Middle Articles

MEDICAL EDUCATION

Problems and Solutions in Selection, Training, and Organization of Hospital Surgical Staff*

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It takes between 8 and 10 years to train a medical graduate to become a surgical consultant. The mean time of graduation is about 24 years of age, and it is reasonable that young men should want to stand on their own feet not more than 10 years later. Hence we must expect young graduates to be deciding to pursue a surgical career during, or very soon after, their preregistration year. This often happens at present, many potential surgeons going straight from their first house appointments to a demonstratorship with a view to obtaining the Primary F.R.C.S. during that year.

At the moment this individual decision to set out on the long road of surgical training is taken privately and is not discussed in any formal way with senior advisers. Some know perfectly clearly what they want to do. Others take more halting steps towards a surgical training, but rarely are any discouragements placed in their way even though some will not succeed. Hence many surgical aspirants start training. After much hard work they sit the Primary F.R.C.S., in which the failure rate is about 70%. This tough examination at least has the advantage of selecting those with application and therefore probably the necessary drive to carry them through their surgical training.

Registrar Posts

Those who pass the primary examination are generally regarded as being ready to apply for a registrarship, and here they have a remarkable selection of jobs open to them, with the widest possible range of responsibilities and opportunities, ranging from those in London teaching hospitals (where responsibility is not great and emergency experience small, but the atmosphere and opportunities for learning are excellent) to registrarships in some peripheral hospitals (where the case-load is very heavy, emergency experience rich, and opportunities for study, as opposed to learning by personal experience, usually slight).

At present there are 782 registrar posts in general surgery in England, Wales, and Scotland, half of these being occupied by graduates who trained overseas.¹ The usual length of stay in a surgical registrarship is between two and a half and three years, so every year roughly 130 United Kingdom graduates complete this part of their training in general surgery. Nevertheless, the annual number of senior registrarships falling vacant is 38-40.

In surgery this situation is indefensible because nearly all registrars who stay for three years in a general surgical post acquire their Final Fellowship during that time. These are men committed to surgery, with a higher surgical qualification and a variable (but often considerable) volume of clinical and operative experience. The 70% of them who fail to obtain a senior registrarship cannot be expected to go into general practice, because the only special skill they have is unusable there—in contrast to those who have specialized in medical subjects. These are the men who, not surprisingly, have been emigrating because they wish to exercise their skill in a place where it is wanted, appreciated, and suitably rewarded. The corollary of this is clear—earlier selection of potential consultants and fewer registrarships for United Kingdom graduates. This has rarely been recognized, and it is most welcome that in the Todd report this weakness in present training schemes is made clear and a radical solution proposed.

Towards the end of the preregistration year every graduate would receive some career guidance—presumably from a panel set up for the purpose. Those with clearly defined plans to specialize would probably be able to go forward, while others whose surgical aspirations seemed less certain might be advised to think carefully before entering so competitive a field. This type of advice would help in keeping numbers of young trainees somewhat lower than at present. The report, however, quite rightly goes on to say, "we have no doubt that some of the more popular specialties will be over-subscribed: there will be need for some systematic selection, on a national basis, for training in these specialties. This selection should be made as early as possible, and certainly no later than the end of the first year of general professional training, so that those most suitable would proceed . . . and others could change, without great difficulty and waste of effort, to training for a more appropriate specialty."²

Difficulties of Selection

Selection at this stage would be extremely difficult. Judgements would have to be based on reports from those who had seen the applicant at work in the preregistration year and during some six to nine months as a senior house-officer. Some certainly stand out at this stage, but the difficulties of attempting to equate, at national level, reports from 200 to 300 referees are not hard to imagine, with a real danger of some injustice being done. There would need to be a method for those initially turned down but persistent enough to go on trying to enter surgery, and also for able graduates who make a late decision to train in surgery.

* Abridged version of the entry which shared the first prize in the 1968 King Edward Fund Essay Competition.

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The discouragement to reducing the number of registrars is the knowledge that they currently perform a great deal of the surgical work-load throughout the country. The Platt report recognized this need for workers, and, perhaps because much of this work is of a relatively minor kind among the ruptures, varicose veins, and haemorrhoids of the community, the Platt committee felt that this was suitable work for registrars. Consequently the Platt report designated registrars as being in a "service" grade and so perpetuated a system of training which uses junior surgeons for three to five years and then finds no further use for most of them.

This attitude must go, but the work remains to be done. Who will do it? There are several interrelated topics here which must first be considered separately.

Arrangement of Surgical Services

One of the reasons for the large number of surgical registrars required at present is the way in which surgical services are provided.

In one hospital region in the north of England, for example, there are 28 acute hospitals providing surgical services: 17 of them are of 200 beds or fewer, and 10 of the 17 are within 20 miles (32 km.) of each other. Each one of these hospitals is likely to have one and perhaps two surgical registrars. A 24-hour emergency service will have to be provided, and so the registrars will have a heavy emergency-call responsibility. This means that they will be very much tied to the hospitals, and their chances of further training and attending courses and lectures are few, while the hospitals are small enough to make it quite difficult to have many clinical meetings with a fair exchange of opinion among members of staff.

Looked at in this way, the argument for establishing district general hospitals of 600 to 800 beds serving 100,000 to 150,000 people seems very strong.³ The opportunity to work in a hospital with several colleagues with similar interests, backed up by a full range of special departments and laboratories, would attract good consultant and junior staff. Comprehensive in-service education schemes could be worked out because there would be enough breadth of interest to share this time-consuming activity. Most important of all, patients would benefit by being treated in a high-quality hospital where there is good staff morale.

This difficult topic is understandably bound to raise cries from good small local hospitals and their patrons. But can every small hospital provide a top-quality service for 24 hours a day? This is highly questionable, and even if it does it is reasonable to ask whether it is not done at the expense of considerable overwork among medical staff.

Concentrating the services in good hospitals with a sufficiency of consultant staff would mean that registrars could be reduced to a number which could be properly educated and trained, all of whom would be able to rotate through the local teaching hospital for some part of their training. In this way the number of registrars would be reduced, while none would become forgotten men in small peripheral hospitals.

Such a suggestion demands a large and comprehensive development plan and can offer no short-term solution. It should not be laid aside because of this. The disparity in quality of treatment provided in the small hospital compared with that in the large hospital with specialists in all major subjects is already very clear. There are many excellent small hospitals, but advances in medical and surgical care have meant that the individual touch of the smaller unit no longer compensates for the absence of the expert and his skills when a patient suddenly requires mechanical ventilation, renal dialysis, or urgent specialized radiography to survive a surgical emergency. Again, paediatric skills are all too likely to be lacking, in spite of children's beds being provided. Paediatric surgical

emergencies can be very demanding, even for an experienced children's unit. The move to concentrate major surgery in fewer hospitals is surely soundly based.

Overseas Graduates

It must now be fairly well known that the 400 foreign graduates currently in surgical registrarships are performing a valuable service for the N.H.S., but that few of them receive a well-supervised training and fewer achieve the Fellowship. And yet the community of interest here is truly striking. Foreign graduates want a British training; the N.H.S. wants their skilled help. It is only a step to designate some jobs in the junior staffing structure as being specifically for overseas graduates. They would then join a co-ordinated rotation through district and teaching hospitals. It would be a grave mistake to designate particular jobs in particular hospitals as being specifically for overseas graduates—planned rotation through a co-ordinated teaching programme is the answer. Such a programme would clearly be much easier to administer among a few large district general hospitals, but it does not have to wait on this long-term development.

In this way alone can the N.H.S. honourably receive the help of overseas doctors and at the same time discharge the obligation which rests on this country to pass on its traditions and very high standards of medical and surgical practice.

Surgical Organization

At present the line of responsibility for patient care is perfectly clear. The consultant alone has personal and complete responsibility for the welfare of his patient. He delegates responsibility to his juniors in proportion to their ability, but they know that they must keep in touch with him whenever they are reaching the limit of their experience. Such reference back to the consultant involves no loss of face, even for quite a senior senior registrar, because it is expected that he will act responsibly in this way.

If, however, a subconsultant grade arises, many with specialist registration, this relationship is going to be considerably blurred. Any "specialist" will inevitably feel that he can stand on his own feet, though specialist registration will clearly be more easily won than the present consultancy in surgery. Specialists will expect to be left increasingly alone, and the present clear responsibility of the consultant will be diluted and he will have to wait to be called in. Another question is what type of work would the surgical subconsultant undertake? Would he work continually among the varicose veins and the hernias, with an occasional cholecystectomy to encourage him? Would he bear the major share of the emergency work, but be permanently beholden to his chief for what he undertook in elective surgery? It is hard to imagine any surgeon of ability accepting this situation.

The present standard of hospital specialist work has been built on the basis of competitive consultant selection. The resulting high general standard of surgical care throughout Britain is an achievement which cannot be lightly set aside, without our being for a moment blinded to the continuing need for improvement.

One of the areas in which improvement certainly should come is in emergency surgical services. These have been to an undue extent in the hands of junior staff who are, all too often, receiving only nominal consultant cover. Involvement of consultants in emergency work is urgently needed all over the country, though this will not easily happen while they continue to carry their present heavy day-to-day load. And yet emergency work, though essential for junior staff training, constantly throws up, often unexpectedly, situations in which really mature judgement and sometimes quite advanced tech-

nique is required. A junior may achieve a satisfactory result, but close liaison with a senior would often pay dividends.

One solution to these problems would be to agree that consultants should be promoted somewhat younger, say at about 34 years of age after a 10-year training, and in greater numbers. It would then be natural and by no means unacceptable for the younger of two consultants on a firm to take rather more emergency work and to expect as he became senior to be similarly treated. Registrars would certainly be fewer, but junior staff would be by no means lacking, because the three-year period of general professional training proposed for all graduates would mean that quite considerable additional numbers would be available in hospital work as the equivalent of senior house-officers.

Expansion of the consultant grade would probably make it necessary to train 45 to 50 senior general surgical registrars per year. This would mean expansion of the senior registrar ranks from between 150 and 160 to about 200 in England, Wales, and Scotland. There seems to be general agreement that this grade should be retained without modification. If a ratio of five registrars to every four senior registrars is assumed, to allow for some drop out due to change of plans and for some necessary competition, about 250 registrars would be needed instead of the present 400 United Kingdom graduates. The number of training posts for overseas graduates would also need calculation after the necessary consultation. This planned limitation of the number of registrars is probably the fairest way of limiting the number of entrants to surgery without resort to a national selection process as envisaged by the Royal Commission. If the number of posts is correctly calculated and all are held partly in teaching hospitals, so that all the posts are of roughly equal attraction, then the usual processes of interview are likely to select those best qualified to proceed to a surgical training. Those taken on will have a reasonable hope that if they work hard and show promise they will obtain a senior registrarship.

When these calculations have produced the total numbers which training programmes, not service needs, showed to be necessary, then the placement of these senior registrars and registrars in teaching and non-teaching hospitals would have to be decided. Rotation would take place mostly at registrar level, when families are young and household moves are a reasonable proposition. Rotation at senior registrar level should not involve more than one move during the four years. Registrars and senior registrars alike, whether of British or of foreign birth, would all have a spell in a teaching hospital.

Participation in the training scheme should be considered a mark of distinction for a hospital, tending to promote both maintenance and improvement of standards.

It is most welcome that the subcommittee of the Joint Consultants Committee (under the chairmanship of Mr. Walpole Lewin) has quite clearly stated that specialist trainees should be prepared for consultant posts and for nothing else.

General Practice and the Hospital

Can part-time practitioners help in hospital surgical work? This is not at first easy to visualize in general surgery, with its constant emergency and planned service load. Nevertheless, if practitioners are going to divide their time fairly equally between practice and hospital work, as in the Livingston scheme,⁴ there is a possibility of integrating them into general surgery. Someone who is keenly but not exclusively interested in surgery might well be happy, after three years of general professional training in surgery, to join a group practice as a principal with a list of about 1,500, deal with such minor surgery as he could at the health centre, and perform a carefully chosen list of operations once or twice a week at the local hospital. During the summer, when the practice work is relatively light, he might be prepared to spend more time in hospital to cover the holidays of full-time staff.

Finally, there would be much to be said for a trial of the ideas put forward in this essay in one area before general adoption. For this Scotland would appear to be ideally suited. The Health Service is under a separate and enterprising department, while teaching hospitals play a very important and active part in the working of the Health Service and often act as district general hospitals.

These ideas are practicable, though they call for much careful preliminary planning and negotiation. Most important of all, they protect and promote the interests of patients and at the same time offer good training prospects for young surgeons and good working conditions for all surgical staff.

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REFERENCES

- ¹ *British Medical Journal Supplement*, 1968, 3, 110, 119.
- ² Royal Commission on Medical Education, *Report 1965-8*, 1968, Cmnd. 3569, para. 86. London, H.M.S.O.
- ³ Ministry of Health, *Hospital Plan for England and Wales*, 1962, Cmnd. 1604, p. 6. London, H.M.S.O.
- ⁴ Duncan, A. H., *British Medical Journal*, 1969, 1, 632.

NEW APPLIANCES

Subcutaneous Colostomy Rod

Mr. J. W. S. RICKETT, surgical registrar, St. George's Hospital, London S.W.1, writes: The cumbersome glass rod and rubber tubing often used for temporarily retaining a loop colostomy presents a difficult problem when it comes to fitting a bag. The subcutaneous rod described here retains a loop colostomy in place, allowing a bag to be applied immediately. Faecal soiling of the laparotomy wound is prevented, and the patient is spared not only wound infection but also the skin reaction associated with an ill-fitting colostomy bag. The rod is not intended to act as a defunctioning colostomy, though experience has shown that it is not inferior to the glass type in this respect.

The rod is slightly curved in conformity with the contour of the abdominal wall. One end (see Diagram) incorporates an S-bend with a small eye through which a suture

Subcutaneous colostomy rods.

is placed to secure it to the skin. It is easily taken out after the suture has been removed.

The colostomy rod is best inserted at right angles to the colon, which it will support. It is important to place it immediately subcutaneously by fashioning an artificial tunnel by means of a pair of Spencer Wells forceps. The S-shaped end is brought out through a small skin incision well away from the wound. A suture through the eye retains it firmly in place. Infection of the track of the colostomy rod has not been a problem.

The rod is available in three sizes from Down Bros. and Mayer and Phelps, Mitcham, Surrey.