Organization of Cardiac Surgical Services

Surgery plays an essential part in the management of heart disease, but it is expensive both financially and in its demands on skilled manpower. Substantial support by an overextended health service can be justified only if the resources devoted to it are used as effectively as possible. This necessitates planning on the basis of accurate information. Such considerations stimulated the National Heart Foundation of Australia to start a register of cardiac surgery in 1963, and it has continued to review the cardiac surgical service on a national scale up to and including 1973. Its latest report surveys the complete experience and results of cardiac surgery in a population of 13 million over a period of 10 years, recording the number of operations undertaken, a breakdown of the types of surgery performed, and the mortality associated with each type. The review shows that there has been a progressive fall in mortality from all types of cardiac surgery over recent years. It also shows the beneficial effect of surgery in the neonatal period on the Australian death rate for infants under 6 months of age. Clearly standards are high in Australia, and the provision of cardiac surgical services there is now organized on a rational basis.

The organization in Britain is by no means so clear. In some of the best-known centres a large amount of work is carried out in unsatisfactory conditions, while in others good facilities are underused. Many units suffer from severe shortages of staff, particularly nurses and ancillary personnel such as pump technicians. In most areas waiting lists are long and lengthening; many patients deteriorate during the months of waiting, and some die. Until these facts are brought out into the open tragedies will continue to occur and will attract adverse publicity. This state of affairs would hardly be tolerated with some other forms of surgery; that it is so may be a consequence of the tendency of many general surgeons and physicians to regard cardiac surgery as dangerous species of fringe medicine. In fact, compared with many other forms of major surgery the mortality of cardiac operations is low and the likelihood of symptomatic improvement high.

The collection and publication of data as carried out by the National Heart Foundation of Australia would not remove these problems but it would help the rational development of cardiac surgery in this country in four ways.

Firstly, the work load of existing units in terms of the numbers of patients operated on per year and per head of the population would become known. Certain areas are seriously deficient in cardiac surgical services, and many patients have to travel from Scotland, Wales, and areas of England to London because adequate resources are not available locally.

Secondly, it has been shown in the United States that the best results are obtained only in those units that undertake a substantial volume of work. The same is true for the associated investigation of coronary angiography. Many British centres are not dealing with adequate numbers and are unlikely to do so.

Thirdly, the publication by units of their annual mortality and morbidity figures is known to lead to a rise in standards.

Finally, such a programme would provide information on current medical, nursing, and ancillary staffing and allow prediction of future needs.

It may be difficult to stimulate physicians and surgeons into providing the information that is required. This is mainly because they are so heavily committed to their clinical duties that they have not the time for clerical work, but it is also because they have experience of the misuse of statistical information of doubtful validity by bureaucrats. Yet, if cardiac surgery is to be done at all, it must be done by well-supported teams of highly skilled surgeons, physicians, anaesthetists, nurses, pump technicians, and other ancillary workers. Such teams must have a minimal critical volume of work available to them. Only if appropriate data are available can rational decisions be made on the number, size, and needs of cardiac surgical centres in this country.

Who should collect this information? Preferably it should be obtained by members of the profession rather than by the Government, and possibly the Royal Colleges of Surgeons, the British Cardiac Society, or the Society of Thoracic and Cardiovascular Surgery will initiate a review of the current position; but the encouragement and help of the Department of Health and Social Security and the Scottish Home and Health Department may well be necessary too.

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Early Detection of Bronchial Carcinoma

It might be expected that patients in whom a diagnosis of lung cancer is made by mass radiography would have a better prognosis than those who seek medical advice only after they have developed specific symptoms. There is, indeed, some evidence that this is the case, but the advantage in terms of five-year survival after surgical treatment is disappointingly small. Again, it might be assumed that repeated x-ray examination at regular intervals would increase the yield of early cases, with a corresponding improvement in prognosis; but projects in which large groups of men have been x-rayed at six-monthly intervals have produced almost equally depressing results in terms of survival among those who developed lung cancer.

In these projects, however, sputum cytology was not included in the diagnostic "screen," and it could be argued that an interval of six months between films was too long. The latest attempt to devise a more effective procedure for the detection of bronchial carcinoma at a curable stage is now being undertaken at the Mayo Clinic, and the preliminary results of this study have recently been published. "Screening" every 4 months by x-ray examination and sputum cytology is being concentrated on "high-risk individuals"—men over the age of 45 who were smoking at least 20 cigarettes per day—and the incidence of lung cancer in this group is being compared with that found in a control group who were receiving merely routine medical care (though in the United States this may include annual x-ray examination and sputum cytology).

A total of 4353 men volunteered for the project, but many were excluded for various reasons, and over a period of 2½ years 3495 entered the cancer detection phase of the study, the number in the screening and control groups being almost equal. It is of interest that 28 patients were excluded because 25 had been found at the initial examination to have unsuspected lung cancer and 3 to have cancer...