A SURGICAL TRAINING

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Introduction

IN the latter part of 1962 there was a considerable amount of discussion about the organisation and duration of training required by Military Surgeons and it is interesting to note that Civil Authorities are now equally interested in the scope and suitability of training offered to civil surgeons (1), (2). In view of this, I take the liberty of recording my recent experiences in the hope that they may provoke further interest in this important matter.

The scope of the Problem

There are now sufficient civil surgeons in Great Britain to ensure that each is to some degree a specialist within a certain field whether it be general surgery, orthopaedic, neurosurgery or one of the other branches and each surgeon rises through the ranks of Registrar and Senior Registrar before finally being appointed to consultant status, usually ten or more years after becoming fully registered.

His training will probably be divided more or less as follows:

1. One to two years in different House Officer or Senior House Officer posts, e.g. Casualty, General Surgery, Orthopaedic.
2. Two years as a General Surgical Registrar being given increasing responsibility for both acute and elective surgery.
3. Four years as a Senior Registrar with perhaps a year or more in some speciality or in research.

Thus his training will extend over at least eight years.

Now that the title of Consultant Surgeon is being conferred upon Military Surgeons with a status equivalent to that in civil life, it is a necessity that the training of Military Surgeons must be at least as thorough over a broader field as that of their civilian counterparts. The majority of Senior Officers in the Corps had the advantage of training and gaining experience during the last War when there was good supply of clinical material and a leavening of trained civilian specialists who were available to give advice and assistance when required.

Soon however, we shall celebrate the 20th anniversary of the end of the second World War and within a decade a new generation of Senior Officers will emerge who have known only conditions of relative peace. Before the older and experienced members of the Corps retire it seems prudent to ensure that their juniors will have been adequately trained to fill the posts that will become vacant.

Footnote

1. *Lancet* (1963) 2. 561.
2. *Lancet* (1963) 2. 1103.

The Training of a Military Surgeon

I speak now as a civilian and though I fully understand that both military and clinical skills are required I will speak only of the latter since it is apparent that I am not competent to consider the former.

The Military Surgeon spends the majority of his life treating able bodied men between 18 and 50 years of age and provides surgical treatment for such of their dependents as require his services. Apart from the good general health of his charges, there is the added disadvantage that the population at risk is small, the total strength of serving personnel and their dependents being no more than 700,000, even if one assumes that each serving officer and man is married with two children.

Despite this however, and despite the fact that much of the surgeon's time will be taken up in dealing with minor ills such as varicose veins, piles, hernias and torn cartilages, *he must be fully competent to deal with any surgical emergency of whatever severity and in whichever part of the body it should occur.* He must therefore be a competent general surgeon in every sense of the word, able, at will, to turn from general surgery to orthopaedic, thoracic surgery, neurosurgery or urology. Such a Herculean task may appear impossible. A little further consideration will show however that, given adequate previous experience, he can easily succeed. Though he will undoubtedly deal, in their entirety, with the majority of cases which comes his way, *he must above all save, preserve and if necessary maintain life* until his patient can receive any particular specialist treatment which is beyond his own unaided capabilities.

Since nearly all his patients in danger of their lives will be suffering from acute abdominal condition or will have sustained trauma to the abdomen or some other part of the body it follows that, above all else, the Military Surgeon requires:

1. A sound training in "general" surgery and,
2. A sound knowledge of traumatic surgery in its broadest sense.

In his role as general surgeon he will be required to undertake gastrectomy, bowel resection and perform as required splenectomy, nephrectomy, suprapubic cystotomy or colostomy.

As a traumatic surgeon he will be required to perform burrholes to drain an extradural haematoma, insert intercostal drains in cases of pneumothorax and haemothorax, perform an occasional thoracotomy and deal with any orthopaedic surgery in any part of the body. A knowledge of the detailed management of cases of multiple trauma increasingly seen today after motor accidents is also indispensable.

How then is he to gain such experience whilst still young? Not entirely in Military Hospitals in peace time as the number of cases seen is inadequate. It follows therefore that *a period of secondment to suitable civilian hospitals is required.* This idea being now accepted it only remains to decide upon the duration of secondment and the form which this should take and it is my purpose in this paper to record my own experiences and to put forward my own points of view on this matter.

The Training Required

Every surgeon requires both theoretical knowledge and practical experience. He will acquire the former whilst reading for the Fellowship but the latter, his experience, will be gained most readily by working in a busy general hospital under adequate supervision. Since experience of both "general" and traumatic surgery is required his career will need to be planned to include both. A person intending to be a surgeon will take the Primary F.R.C.S. whilst gaining experience in junior posts in general surgery, casualty, etc., with or without the help of a postal or full time course of study. This will take one or two years after which a further one or two years will pass before he is ready to sit the Final F.R.C.S. His chances of success in this examination are enormously increased if he is able to spend a six month period as a house surgeon or registrar at a reputable teaching hospital—of which the Hammersmith Hospital is probably the best example in this country.

Having attained this goal he still requires a wide experience of practical surgery before his training is complete. Much of this training is quite obviously available in the Army but, because of the rather special nature of his charges, the amount of major surgery available for him to do is limited, and therefore he will mature (in conditions of peace) more slowly than would be the case in civil life.

Perhaps I may illustrate this by my own experience. During two years of National Service I was successively:—

(a) O.C., 50. F.S.T. (British Cameroons) from November 1960—June 1961.

(b) O.C., Surgical Division, Tidworth Military Hospital, from July 1961—September, 1962.

having passed the F.R.C.S. before entering the Army. Though my U.K. posting was, admittedly, not to the busiest military hospital, this was to some extent counterbalanced by a wide experience of surgery on the civil population in the Cameroons.

In tables I, II, and III, I compare my two years military experience with civil experience gained in six months as orthopaedic S.H.O. before taking the F.R.C.S. and with my experience as a surgical registrar in the year after leaving the Army.

TABLE 1
Surgical Experience (No's. of cases)

Experience	*General Surgery*		*Orthopaedic Surgery*	
	Major	*Minor*	*Major*	*Minor*
Military	17	206	23	20
Civil	124	415	24	Unknown

TABLE 2
Detailed Analysis of Surgical Experience (No.'s of cases)

General Surgery

Operation	*Military*	*Civil*
Partial Gastrectomy	—	3
Vagotomy & Gastroenterostomy	2	5
Splenectomy	—	1
Amputation	1	10
Burrholes	1	—
Intestinal Obstruction	3	27
Colectomy	—	8
Perforated Peptic Ulcer	1	12
Cholecystectomy	—	2
Thyroidectomy	2	4
Abdomino Perineal Resection	—	11
Lumbar Sympathectomy	—	6
Mastectomy	—	13
Appendicectomy	40	150
Hernia	72	135
Varicose Veins	60	58
Haemorrhoidectomy	8	43
Sundry	33	51

TABLE 3
Detailed Analysis of Surgical Experience (No's. of cases)

Orthopaedic Surgery

Operation	*Military*	*Civil*
Putti-Platt	2	—
Open Fractures	7	5
Nail Plating	—	18
Menisectomy	13	—
Patellectomy	1	1
*Others	20	Unknown

*Includes tendon suture, skin grafts etc. but excludes manipulation of fractures.

Few people would dispute that one requires to carry out any procedure ten or more times before becoming truly competent and I would draw your attention to the fact that even after one year in civil life I have still not performed ten gastrectomies, splenectomies, thyroidectomies or colectomies and, as yet have done no urology. It seems therefore that at least a further year must pass before my general surgical training can be considered to be acceptable. In addition to this general training I suggest that a further year could well be devoted to orthopaedics and the surgery of major trauma.

Suggested Training Scheme

Consideration of the training requirements together with my personal experience suggests that two different approaches to the problem are possible. Either the Army can train its own surgeons from the ranks of those accepting Medical Cadetships and Pre-Registration Commissions or partly trained surgeons who already possess the Fellowship can be recruited, filling the gaps in their training as required, by secondment to civilian hospitals for up to one year.

If suitably qualified and interested serving officers are chosen, the following training period would be suitable:

1. One year in clinical posts in military hospitals approved by the Royal College of Surgeons for the Fellowship followed by
2. Six months leave with pay and allowances to take a course in Basic Sciences, the fee for this course being payable out of the officer's own pocket and thus stimulating him to maximum effort. The Primary F.R.C.S. could be taken at this stage. Successful candidates could then receive:
3. A further year's clinical training in approved posts in military hospitals followed by
4. Six months secondment on full pay and allowances to a post as house surgeon at e.g. Hammersmith Hospital. The Final F.R.C.S. should be taken at this stage.
5. After further military service the surgeon could then be seconded to civilian hospitals for a minimum period of eighteen months general surgery and six months traumatic surgery to complete his training, perferably being sent to a busy hospital if possible associated with a teaching group to gain maximum experience under the best supervision.

Such a scheme, the minimum acceptable for consultant training, would result in the Army being denied the services of each surgeon for three years in all.

If, on the other hand, partly trained surgeons, possessing the Fellowship, are recruited, not more than one year's secondment would be required thus saving the service at least £4,000 for each surgeon. This method would also preclude any possibility of "wastage" during training and would bring into the Army people whose opinions would represent a cross section of current surgical practice and thus ensure surgical progress on the broadest possible lines.

Summary

The training requirements of military surgeons in peacetime are discussed and in the light of personal experience both in the Army and in civil life, training schemes are outlined which will result in a supply of suitable candidates to fill consultant posts in military Surgery as and when these become vacant. It is suggested that it is more economical and professionally advantageous to recruit partly trained surgeons from civil life than to train recently qualified officers.

Editor's Note

This is the actual policy in practice at present almost word for word, but due to force of circumstances and military necessity it is not always possible to adhere strictly to it.

Acknowledgment

I should like to express my indebtedness to the many senior officers of the Corps with whom I have come in contact and whose opinions have helped me to formulate my own views.