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EDITORIALS AND ANNOTATIONS

SURGICAL TRAINING
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It is probably true to say, as has often been said especially by young men, that over the age of fifty the mind becomes a little fixed; that the flashes of inspiration and the enthusiasm for new developments which lead to real advances become dimmed or even extinguished. To compensate for this the older surgeon should have acquired experience, judgment and authority which can be invaluable to younger surgeons if properly used to guide and stimulate rather than to dictate and suppress. The older surgeon has particular responsibilities of this kind in surgical education and research.

I have been continuously and closely associated with surgical education as a student and as a teacher for exactly forty years. I have served as a member of the Court of Examiners in Surgery of this Royal College and as an examiner in general surgery at two universities, and I am a member of the Council of this College whose prime function is—or ought to be—the wise control of postgraduate education. It is with the authority of this not inconsiderable experience that I venture to address you on the subject of postgraduate education in orthopaedic surgery. What I have to say, however, applies also to training in all other specialities including so-called general surgery, and gives my personal views, in no way representing the official view either of the British Orthopaedic Association or of the Royal College of Surgeons.

I define postgraduate education in orthopaedic surgery as the training which should follow registration as a medical practitioner in order to reach the standard of knowledge and experience necessary for consultant status as an orthopaedic surgeon.

Fifty years ago specialties within surgery were for all practical purposes non-existent; each surgeon covered the whole field of surgery. Training then was simply a matter of working in a suitable hospital under experienced surgeons for a sufficient time. Such training automatically covered all branches of surgery, and thus the young surgeon who held the diploma of one of the Royal Colleges was certain to have a reasonably sound knowledge and have acquired at least some experience in the surgery of all the systems of the body.

In the last thirty years the enormous advances in surgery have led to increasing complexity in investigations and to such complicated operative techniques that no single individual can hope to master all branches of surgery, and thus specialisation has been forced upon us and has come to stay. This rise in specialisation has abolished the “general surgeon” and has necessarily had a profound effect upon postgraduate education.

Wide basic training can no longer be acquired merely by working under one or two surgeons for a sufficient length of time. Such training is completely unbalanced and produces a technical expert in a narrow field having little or no knowledge of any branch of surgery other than the one or two specialities in which the trainee has worked.
To those who have experience of examining in the higher examinations and of the work of many young surgeons this is deplorable, for it tends to produce excellent technicians but bad surgeons lacking in judgment and quite incapable of tackling any problem outside their own particular field.

Attention has been drawn to these deficiencies in surgical training and to the disadvantages of early specialisation by many specialist associations and in particular by the reports of the committees on accident and emergency services, and there is now general agreement that training in any speciality should ensure that the trainee has acquired a sound knowledge of the basic principles and be familiar with the simpler operative techniques of all the major branches of surgery in addition to his much more detailed specialist knowledge.

The difficulty arises when we come to consider how this wide basic training should be acquired; how much experience of how many specialities we should demand of our young men in addition to the long and detailed training in their chosen field, and how a satisfactory level of general training can be assured. At present there is no organised postgraduate training in this country. The only guide to the young man aspiring to a career in surgery is the regulations for the Fellowship of the Royal College which demand that the candidate must have worked for two years in surgery, of which one must be in so-called general surgery (now a meaningless term) and six months in a casualty department. These regulations are obviously inadequate to ensure wide basic training. The young man is left entirely without guidance to acquire what experience he can in any senior house officer or registrar appointments approved by the College. No attempt is made by any recognised authority to ensure that he has a proper series of appointments which will give him wide experience. Indeed at the registrar level this is actively discouraged, for the Platt Report on hospital staffing specifically excludes (though illogically and against all current practice) this grade from the training scheme.

As a result of this chaos the young man aspiring to become a surgeon drifts into senior house officer and registrar appointments in one speciality which he holds for two or even three years and, as the Final F.R.C.S. examination approaches, frantically attempts to acquire knowledge of those large branches of surgery not covered in his daily work. Alternatively, if he is wise to this danger and tries to widen his experience, he often has the greatest difficulty in getting the right job at the right moment and for the right length of time.

Apart from the difficulties in attempting to acquire a sufficiently varied experience to make it reasonably certain that he will pass the Final Fellowship examination, the young man is faced with an even more impossible situation. Having decided upon his speciality, when he applies for more senior appointments in which he can complete his training he finds that there is no agreement as to what previous experience he should have had. I encountered a typical example of this recently. A young man from my own hospital with the F.R.C.S. diploma, and with what I would consider good basic training, having decided that he wished to be an orthopaedic surgeon, applied at two famous orthopaedic hospitals for the post of registrar. He was told at hospital A that although his general experience was satisfactory he had not done enough orthopaedics, whilst hospital B considered his orthopaedic experience quite satisfactory, but told him to go away and do another year of general (by which I suppose they meant abdominal) surgery. What is the young man to do now? If he plans his next year's work on the advice of hospital A he will never get a job at hospital B, whereas if he conforms to the idiosyncrasies of hospital B he will meet a similar fate at hospital A. That such a situation can arise is not only ludicrous but a grave imposition on our young surgeons.

All this is well recognised and bitterly resented by the young men, who rightly think that they are treated as "pairs of hands," and that appointments are arranged not for the purpose of training but to provide junior surgical staff or to satisfy the whim of the senior staff of some hospital at which the trainee hopes to complete his specialist training.

In my view the solution of this problem of early training lies not in the organisation of ward rounds, lectures, seminars and the like, important as these may be, but in the establishment
of a programme of postgraduate work to which every aspirant for consultant status in any speciality must conform, and which would precede definitive specialist training. Such a programme should be agreed by the Royal Colleges after consultation with the specialist organisations and be incorporated in the regulations for the Final Fellowship examinations. If this were done then the F.R.C.S. diploma would indicate a wide basic knowledge of surgery, acceptable by all as a standard foundation upon which definitive specialist training should be built. For such a purpose this diploma is invaluable.

I suggest that such a programme should start two years after the qualifying examination or after the trainee has passed the Primary F.R.C.S. examination. It should be at registrar level and should consist of appointments of two or preferably three years at a single hospital or at a group of hospitals in which the young surgeon would work for periods of six months in general surgery and at least two of the major specialities, one of which would be orthopaedics. A two-year appointment would thus cover two periods of general surgery, one of orthopaedics and one of one other speciality—such as neurosurgery, thoracic surgery, or plastic surgery. A three-year appointment would give longer experience in the same specialities or experience in a greater number of specialities.

Clearly the exact type of rotation will vary from one hospital group to another, for not all specialities are available at all hospitals, but there are very few that cannot provide general surgery, orthopaedics and one other speciality, particularly if hospitals in an area cooperate and registrar appointments in the rarer specialities such as neurosurgery, thoracic surgery and plastic surgery are duplicated if necessary. The one thing that must be fixed and rigid is the total length of the appointment and the time spent in each appointment in the rotation; otherwise the whole scheme breaks down.

Such rotational appointments provide a true wide basic training and are entirely successful. They are also greatly to the advantage of the hospital which then has a pool of enthusiastic young men all aware that they are getting first-class training. The disadvantage to the surgeon of changing his registrar every six months is, in our experience, completely offset by the enthusiasm of the registrars and their wide grasp of surgical principles. At the Royal Infirmary, Sheffield, we have had such registrar appointments for the past eight years. Their success and popularity can be judged by the fact that we have not had one failure in the Final F.R.C.S. examination and that we had seventy-five applications, all from suitable candidates, for the last two appointments.

In my opinion proposals for complete rotating registrar appointments should be submitted to the College for approval by the Council, and if approved should be the only appointments recognised by the Royal College as suitable training posts for the Final Fellowship examination.

It has been argued that such rotating appointments could be organised only by the teaching hospitals and the larger non-teaching hospitals, and thus the number of young men in training would be very restricted. I have investigated this point in some detail and I do not believe the statement to be true. The number and distribution of the rarer specialist departments in this country is such that there can be very few hospital groups suitable for training at all which cannot arrange satisfactory rotations. Moreover, I believe that the Ministry of Health through the Regional Boards and Boards of Governors would cooperate by increasing establishments in certain specialities if such definite training programmes were submitted to them.

I sincerely hope that every hospital or hospital group will carefully investigate the possibility of organising such rotating posts and will submit their schemes to the Council of the College through the recently appointed regional organisers. In my view it is only by such organisation that we can maintain proper standards of training which will satisfy the needs both of our own young men and of all those who come from overseas to this country for their early training in surgery.
Hospitals not wishing or being unable to organise such training posts would of course still have registrars appointed as at present. These appointments would then be filled by men who had already complied with the regulations of the Royal College but had failed the examination, and wished to sit again, or men with the F.R.C.S. diploma who wished to obtain additional experience in their chosen speciality before applying for senior registrar appointments.

Definitive specialist training should only start when the trainee has finished this wide general training. It should, in my opinion, be almost entirely at senior registrar level and last for at least four years. Between the completion of general training and senior registrarship further experience in the chosen branch of medicine might be required in registrar appointments outside the rotation schemes, but there should not be too long a gap before senior registrar status is achieved. During his period as a senior registrar the trainee should undoubtedly have encouragement and facilities to undertake research. I do not believe, however, that research, though desirable, is an essential part of training at any stage. Forcing research programmes on all young men seems to me to result in a lot of bad research and certainly to a considerable number of indifferent papers, full of badly digested facts and unjustifiable conclusions which clutter the surgical publications today. In the past you published when you had something to say, now you publish if you can whether or not you have anything to say. We need a little clear thinking on research in general and certainly on the position of research in training programmes.

Apart from the question of research I believe that perhaps the most valuable part of this final stage of training is its personal quality. At the present time I think we are in grave danger of losing this—that is the close personal ties between the senior registrar and the consultant—"the chief." It is a remarkable thing that while we compel the juniors to arrange their own training programme we often impose restrictions on the senior registrars, and if the Platt Report is fully implemented restrictions will be imposed on all senior registrars. The registrar without experience and asking for guidance is allowed to shift for himself, whereas the senior registrar, who certainly knows what he wants and is much more mature, is told what is good for him. He is often forced into a rotation usually between a teaching hospital and a regional hospital and told that this will enlarge his experience, when it is, in many cases, an obvious device to provide senior registrars in hospitals which otherwise would never get them. Moreover, many rotations are so arranged that the applicant does not even know with which surgeons he is going to work. How many of us, especially among the older surgeons in this room, recollect with gratitude a single teacher whose wisdom and skill fired our enthusiasm and set our feet on the right road through surgical life? I hold the view and hold it strongly that at this stage a man should be free to choose his teacher, and that subsequent changes of appointment for further experience should be on the advice of the teacher and not according to a fixed rotation. The relationship should be that of master and apprentice, the system which has resulted in the present high standard of British surgery, for—make no mistake—the general quality of British surgery is very good indeed. No country in the world can surpass our standards and few can equal them.

It may be argued that with no direction at this senior level some hospitals will never get senior registrars. If this is true then such hospitals do not deserve them. Senior registrars have to compete for positions. I see no reason why consultants should not compete for senior registrars. It is also said that a senior registrar from the teaching hospital is more likely to be elected a consultant than one from a non-teaching hospital. If this is true it is certainly no reason why senior registrars should be forced into non-teaching hospitals in a rotation. I do not believe, however, that it is true. Those of us who sit on appointment selection committees know that it is the surgeon with whom the candidate has worked and not the name of the hospital which is important. There are many surgeons from non-teaching hospitals in this room whose reputation is such that a recommendation from them for any candidate
would have the most powerful effect upon any appointments committee. If we are to have in the future, as seems likely, establishment for more senior registrars, let us see to it that these young men are free to compete for appointments of their own choice and that such appointments are freed from irksome and unjust conditions.

The adoption of this scheme of comprehensive postgraduate surgical training would necessitate a clear distinction between training posts both specialist and general, and posts which are purely for carrying out the routine work of the hospital—a clear distinction which to my mind is long overdue.

In orthopaedic and accident surgery the amount of routine minor work is enormous. In my own unit there are 35,000 patients a year, of which only about 750 require the direct attention of the consultant, though of course the treatment of all is supervised by them. In all accident and orthopaedic departments the proportions are about the same.

At the present time this routine minor work is done in practically all hospitals by senior house officers and registrars, and of these, the registrars certainly consider themselves trainees. In the majority of hospitals this arrangement works very well except that they are often short of registrars. We are bound to admit, however, that in some hospitals these appointments are merely "pairs of hands," and the training which the young man receives is minimal or non-existent. This is one of the main criticisms the young men in training have about some present posts. If a satisfactory training programme were established it would have to be recognised that such hospitals were unsuitable for training and they would therefore be unlikely to attract registrars.

How then could this routine work be done? It has been suggested that more consultants should be appointed. I think this is both impractical and unwise. The amount of work which demands the direct attention of a highly qualified and experienced consultant in any one hospital is limited and to appoint more consultants than are necessary to do such work is to deny the existing consultants sufficient intellectually satisfying work. This would be deplorable. How many orthopaedic consultants would be content to spend the greater part of their time treating nothing but minor fractures and soft-tissue injuries?

In those hospitals unsuitable for training there seems to be no other solution to this problem than the establishment of a permanent junior grade—surgical assistants. I see no objection to this, and indeed there are very many advantages. I believe that many young men would willingly enter such a grade as an alternative to general practice provided the appointment was permanent and carried remuneration like that earned in general practice. I urge you to think carefully about such a grade before condemning it as a dilution of the consultant service.

It appears to me that the programme which I have described would provide a first-class training in surgery which would be unexcelled anywhere in the world. It employs both teaching and non-teaching hospitals and uses the enormous teaching potential for general and specialist training of the non-teaching hospitals in a rational way.

FRONT COVER OF THE JOURNAL

The British volume of the Journal of Bone and Joint Surgery has a new front cover which in this first issue of 1964 shows the Royal Grant of Arms of the British Orthopaedic Association. The next issue, soon before the joint meeting of orthopaedic associations in Vancouver, will have the insignia of the Canadian Orthopaedic Association. In succeeding numbers there will be the emblems of Australia, New Zealand and all other countries associated with us.