THE LOGISTICS OF DENTAL ANAESTHESIA

BY

M. P. COPLANS

During the past 10 years, the introduction of halothane, methohexitone and propanidid into anaesthetic practice has so widened the scope of out-patient anaesthesia in general—and dental anaesthesia in particular—that considerable reorganization of the existing dental anaesthetic services has become essential. In July 1965 the Ministry of Health set up a joint sub-committee of the Medical and Dental Advisory Committees to consider this and other aspects of the subject, and in May 1967 a report was issued by the Ministry of Health (1967) which made certain recommendations concerning the training and deployment of dental anaesthetists in the future. It is to these recommendations, and their short-term and long-term applications, that this paper is devoted.

GENERAL CONSIDERATIONS

In the United Kingdom all general anaesthetics excluding those in dentistry, are given by registered medical practitioners who, with few exceptions, are specialist or trainee-specialist anaesthetists. While also applying to in-patient dental anaesthesia, this system has never been associated with out-patient dentistry, in which the anaesthetics are administered by either a doctor or a dentist—neither of whom would necessarily have received tuition additional to that inherent in his undergraduate training. Strict limitations to the scope of work undertaken under general anaesthesia in the past were imposed by the widespread use of unsupplemented nitrous oxide with varying degrees of hypoxia, which was regarded as the standard technique; under these circumstances, personal clinical experience, rather than depth or length of training, determined the anaesthetist's prowess, and either a medical or dental education was considered to be acceptable. The recent approximation of dental anaesthetic techniques to those in everyday use in other branches of anaesthesia has necessitated a reappraisal of this somewhat haphazard training system, and bearing these various factors in mind, the joint sub-committee reached the following two basic conclusions.

1. That ideally all dental anaesthetics should be administered by specialist anaesthetists trained in dental anaesthesia; that this ideal would take many years to achieve, and that in order to safeguard against withdrawal of an essential public service in the interim period, many dental anaesthetics would continue to be administered by medical and dental practitioners to whom improved postgraduate training facilities should be made available.

2. That both medical and dental undergraduate training should confine itself—in terms of theory and practice—to broad basic principles, thus ensuring that the future administrator will receive some form of postgraduate instruction before considering himself competent to undertake unsupervised clinical responsibility.

The second of these two recommendations has been welcomed by most interested parties, but the first has provoked considerable criticism, which can fairly be summarized by the following comment published in a paper by the British Dental Association (1967).

"The British Dental Association is of the opinion that the right of the dental practitioner to administer anaesthesia must be maintained and considers this 'ideal' to be quite unrealistic."

"The ideal" refers to the recommendation that ultimately dental anaesthetics should be given by doctors.

Contained in one sentence are two quite distinct objections to this important recommendation, and it is necessary to examine these objections separately.

Is the "ideal" desirable?

Nowhere in the Ministry Report is there any suggestion that "the right of the dental practitioner to administer anaesthesia" should be assailed. This "right" is, of course, enjoyed by all surgeons, but with the growth of a comprehensive
and expert anaesthetic service no doctor who has not received postgraduate anaesthetic training voluntarily elects to exercise his “right” other than in situations of emergency. The refusal by some to recognize the increasing complexity of dental anaesthesia and the advantages to be gained in this subject from a broad medical, as opposed to a more specialized dental, training might, however, provoke the more militant-minded to seek prohibitive legislation.

This recommended “ideal” does not imply that every doctor will automatically make a competent dental anaesthetist, nor that no dentist can; but simply appreciates that the present-day medical training furnishes the best available basis on which to superimpose postgraduate expertise. General agreement, therefore, that a doctor with specialist (not necessarily “consultant”) training represents the “ideal”, would be the first step toward the construction of a dental anaesthetic service comparable with that at present enjoyed by all non-dental surgeons—who in other spheres of work have long ago accepted an identical proposition as being “ideal” and who, by their help and encouragement, have allowed anaesthetists over the years to build up a service of the highest possible quality.

Is the “ideal” realistic?

Only if the “ideal” is accepted as desirable is its feasibility worth considering. The Ministry Report laid considerable stress upon its own recognition that the “ideal” would take many years to achieve. The problem must be solved in both its long-term and “interim period” aspects.

ULTIMATE SOLUTION

The training and manpower problems involved must be considered under two separate headings, namely those associated with orthodox general anaesthesia for routine exodontia, and those associated with so-called “ultra-light” anaesthesia or sedation for conservative dentistry.

General anaesthesia for out-patient exodontia.

It is possible in this field at least to attempt to forecast the numerical demands of the future. The number of general anaesthetics for exodontia given in National Health Service dental practice has fallen steadily since 1948 to the present figure of less than one and a half million and has remained close to this figure during the past five years. It is not unreasonable to assume that this figure will represent the need for this type of anaesthesia for several years to come. There may be a decrease due to improved standards of overall dental health and care, improved local anaesthetics, fluoridation, and other factors. This decrease may be counterbalanced by an increase based upon improved general anaesthetic techniques and services available to the practitioner. There is, however, no reason to anticipate a massive departure from the present figure. If one and a half million anaesthetics were administered solely by general practitioners with special postgraduate training, this would demand that 10 per cent of the present general medical practitioner force, if in receipt of such training would have to administer ten to twelve anaesthetics per week. Viewed from an alternative standpoint, if all these anaesthetics were given by part-time consultant anaesthetists each such consultant would have to administer some thirty per week.

It is not suggested that either of these arrangements would constitute an ideal solution, but it is clear that a combination of both approaches could well form the basis of a satisfactory service in the foreseeable future. The selected cases would, of course, have to be collected and presented as a regular “session”, an arrangement already in force in many dental practices and found to be acceptable to practitioners and patients alike. The doctor who undertakes such a regular “session” is not, and would not be, averse to an occasional visit to deal with the genuine emergency unable to await the next “session”. It would thus appear that the ultimate “ideal” solution in respect of the one and a half million anaesthetics for exodontia is not as “unrealistic” as the British Dental Association might suppose and certainly need not entail an enormous and unmanageable demand upon medical manpower.

General anaesthesia or sedation for out-patient conservative treatment.

That a proportion of patients justify the use of general anaesthesia for conservative treatment is undisputed, but in the evidence submitted to the joint sub-committee, estimates of that proportion “varied widely, from 1 per cent to (in the view of a minority) 95 per cent”. The Report continues:
"The majority thought it was justified in no more than 5 per cent, and we think this is a reasonable estimate."

The future organization of an anaesthetic service to cover the needs of conservative dentistry is entirely dependent upon which of these two numerical views must be considered to be realistic. The range 1–5 per cent can be no more than a guess, but whatever the exact figure is, it will demand an organization quite different from that required by the estimate of 95 per cent. Some 15,000,000 courses of dental treatment are undertaken annually, and thus the estimate of less than 5 per cent would probably entail the administration of a maximum of 750,000 such anaesthetics annually. A demand of this numerical order could probably be met within the framework of an anaesthetic service as already suggested in relation to exodontia. In addition, all hospitals with large dental departments—and particularly those engaged in undergraduate teaching—would doubtless plan to provide facilities capable of absorbing a proportion of this work. Viewed in these numerical terms, the problem certainly does not appear to be insuperable.

If, however, the proposition that 95 per cent of patients merit this form of treatment gains acceptance, then this implies that ultimately general anaesthesia, or some associated technique, should be considered the routine choice in preference to local anaesthesia. Under these circumstances it is inconceivable that a separate anaesthetist, be he doctor or dentist, could be provided for every case; for to do so would entail doubling the present manpower in order to cope with the existing dental need. Thus it follows that the "operator-administrator" would have to gain unqualified acceptance. Those who believe that this should indeed be the case, do so on the grounds that what is required is not an anaesthetic, but merely heavy sedation, which is devoid of all the risks and problems inherent in orthodox anaesthesia. This view refers in particular to the technique described as "ultra-light intermittent methohexitone", and it is not the purpose of this paper to discuss the clinical justification for this view in detail. Suffice to say that there is little evidence to suggest that the use of methohexitone in any context can be responsibly viewed in this light. If, however, this clinical viewpoint is thought to be justifiable, then it dictates that, if 95 per cent of patients merit this form of anaesthesia or sedation, 100 per cent of dentists must be trained in its use. Training, on this scale, can only be effectively applied during the undergraduate period and would have to be undertaken by teachers in purely dental subjects. Many problems, other than the purely clinical justification of such a view, present themselves. What degree of supervision would the student-operator-administrator require? What recovery space should be made available in the teaching hospitals, and where would the escorts wait? Would the patients be allowed to attend unaccompanied? Serious intention to replace the use of local anaesthesia in routine out-patient dentistry presents, therefore, an enormous number of problems, and I would suggest that these problems are soluble only within the dental profession—if indeed they are soluble at all. Perhaps a more realistic solution lies in training the dental undergraduate in the fuller appreciation and use of simple sedatives and tranquillizers as an adjunct to local anaesthesia. Under these circumstances, the number of patients requiring complex techniques would surely remain small enough to be catered for by a comprehensive anaesthetic service constructed along the lines already suggested. Such a service would require much hard work and expert organization in its construction, but primarily its success would depend upon the close understanding and co-operation between dental surgeons and anaesthetists, and their joint ability to arouse interest in the subject amongst a proportion of general medical practitioners.

INTERIM SOLUTION

If the "ideal" discussed above is adjudged to be both desirable and feasible, then it is necessary to devise interim arrangements which will ensure a steady improvement in the existing service without in any way hindering achievement of the ultimate goal. There are two main avenues of approach.

(i) Better utilization of existing manpower.

At the present time, there are a number of dental practitioners who wish to utilize the services of a medically trained anaesthetist; likewise, there are a number of doctors with full or partial consultant training in anaesthetics, and consider-
able training in dental anaesthetics, who would be willing to devote more of their time to this work. It is, therefore, necessary to create an organization which would enable these two groups of practitioners to contact one another on a regional basis and through orthodox channels. Such an organization would supply local dental authorities with a list of suitably qualified medical practitioners, together with their periods and areas of availability.

(ii) Improved training facilities.

(a) Undergraduate. Undergraduate training should supply a sound theoretical and practical background on which to graft postgraduate expertise. No longer, however, should the undergraduate be allowed to gain the impression that he is competent to administer unsupervised anaesthetics on qualification. With the ultimate "ideal" in mind, it is essential that the theoretical and practical aspects of the subject figure as prominently in the medical as in the dental curriculum.

(b) Postgraduate. Postgraduate courses should be devised with two basic needs in mind. Firstly, the medical or dental practitioner who has already gained clinical experience in the subject must have access to regular "refresher" courses, the exact nature of which will be determined by the rate at which teaching and possibly other dental hospitals are able to develop and expand their teaching facilities. Such courses might at the outset only provide a few days' training, but any improvement on the existing situation is desirable in this particular area of training.

Secondly, the newly qualified doctor or dentist wishing to engage in this work will have to be provided with appropriate facilities. It is difficult to dogmatize as to the precise nature these should take, but it is desirable to have some target at which to aim. One year as resident anaesthetist—provided the post carries considerable experience in dental anaesthesia—would appear to be a realistic aim for the medical practitioner. The dental practitioner, whose training in clinical medicine, pharmacology and physiology is less thorough, and who is not required to hold a preregistration appointment, would presumably require longer to attain a comparable degree of overall competence.

The system suggested would be a complex one, for during the entire "interim" period, there would be a mixed service, staffed partly by doctors and dentists who were basically "self-taught", but who would be encouraged or obliged to attend regular "refresher" courses; partly by younger practitioners who had received a fairly comprehensive postgraduate training; and at the same time the system would be geared to the ultimate "ideal" in which the service would be entirely staffed by doctors who had received a training preferably in excess of that suggested above. There would, of course, also be an expansion of hospital out-patient dental anaesthetic facilities, partly to meet growing training requirements, and partly to fulfil an essential clinical function in the comprehensive service envisaged.

Finally, it is inconceivable that any dentist, trained in the manner suggested, should during his professional lifetime be barred from entering fully into such an anaesthetic service. Thus it would be in the distant future—perhaps fifty years hence—that the ultimate "ideal" would be attained.

FINANCE

Smooth implementation of the system described is dependent on two additional factors. Firstly, the newly qualified doctor must be made aware of the need for his services in this field. Secondly, it must be made possible for him—in terms of both time and remuneration—to undertake such work. So far as the financial aspect is concerned, the present scale of National Health Service anaesthetic fees for exodontia clearly needs radical revision; "radical" need not imply "astronomical", and so long as dental practitioners are prepared to collect the majority of their cases into "sessions", the anaesthetic fee need not exceed that which an expanding health service might be reasonably expected to bear. Fees for general anaesthesia for conservative dentistry do, however, demand careful consideration. Where the need is such that dental fitness could not be attained without the use of general anaesthesia, the health service should bear the cost; but where the indication is a marginal one, and reflects a preference—albeit a justifiable one—on the part of patient and practitioner, it is not reasonable to
expect provision of this facility by the health service, at a time when many items of purely dental treatment are denied on the grounds that they may be desirable, but are not essential to achieve dental health. If a patient is prepared to pay privately for the services of an anaesthetist whilst receiving dental treatment under the National Health Service, there seems to be no valid reason why patient, dentist and anaesthetist should not enter quite openly into such a sensible arrangement.

REFERENCES


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FIRST INTERNATIONAL SYMPOSIUM ON DETECTION OF CANCER

SPA (BELGIUM): SEPTEMBER 26–29, 1968

Chairman Dr. Henri Ramioul, Civil Hospital of Verviers.

The aim of this Symposium is to discuss the different problems of the detection of cancer.

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Detection of digestive cancer.
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Round tables
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Deontological aspects of the detection of cancer.
General results of the detection.

Scientific exhibition. Recreational programme.

Registrations Secrétariat Général, Quai du Barbou, 4, Liège (Belgium).

Further particulars: The Secretary of the Organizing Committee, Doctor Albert Liegeois, Civil Hospital of and in Verviers.