectacular as it was a few years ago. Moreover, the linkage between economy and surgery is not straightforward. The reasons for the decay of teaching hospitals and postgraduate training are many and most are the result of bad economics and bad governance. But we surgeons individually and serially and the Association itself, have also contributed to the decay. Most of us have not made enough personal sacrifices. We neglected our young colleagues and turned our backs on the universities and teaching hospitals. Also, in trying to secure for ourselves the privileges of the upper middle class, we have, for years, when it was dangerous, avoided confrontation with authority. These were some of the omissions we are guilty of.

Our major error of commission was for many years that we tried to imitate the West, its technology and its organisational patterns within surgery and within the teaching environment.

The fact that we are discussing postgraduate training today is encouraging and it signals a change of heart. The fact that we do so in Blantyre is significant, for Blantyre, the newest medical school in the region, has come into existence when some of the others are failing. We only can hope that our friends in Blantyre will continue to eschew imitation and, having learned from our mistakes, will take words like “appropriate”, “focused” and “tuned to the local environment and the capacity of its economy” seriously.

Presently, much is in favour of Malawi. The school is small, aspirations are not pegged too high and there is enthusiasm. Moreover, there is a promising cooperation with Edinburgh, with the enlightened Scots who, in the case of Malawi, are also the embarrassed and repentant Scots, the generous Scots if you will. The embarrassment and the repentance is because of the Banda connection of which the Edinburgh College was so unduly proud. The ups and downs of the Scottish connection, from Livingstone to Banda, and now the help to the Blantyre postgraduates are examples of how history works.

The tables summarise some data relevant to the postgraduate training situation in Eastern Africa. The tables are self explanatory and also show what proportion of the surgeons in a given country have graduated in a home programme. This aspect needs clarification. I do not wish to appear to suggest that all our surgeons should be locally trained. Whilst the majority should have local MMed
TABLE I  Postgraduate surgical training in Eastern Africa

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<th>UGANDA</th>
<th>KENYA</th>
<th>TANZANIA</th>
<th>ZAMBIA</th>
<th>ZIMBABWE</th>
<th>MALAWI</th>
<th>MOZAMBIQUE</th>
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<tbody>
<tr>
<td>Total Number of Graduates so far</td>
<td>70-80?</td>
<td>158</td>
<td>78</td>
<td>17</td>
<td>19</td>
<td></td>
<td></td>
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<tr>
<td>Number in Training</td>
<td>15</td>
<td>58</td>
<td>2-4</td>
<td>15</td>
<td></td>
<td>4</td>
<td></td>
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<tr>
<td>Duration of Program in years</td>
<td>3</td>
<td>3 (4-6)</td>
<td>3</td>
<td>4 + 1</td>
<td>4 + 1</td>
<td></td>
<td>ARCS Edinburgh</td>
</tr>
<tr>
<td>Proportion of Surgeons in country with local qualification</td>
<td>95%</td>
<td>66%</td>
<td>70%</td>
<td>? small</td>
<td>15%</td>
<td>N/A</td>
<td>40%</td>
</tr>
<tr>
<td>Source: (with grateful acknowledgment)</td>
<td>Onaswa</td>
<td>Adwok</td>
<td>Lema &amp; Kinshasa</td>
<td>Erzingastian</td>
<td>Levy</td>
<td>James</td>
<td>Barradas</td>
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TABLE II  Postgraduate surgical training in Eastern Africa Subspecialisation

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degrees, some should travel to neighbouring countries early on and to other countries further afield. Nothing is more alien to a university than indigenisation. Indigenisation, in fact, is one reason why our universities do so poorly. I also continue to believe that every surgeon should travel during his training. And not only Africans. Westerners, or rather Northerners, should come to Africa. There is plenty to learn here.

A certain amount of subspecialisation has already taken place. This will almost certainly turn out to be a wrong move, a move so far resisted in Tanzania. The MMed surgery programme has at its core the belief that general surgery is the surgery of common conditions and common emergencies. Indeed, neurosurgery, urology and orthopaedics ought to be “higher qualifications” if you will. There may be a case for an MMed in ophthalmology. It may well be that the MMed surgery course should be longer than three years and include a broader base. Consider this: there will not be enough surgeons of any kind to go to the districts for many years to come.

What of the future?
In the foregoing, I have tried to give an approximate picture of what has happened with regard to surgical training in the region in the last fifty years. I think that to have established surgical training programmes in all the seven countries is an accomplishment. On the other hand, I also think, that the present status of teaching and training, the standard of our postgraduate programmes, at least in the four northerly countries in our region, is unsatisfactory if not abysmal.

A closing remark about Scotland and Africa. If we analyze the origin of the fellowships of the early east African surgeons, we find a preponderance of Scots and Scottish fellowships. This Scottish preponderance may have several explanations, the most important of which, I think, is the influence of the Enlightenment. It is for this reason that I think that the Edinburgh College helped us and continues to help. Scottish influence once created the American School of Surgery3. I wonder whether in 100 years time African surgeons will speak of the East African School of Surgery and will link it to Edinburgh.

In any case, the name of Sir Ian McAdam will shine. Born in Parys, South Africa, raised in Rhodesia, educated at Plumtree, earning blues at Oxford and his fellowship at Edinburgh, this expatriate Scot, working at Makerere, had set out to create a structure of permanence that has changed surgery in Eastern Africa. He has shown what can be done in Africa. It is now upon us to reconstruct what Sir Ian created and what we have allowed to decay. Let the Association re-focus on postgraduate surgical training so that the words of Kirkaldy-Willis come true:

“We should go forward together into the future in mutual trust and confidence, in the faith that together we can achieve something that is infinitely worthwhile for medicine in East Africa, in the building of a great tradition here”.

References