

Contemporary Themes

Who does the surgery?

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It has become accepted dogma that all surgical procedures should be performed or closely supervised by a fully trained surgeon. Most governments apparently aim at achieving this. Nevertheless, in many parts of the world specialist surgical care is restricted to a small proportion of the population, particularly in rural areas, and this dogma has become a barrier to providing surgical care for these people. Three main factors restrict surgical care in developing countries. Firstly, resources to support the required number of surgeons may be inadequate. Increased wealth or diversion of resources from other areas such as defence or education might remedy this, though in many countries this solution is not immediately attainable. Secondly, training facilities may be inadequate. This could be remedied fairly quickly by expanding postgraduate training programmes or sending postgraduates abroad for training. Thirdly, the pattern of disease and distribution of population may mean that the catchment area of a district hospital has too few patients to occupy a surgeon, while communications are too poor or distances too great to transport all surgical patients to hospitals where specialist services are available. In Kenya, for instance, only 10%-15% of patients admitted to hospital require surgical care,¹ while in rural areas away from paved roads the rate is even lower.

The first two problems can be resolved by government, community, or private initiatives, but the third cannot, particularly when resources are scarce. This is when a health-care system based on medical auxiliaries is most valuable, and surgical care in these circumstances must inevitably be provided by someone other than a specialist surgeon. The dilemma exists in large areas of Africa, the Indian subcontinent, the Far East, and South America, and in localised areas in many parts of the richer countries where population densities are low.

District physicians

At present surgical care is usually provided by physicians who have been inadequately trained in surgical methods at undergraduate or junior postgraduate level, and who must necessarily embrace all aspects of curative medical practice. All over the developing world local and expatriate doctors who work in mission and government hospitals have become expert at managing the major diseases (surgical and medical) that are common in the area in which they work. Inherent ability

combined with time to learn from experience produces a high level of clinical achievement, yet they are not recognised by the surgical establishment of most countries because they were never formally trained to be surgeons.

Not all parts of developing countries are fortunate enough to have physicians of this calibre. Most graduates see their future in urban practice, with the result that the rural areas are staffed by recently graduated medical officers who are bonded to government service for several years and have only a short internship to prepare them and little or no experience of working with paramedical staff. Usually no senior experienced district physicians are available to train and advise. Lacking confidence and guidance, the graduates fail in the task they face, and decide that they can achieve a satisfying career only by specialising in a large urban hospital. Governments deplore the refusal of physicians to work in rural areas, yet do little to train them appropriately or to ensure that the rewards of becoming experienced in district practice are at least equal to those of the specialist in the urban hospital.

Training

The services provided by the experienced district physician in many parts of the world are likely to remain essential even when adequate resources are available for comprehensive health services. If this is accepted postgraduate training must be planned, objectives defined, and a career structure established that provides adequate rewards and recognition. A district physician is a "specialist" who is well trained within defined objectives in surgery, medicine, obstetrics and gynaecology, paediatrics, and community medicine, though these components are not necessarily equally emphasised. A surgical procedure is a specialised therapeutic measure which forms as logical a part of a district physician's training as the diagnosis and treatment of kala-azar. One physician may be an internist who can deal with surgical emergencies, another may be better at surgery but able to cope with paediatric emergencies.

In Kenya a masters degree of the university was established for specialist training in all major disciplines. Such a degree course could be adapted to the training of the district physician, giving him an equivalent general degree rather than an inferior diploma. The syllabus would consist of five modules in each of the main subjects, two of them being taken at advanced level. Ophthalmology, otorhinolaryngology, or anaesthetics might be offered as optional subjects to be taken instead of one of the five basic modules, though they are probably best provided by specially trained assistants. In each module the syllabus should be clearly defined and related to the disease pattern in the country. Training should last for three years, and be based in regional and district hospitals (not urban teaching hospitals) under the supervision of the regional specialists on behalf of the medical school. Understanding of the structure of primary health-care services and of the need to work with the medical

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assistants and auxiliaries who constitute the primary health-care teams should be encouraged.

The training programme might be as follows: 12 months—four months in three basic modules; 18 months—nine months in each of the two subjects taken at advanced level; six months in district hospitals working with medical auxiliaries, work being supervised by a senior district physician. The syllabus for the ordinary and advanced module in each subject must be defined. In surgery the ordinary level would include essential emergency procedures, while the advanced level would include some simple elective surgical treatment. Syllabuses might include the following components:

Ordinary level—electrolyte and fluid balance (shared with other modules); blood transfusion (shared with other modules); preoperative and operative care of intestinal obstruction; operative repair of strangulated inguinal hernia; initial management of penetrating and closed wounds of chest; closed management of common fractures of the bones of the arms and legs, etc.

Advanced level—skin grafting of burns; excision of hydatid cysts of liver (if a common problem); management of mycetoma (if locally prevalent); management of compound fractures; simple procedures for correcting deformities resulting from poliomyelitis, etc.

Suitable text-books and manuals must be written for district practice that give precise details of standard operative procedures. The operative ability of each candidate would be certified before admission to examination and they would be required to submit a log-book of the procedures they had performed.

After completing his training, the district physician would then be posted to a district hospital with at least two other colleagues. With further experience he would be promoted to become the senior district physician in a hospital and a recognised teacher of trainees and would also be responsible for directing the primary health-care teams attached to his hospital.

Role of specialist surgeons—Specialist surgeons, working from a base in regional and national referral hospitals, must be responsible for supervising the training of district physicians, who would hold registrar (or resident) posts. When training is complete the surgeon would visit them to support them in their work and to improve their surgical skills, rather than confining himself to work within his hospital. It is to him that the district physician will refer those patients he cannot manage himself.

Conclusion

In the 'seventies the World Health Organisation and many governments, both rich and poor, have given priority to developing peripheral health services and training medical auxiliaries. An efficient system of primary care cannot be developed without recognising the crucial role of the district physician and ensuring, by suitable training and incentives, that they are capable of fulfilling it. Physicians trained in this way should provide surgical care within defined limits and receive the help and recognition of surgical colleges and institutes. Everyone who provides surgical care should be properly trained for the work that they are called upon to do, but they need not be exclusively surgeons. The surgical establishment, on the other hand, must contribute to initial and continued training and assessment. Surgeons should regard the district physicians as their equal in skill and their partners in treating disease.

Reference

- ¹ Bonte, J T P, in *Health and Disease in Kenya*, ed L C Vogel *et al*, p 75. Nairobi, East African Literature Bureau, 1974.

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Attitudes of 40-year-old college graduates towards amniocentesis

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Male doctors often think that almost every pregnant woman who is offered amniocentesis will gladly accept it, unless she is a Roman Catholic. Nevertheless, conversations with my non-medical friends have shown that this is not so, and I therefore thought it would be interesting to discover the views of a group of 40-year-old women. Ideally such a group of women should be pregnant, but until widespread facilities for amniocentesis are available I thought it worth while to conduct a postal survey using my old college, Girton, as a source of women of appropriate age. I thought that the disadvantages of using such a selected group would be outweighed by the probable advantages that (a) they would have some knowledge of amniocentesis, so that a brief description in a letter would be a sufficient basis for them to reach a decision; and (b) they would appreciate the aims of the

survey, and therefore take the trouble to fill in and return the questionnaire. I hoped that such a survey might be useful in planning the facilities needed before amniocentesis and chromosome testing can be offered routinely.

Method

The women studied were all those who entered Girton College, Cambridge, as undergraduates in 1953-7, and who had addresses in the United Kingdom. At the end of 1977 and the beginning of 1978 each was sent a letter, an anonymous questionnaire, and a stamped addressed envelope. Each woman was asked whether she would have an amniocentesis if she were pregnant because of the increased risk of mongolism. She was given details of age-specific risks for liveborn mongols,¹ and was told that the risk of losing a healthy fetus as a result of amniocentesis was about 1%. As well as her and her husband's decision on amniocentesis she was asked for information on her age, marital state, number of children, any relevant handicaps in her family, and her religion.

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