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NEEDS-ORIENTED POSTGRADUATE TRAINING IN ORTHOPAEDICS

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INTRODUCTION

FOR a developing country, Malaysia has a good health care delivery system. This health care delivery system provides for the control of communicable diseases and also provides curative and health services. Specialists in medicine, general surgery and obstetrics and gynaecology are available in all the general hospitals throughout the country as well as in some of the district hospitals and in the private sector, so that specialist care is now available to the people in most urban parts of the country. However, orthopaedic units are found only in the general hospitals and the time is now ripe for attention to be directed towards the provision of further specialist services and a program of training for orthopaedic surgeons. However, we must develop a program relevant to the national needs and the local situation, which means that the training is best done locally.

LOCAL TRAINING

Local training has several advantages. The trainee grows in the local environment and becomes familiar with the local population and the local disease patterns. He also becomes familiar with the local health care delivery system and fits in easily to the system at the end of his training.

There are skills, knowledge and attitudes relating to the delivery of orthopaedic care in the community that are not stressed in the training programme that are now available in developed countries. Many do not have any understanding of the economic, social and cultural problems involved in the organisation of health care and are not prepared for the local situation at the end of their training. The result is that often there is a discrepancy between the society's health needs and disease problems and the response of the orthopaedic surgeon. Further, the needs of one developing country differ from those of another. Does Malaysia need two levels of training for the orthopaedic surgeon as has been suggested for developing countries like India and Africa which have very large populations and poor doctor-population ratios? Rather than two levels of training for the orthopaedic surgeon in Malaysia, the need is for a broad based training of the orthopaedic surgeon who should also receive a sound training in general surgery, together with an adequate training in orthopaedics for those who are being trained as general surgeons. Primary orthopaedic care in all the district hospitals is now provided by general surgeons many of whom have had inadequate training in orthopaedics as many were trained for the system of medical care found in developed countries.

NEED FOR A SOUND GENERAL SURGICAL TRAINING

Many of our general hospitals have at least one general surgeon and one orthopaedic surgeon. However, in a single man station each covers the others area of work. Consequently, the trainee in orthopaedics will benefit from exposure to general surgery, plastic surgery and neurosurgery. "It is singularly useless for a highly specialised orthopaedic surgeon to deal expertly with a shattered tibia while the patient is dying because the surgeon cannot diagnose and if necessary remove a ruptured spleen or diagnose and drain a haemopneumothorax" (Holdsworth, 1970).

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In designing the curriculum stress should be laid on local disease patterns. Table I shows an analysis of the elective orthopaedic operations done in the University Hospital, Kuala Lumpur during the five year period 1968 – 1972. Most of the operations were for deformities due to poliomyelitis, leprosy, cerebral palsy, rheumatoid arthritis, bone and joint tuberculosis, pyogenic infections of bones and joints and congenital deformities. In addition, spinal surgery and amputations were of importance. Table II shows an analysis of the operations done for neglected trauma which is rarely seen in developed countries. Trainees must therefore spend time in the developing countries if they are to gain experience in relation to such problems.

Table I

Elective orthopaedic operations done at the University Hospital, Kuala Lumpur from 1968 – 1972

Operations for	Number
Amputations	207
Post-polio deformities	200
Cerebral palsy	63
Leprosy	56
Rheumatoid arthritis	48
Spina bifida	8
Pyogenic infections of bones and joints	180
Tuberculosis of bones and joints	113
Congenital deformities	82
Bone tumours	29
Soft tissue tumours	84
Spinal surgery	133
Prosthetic replacement	41
Total	1244

TRAINING IN ACCIDENT AND EMERGENCY SERVICES

Malaysia is developing rapidly and injuries due to road traffic accidents and industrial accidents are becoming more common. In 1974 there were 51213 road accidents with 20915 people injured and 2303 killed. In 1975 there were 55148 road accidents resulting in 21973 people injured and 2317 people killed. Consequently, the hospital emergency room is an important area for the training of the orthopaedic surgeon and several educational objectives can be achieved in an emergency room setting (Morton and Milton, 1968).

Table II

Elective operations done for neglected trauma at the University Hospital, Kuala Lumpur from 1968–1972

Operations for	Number
Non-union or malunion of femur	133
Non-union of tibia	80
Fractures of forearm bones	84
Fractures around elbow	58
Fractures of ankle	38
Fracture shaft of humerus	26
Fractures around knee	47
Unreduced dislocations of elbow	28
Unreduced dislocations of hip	13
Unreduced dislocations of shoulder	19
Total	526

1. Certain diseases or injuries can only be observed in an emergency setting.

2. Skills in rapid but accurate assessment of injured patients, their resuscitation and definitive treatment can be acquired.

3. Skills in effective communication, with patients and relatives at the time of crisis, can also be acquired.

SUB-SPECIALITY TRAINING

Among many sub-specialities one could consider hand surgery and spinal surgery. During the five year period from 1968 to 1972, 548 operations on the hand were done at the University Hospital. These were for bony injuries of the hand (202), tendon repair (102), nerve repair (45), and skin cover (199), and for leprosy and rheumatoid arthritis. It would therefore appear that there is a special need for some exposure of the trainee to the principles and practice of hand surgery. During the five year period under review 133 operations on the spine were carried out. They were for tuberculosis of the spine (55), spinal cord tumours (29), prolapsed intervertebral discs (11), spinal fusion (16), spinal plating (5) and correction of scoliosis (17). I do not think that the trainee at the end of his four year period of training will be able to do spinal surgery competently. Further training at special centres in the country or abroad will be necessary for this.

TRAINING IN MEDICAL ASPECTS OF ORTHOPAEDICS

It would be better to call the speciality orthopaedics rather than orthopaedic surgery since a substantial portion of the work is medical. Some aspects of internal medicine, endocrinology, neurology, rheumatology related to orthopaedics and rehabilitation medicine must be included in the curriculum.

SKILLS IN ORGANISATION AND MANAGEMENT

Learning of skills in organisation and management is neglected in undergraduate medical education and at the postgraduate level as well. The doctor learns these skills by trial and error. As a consequence the delivery of orthopaedic care sometimes suffers because of poor organisation by the surgeon. An orthopaedic surgeon's effectiveness depends not only on his clinical skills but also on his ability to manage clinics, rehabilitation units, orthopaedic workshops and on his ability to work as a team with social and welfare staff. It is thus crucial that the trainee develops skills in management in addition to clinical skills.

SUMMARY

Specialist care is now available in all the general hospitals and some of the district hospitals in Malaysia. The time is now ripe to embark on a program for the training of orthopaedic surgeons for Malaysia. The training must be relevant to the national needs. To achieve this the training must be done locally for the trainee grows in the local environment, becomes familiar with the local disease patterns and fits in easily to the local health care delivery system, particularly since certain skills, knowledge and attitudes relating to the delivery of orthopaedic care in the local community are not stressed in the training programmes available in the developed countries and neglected trauma, leprosy, bone and joint tuberculosis and poliomyelitis are also rarely seen in the developed countries. There is also a need at present in Malaysia to provide adequate training in orthopaedics for those who are being trained as general surgeons.

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