An appropriate approach to orthopaedics in developing countries

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Summary. Gifts of high technology and expensive buildings can constitute a disservice to a poor country when not accompanied by funding for the maintenance and running costs, since they will divert limited resources from more essential needs. The orthopaedic surgery that should be practised in many developing countries differs greatly from that in the contemporary Western world because of a different spectrum of disease, the consequences of uncontrolled disease processes and the less satisfactory conditions in which to function. Training in the home country is therefore essential and circumvents frustration and the brain drain from these countries. Poverty in material resources is not matched by poverty of intellect or resourcefulness, and we have much to learn from developing countries. Different cultures result in the needs of patients being quite different. Orthoses and prostheses need to be based on local crafts and resources, and some of these are illustrated.

The Western world can best assist by having surgeons working, teaching and learning in the Developing World, using inexpensive means to treat the many and not to pamper the few.

Key words: Developing countries, Orthopaedics

I have spent over five years working in four of the poorest countries in Africa and Asia. This paper is in two parts, the first dealing with the broader issues and the second concentrating on orthoses, prostheses and other equipment.

It is questionable whether advanced technology is desirable or appropriate in developing countries. I believe that the approach to the problems in the Third World should be entirely different, for the following reasons:

1. The great poverty in these countries will persist for many years to come.
2. The great cost of operating and maintaining facilities which may have been acquired initially as a gift must be appreciated.
3. We must learn from our colleagues in these countries how to adapt available materials and crafts to solve their problems.
4. We must recognise that their orthopaedic problems are those which we encountered in the early part of this century. They have little similarity to orthopaedic surgery as practised in our own countries to-day.

The building of a large hospital as a "one off" commitment only gains kudos for the donor country, whether east or west of the Iron Curtain. Without endowment these 'Disease Palaces' are frequently a serious financial embarrassment to the recipient because of the high costs of operation and maintenance. They divert the money available for medical care towards the vocal urban communities and away from the rural areas, where 70% of the population live. When building a hospital in a developing country every economy in running costs must be encouraged. Use of a ramp between floors rather than a lift recognises that labour is cheap, jobs are much in demand and that the electrical supply is unreliable. The provision of low cost accommodation needs to be encouraged, since the patient will have incurred much expense in getting to the hospital. In the Jaipur Regional Limb Fitting Centre, Professor Sethi provides the amputees with such accommodation until the limb is fitted, and only then does the patient return home with his prosthesis, thus necessitating only one visit to hospital.

Complicated and technically advanced radiographic and autoclave equipment is often given and gratefully received by the developing country, but the likelihood of breakdown, compounded by poverty and the absence of maintenance and repair services, makes such gifts inappropriate. Only simple, robust and reliable equipment should be offered, with an adequate available maintenance service as a prerequisite.

Consideration of my final point stated above leads to the conclusion that it is wholly inappropriate and usually very harmful to attempt to train, ab initio, an orthopaedic surgeon from a developing country in an advanced country. The spectrum of diseases is entirely different and the treatment taught is often inappropriate for the conditions he will encounter on his return home. He will become frustrated and may withdraw to private practice, where standards may well be much higher, or find employment abroad. In either case his training will be wasted as a contribution to his country's needs. Training must be in the home country and our contribution as surgeons from the developed world is greatly needed, but only after we have absorbed the many lessons to be learned from some very able colleagues in these poor countries. Visits to advanced countries for from three to twelve months by established orthopaedic surgeons from the Third World, to raise their horizons or to acquire special skills, are excellent at later stages in their career.

It is vital that Orthopaedic Surgery should function as a speciality in its own right, and not be controlled by departments of General Surgery. Many older orthopaedic surgeons in advanced countries have experienced the difficulties of achieving this state. The process can be painful and may be resisted by general surgeons who are frequently established, respected and often of professorial rank. In planning teaching programmes orthopaedic surgery must receive proper recognition. Our teaching input is most valuable to the undergraduate and to the surgeon devoting all his talents to orthopaedic surgery. The training of medical students in a subject so full of clinical content is as important as the training of orthopaedic surgeons. Problems in orthopaedics and trauma will be met with later everywhere in the country, and interest in orthopaedic surgery as a career needs to be stimulated early in the medical curriculum. In the very crowded programme of the undergraduate student, time must be found, although resistance may be encountered.

However, the orthopaedic surgical trainee needs to be well grounded in surgery in general. In many countries, where the sequence in surgical training follows the British pattern, the need for general surgeons in newly opened district hospitals is so great, as seen in Tanzania, as to prevent these young men from being able to continue their training in the orthopaedic field. In other countries, such as Bangladesh and Burma, the training of the orthopaedic surgeon includes some general surgical content from the beginning. The trainee must have a reasonable knowledge of other branches of surgery. In developing countries, as in the medical services of the Armed Forces worldwide, deficiency in this respect is much more serious than in advanced countries, where there is excellent transportation and mostly large centres of population with all specialities available. However, with a proper breadth of surgical teaching, this danger can be avoided.

We must not forget that the most important person, the patient, also needs the appropriate approach. Is the proposed treatment what he really requests or is it the desire we attribute to him? Does he wish to walk erect, or do we wish to see him on his feet when he has never walked before? With the child and adolescent such measures, we believe, are for their good. But, in adults, a more careful and critical appraisal is often called for.