THE PART OF THE CONSULTING SURGEON IN WAR.

BEING THE CAVENDISH LECTURE DELIVERED BEFORE THE
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BY

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In making choice of a subject on which to deliver a short address my mind has naturally turned to the work which has, for the most part, engrossed my own attention during the past five years, and I must crave your forbearance if you should consider my remarks to be devoted to a matter rather administrative than scientific in character. None the less, I believe my subject to be one of prime importance to the future of both civil and military surgery, and it deals with a matter in which the lessons to be derived from the experience of the South African war seem to have been allowed to be lost sight of.

In turning to the practical lessons to be deduced from the recent great war the subject is so vast that it becomes necessary to limit a brief address to one single element of the work which has been performed, and I propose to claim your attention to the position of a consulting surgeon employed with the army. Yet even here a limitation must be drawn, for in this world-wide war the experiences of a consulting surgeon must to some extent have varied with the conditions under which he served and the country in which he was situated. Hence the remarks I shall make are founded principally upon the part of the campaign conducted in France and Flanders.

I may premise that I make no claim to originality of conception; my remarks are based rather on observation of a system which has gradually been evolved in practice.

As far as I am aware, consulting surgeons as such were first appointed in the South African war. They were placed in a position of great dignity and freedom, but were accorded no actual military rank in the regular service, although assigned the privileges of a Lieutenant-General and treated with great monetary liberality. Experience of the utility of the presence of consulting surgeons with the army was attained in that war, but when at a later date the Royal Army Medical Corps was reorganized, no definite rules and duties were laid down for them, and when the first consultants left to join the army in France in September, 1914, no more clearly defined duties had been assigned to them than before.

One primary step of importance was however made, in according temporary commissions with a rank only inferior to that of the Director of Medical Services, and the pay and allowances of a colonel in the Royal Army Medical Corps, and this principle was maintained, by promoting the seniors of the consultants to the rank of Surgeon-General when this rank was granted to the Ds.M.S. of the separate armies. The consultants therefore arrived in France with a suitable rank, with no fully defined duties, but considerable freedom of action.

I will summarize shortly the duties of the consulting surgeon as they were subsequently evolved.

1. Consultation with the Medical Director-General or the Director of Medical Services of the army to which he was attached, on all matters concerned with the surgical treatment of patients.

Although the consultant possesses no administrative position, there are numerous matters in the administration of the medical service in which he can take part with advantage. Thus he necessarily takes a prime interest in the question of location, construction, and the equipment of hospitals. In the late war the consulting surgeons were frequently called upon for advice regarding the arrangement and equipment of all the special departments of the hospitals, such as operating theatres, x-ray rooms, wards specially devoted to the treatment of fractures, etc.; and throughout the war a steady stand was made for the provision of huts or buildings in place of the marquees which proved so unsuited to the climate of the country and the form of warfare in which we were engaged.

The numerous demands made upon the administration

for splints and apparatus, and the many varieties introduced as a result of the ingenuity of individual surgeons; the extended employment of x-ray outfits; the requisitions for surgical instruments altogether beyond the limits of those that had been considered sufficient to meet the requirements of military surgery; and the many devices originated for the general treatment of patients suffering from shock, the results of haemorrhage, or the acute infections, are only some of the many subjects which were fruitfully discussed between the consultants and the senior administrative officers.

2. The nomination of medical officers to fill special surgical posts.

The consulting surgeon possesses a more accurate knowledge upon which to base a judgement of the value of the records of men who have held civil appointments, and the nature of the work these appointments have involved; he has a far better opportunity of directly gauging the technical ability of the younger men, because he is constantly seeing them at work in the hospitals; and from the nature of his relations with the men he is often in a position to judge better than any one else of their fitness to occupy successfully any particular post.

A still more troublesome problem than the selection of individual surgeons is found in the maintenance of the efficiency of the units. The exigencies of military service and the casualties which occur amongst medical officers, often require that surgeons shall be suddenly transferred from one part of the line to another. Thus the efficiency of any particular unit may be imperilled; for officers fully familiar with their duties, with a knowledge of how far they can rely upon each other, and whose capabilities have been gauged by the officer in command are suddenly separated. The Director-General in France made an effort to reduce this difficulty by laying down a rule that the three senior surgical officers should not be transferred without the acquiescence of the consultant of the area. This to some extent met the difficulty, although hardly to the entire satisfaction of the consultant, for the consultant is naturally as anxious and jealous regarding the character of the work within his area as is the officer in command of the efficiency of his unit.

It is especially in these directions that the consulting surgeon comes into contact with the administrator, and it may be asked how their official relation should be defined. I consider the answer to be that these should be of mutual confidence and friendship. No sort of rivalry can be supposed to arise between these two sets of officers; their work and the sources of credit for it are both absolutely distinct, while a whole-hearted co-operation between them is the surest element in ensuring efficiency and success, as well as promoting the best interests of the patients. The example set by the Director-General of the Medical Services in France had a most happy influence in this respect, and the cases were few and far apart where jealousy or mistrust jeopardized the efficiency of the system.

In connexion with this subject the value of the meetings of the Director General, or of the Directors of Medical Services, as the case may be, with the consultants as a body, for the discussion of matters in which administrative detail bear closely on medical treatment or vice versa, and for the consideration of large questions affecting the general treatment of the patients, cannot be over-estimated.

3. Co-ordination of the surgical work.

In this direction great scope is afforded to the consultant. He visits numerous units and has some acquaintance with the methods adopted and the immediate results achieved at every stage upon the lines of communication, and he may do much to regularize and bring into conformity the work being carried on throughout the entire army. This is a most responsible duty, for on the one hand he must be careful not to obstruct advance, while on the other he must encourage the pioneer and yet strive to avoid unnecessary alterations of initial treatment to conform with the ideas, either advanced or retrograde, held by the medical officers under whose charge the patients may successively be placed.

On many subjects involving great principles, such as those of the treatment of wounds and the common infections, there can be no doubt of the influence for good

which the consultant can exercise. In special directions, also, he is in a position to encourage individual medical officers to devote their chief attention to any one class of case, or to any one form of treatment undergoing trial, and also ensure that a proper supply of material is assigned to him.

A word should perhaps be added on the delicate question to the nature of the advice to be proffered by the consultant to the individual medical officer. It is obvious that this must correspond with the capacity and experience of the medical officer concerned, and the conditions under which he is for the time working. In the main it should be such as the average surgeon is fully competent to profit by, and the ideal must be reserved in many cases for the man with a highly developed technique, and either special or long-standing experience behind him. In not a few cases mild measures or expectancy may be the safer course and more suitable, than one which would seem to hold out the promise of a more brilliant and rapid result.

4. *The diffusion of recent knowledge.*

Beyond drawing upon his own ability and experience, the consultant can bring under the notice of the medical officers of the large area recent discoveries and advances. This area may be more or less isolated in situation, but even within its own limits free intercourse between the different units may not be what is to be desired, and it may be found that a spirit of aloofness, similar to that which may separate two neighbouring hospitals and schools in a large city, or between the work of distant centres, exists. The desirability of diffusion may relate to general principles and broad lines of thought, but is especially marked in the application of small technical details. It is obvious that in this part of his duties the consultant must be careful not to establish a dead level, and thus interfere with the great advantage to be gained from the exercise of individuality on the part of the medical officers concerned.

The opportunity of diffusing knowledge is not, however, confined to the information which may be casually passed on during the daily round. The medical meeting affords another opening which the consultant cannot too sedulously make use of. To seniors and juniors alike these meetings and discussions are of the greatest value, and during the war many of the discussions recalled the time when the society meeting took the part in chronicling advance in medicine which has unhappily been largely transferred of late years to the custom of publication without the opportunity for free discussion of the questions dealt with.

On some occasions during the war a virgin subject came under consideration, and during my whole professional life I have never attended a meeting of such interest as that devoted to the subject of "poison gas," at which the results of the use of "drift" chlorine gas was first discussed. Each speaker dealt with a theme absolutely novel to his experience, and from direct personal observation alone, and for once a subject was available in which the possibility of tracing the course of cases from the beginning to their termination was present.

Opportunities also arise for the consultant to exercise still more directly his powers as a teacher. The exigencies of warfare necessitate the inclusion in the staff of any definite unit a number of young officers who have but recently entered the service, quite unfamiliar with the class of work they may have to undertake or of the conditions under which it may have to be performed. Under ordinary circumstances these new-comers could only gain the necessary experience by observation of the work of the officers with whom they were associated at a time of storm and stress particularly unsuitable for the impartation of individual instruction.

To meet this difficulty the Directors of Medical Services of the Armies set up schools of instruction, in which during periods of comparative quiet every officer was able to acquire familiarity with the methods employed. In connexion with these schools many of the consultants rendered valuable aid by delivering lectures, initiating discussions, and giving practical demonstrations.

At a later date similar schools were organized at the penultimate base, and the experience gained showed how valuable they would have been had it been possible to provide them at an earlier date, an ideal which the

continuous shortage of medical officers had rendered impracticable.

5. *The initiation and co-ordination of research.*

From the purely clinical aspect the consultant has unusual opportunities of initiating or introducing methods of treatment, and exceptional advantages for observation of the results of their application, because it is within his power to arrange that a large number of cases should be placed under the charge of the same medical officer, and thus form an opinion as to how far any method is one only suited to employment by men of peculiar technical ability, or unsuitable except under ideal conditions.

In the late war, however, the consultant has been under far more favourable conditions than even these, since by the wisdom and foresight of those responsible for the working of the Medical Services, a number of workers in the different branches of pure science were also called in to take their part in the great task. Thus the consultant was in the happy position of possessing colleagues ready and anxious to do their best to solve any problem which might arise. These latter, moreover, were in unusually close relation with both medical officers and patients, and the association forms one of the most striking features of the campaign, and is responsible for a great part of such material advance as has been made.

Allocation of Consultants.

I may now turn to some matters more closely connected with the actual performance of the individual consultant's duties.

The first question which arises is, as to where he may most conveniently be located. Two methods of allocation are possible: in the one the consultants work upon concentric lines, one section being attached to the forward units; the other being attached to the hospitals on the lines of communication.

When the duties which have been briefly outlined are considered, the enormous importance of the consultant's function as a "liaison officer" becomes at once apparent, and for this part of the work no doubt can exist that the "radial system" possesses manifest advantage, and it may be added that by "the base" the general hospitals situated at the Channel ports in a war such as we are dealing with should not be meant, but the actual base hospitals in England. Only by acquainting himself with the work being carried on throughout the whole line can he become fully informed and thus render the service to his fellows that is expected from him.

In the recent war the radial system was not adopted in the British army, although it was by the French. The British consultants worked upon the concentric system, one section being confined in their duties to the forward units, the other to the units on the lines of communication. Thus a risk was incurred that no members of the service could become thoroughly conversant with the whole course taken by the cases. The disadvantages of the system were to some extent discounted in two ways: the consultants located with the hospitals at the Channel ports being allowed to make occasional visits to the front units, and in some cases consultants who had served at the general hospitals were afterwards transferred to duty with the armies. One great advantage did, however, obtain to the system, in that the consultant became personally acquainted with all the medical officers within his area, had unusual opportunities of close relationship and gaining the confidence of the administrative officers, and could secure permanent quarters.

Allowing that either system possesses advantages of its own, the difficulty might be satisfactorily met by adopting a slight variation in the method followed in the British army.

After the initial period of the war the two senior of the consulting surgeons were allotted a somewhat different position to the others, liaison duty being the chief feature of their work. If in place of retaining the concentric system these two officers had worked radially, each over a definite area, a more satisfactory result might have been attained, for it must be borne in mind that the information furnished by the liaison officer is not only as to results in general, but also as to those seen in any particular set of wounded men, and as they may be influenced by any special conditions of weather, difficulty of transport, etc.

On a far smaller scale in South Africa I had personal experience of the working of the radial system, and I am convinced that it is the superior if one system alone is to be relied upon; I also concluded from observation of the work of the French consultants that the system is the better of the two.

During the fighting of the Kimberley Relief Force I was with the field hospitals, witnessed and took part in the early treatment of all the wounded men brought in, saw and examined the whole of the patients who were passed down the line in the ambulance trains to Cape Town, and later went down to Cape Town myself, and was able to see the same patients and personally inform the medical officers under whose charge they had come of the earlier history of them all.

It may be said that this was an experience in a very limited field of action, but in the recent war I was in like manner impressed with the fact that the French consultants were able to follow batches of patients down the line, and personally observe the further course of individual patients.

Practical experience appears to demonstrate that a combination of the two systems may retain the advantages of both, the duties of one class of consultant approximating itself to that of a line of communication officer, while the duties of the other would be confined to the definite area or army assigned to them.

How far should the consultant be looked to for the actual performance of operations?

It is obvious that the consultant should be prepared to operate whenever this may be required; in some instances it may be advisable either on account of the importance of the particular patient, in others as a part of his duty in the regulation of the methods to be employed. On the other hand, if he makes a routine practice of operating freely, so much of his time is taken up that his more important duties may be restricted or interfered with.

Personally I found this to be the case in the early part of the war; it was easy to spend the whole day operating in a single unit, and find no time to visit the remainder.

A considerable difference in this respect exists between the duties to be performed by consultants working on the radial and concentric lines, should this distinction be adopted. The former would be principally concerned in the co-ordination of methods and equipment, and in the diffusion of information. The latter, working in a definite area, would no doubt feel that operative work formed a more important part of their function.

During the great war immense advantage was gained by the presence at an early stage of highly skilled surgeons with the army, capable of initiating new methods and variations of technical detail, and the service was fortunate in acquiring men specially competent in certain departments of surgery, such as those of the head, chest, abdomen, genito-urinary system, etc.

What part should the consultant take in the literary work produced?

This is a question of some difficulty. On the one hand we have a body of men peculiarly well fitted to undertake such work, while on the other the consultant holds a position of much delicacy because he is constantly engaged in watching a large number of the active younger men who are bearing the whole brunt of the work of the campaign; he becomes their confidant in the numerous daily consultations which take place, becomes thoroughly acquainted with their views and ideas, and consequently incurs considerable risk of being thought to make use of this experience for his own benefit.

Hence the consultant probably follows the best course in confining his output to some definite subject or subjects, and in the main to concentrate his efforts on exciting others to place their experience on record. In the recent war the consulting surgeons usually followed this course, with a consequent production of a number of valuable contributions to military surgery, and the only comprehensive work that was published was the result of a combined effort by the whole body.

This, the *Manual of Injuries and Diseases in War*, was drawn up by a method which attempted to reproduce the general trend of thought of surgeons working in France. A sketch outline was drawn up by one writer and sub-

mitted to every other member for emendation, addition, or excision, and the final result was then considered by the whole body sitting in committee. In this way a small manual was produced which, if unambitious and not exhaustive in scope, yet reflected general opinion on the subjects dealt with, and proved of definite use to the officers of the service.

A comprehensive military surgery from a single pen prepared in the light of recent experience, embodying the advances that have been made and their relation to older views and methods, is much to be desired; meanwhile, individual consultants are making themselves responsible for various chapters in the medical history of the war, in course of preparation under the auspices of the Medical Research Committee.

Mode of Choice of Consultants.

It is obvious that at the outbreak of any future war certain individuals will have been already earmarked to undertake these duties, but during the progress of any long-drawn-out campaign the number will have to be increased, and changes in the personnel will be necessary.

The majority of the consultants will probably always need to be recruited from the ranks of the civil profession, but there is every reason to encourage officers of the regular service to qualify for these posts. The possibility of holding them offers a great inducement to officers of the regular service to continue to give their main attention to strictly medical work; and, if suitable rearrangement be made, an escape would be possible from the unsatisfactory conditions under which administrative work offers the only road to the highest positions in the service.

With regard to the choice of consultants during the continuance of a campaign, in the recent war the promotion of junior officers who had gained their experience by practical work in the military hospitals proved a great success, and this mode of choice is not only an inducement to capable men to undertake the duty of surgical specialist, but has obvious advantages over the introduction of men who have had experience of civil work alone, however good their professional status.

In making use of this second method of selection, however, the value of the presence with the army of consultants connected with the hospitals and medical schools at home must not be lost sight of. It is to men emanating from this source that the profession must look for the introduction into military surgery of recent improvements in civil work, and again for the introduction into the surgery of civil life of the experience gained as a result of work in the field. Putting purely scientific questions on one side, the acquaintance of the civilian with the many problems of military administration and the manner in which they may be solved will doubtless prove of great advantage in the future. The necessity for thought and prompt action in the provision of the requirements for the performance of successful work under difficulties, and the experience that these necessities will not be forthcoming unless the surgeon bestirs himself to ensure their presence, form a lesson which the civil surgeon accustomed to expect everything found for him almost automatically has surely taken to heart.

What part may the consultant play in strengthening the bond established by participation in a common science between the nations of the world?

Can it be said that science forms a bond between men of different nations strong enough to withstand the forces set free by the outbreak of a war between them? Recent experience has gone far to falsify the utterances with which international congresses have made us familiar. Not only do societies and corporations disclaim connexion with those of enemy states, but individuals also combine in taking similar action.

Yet the bond had seemed a reality, fostered and strengthened by mutual work in foreign schools and laboratories, international meetings held with both scientific and social aims, the diffusion of abstracts of work done in other countries, and perhaps the most important of all, the incorporation in scientific publication of the results obtained by workers in all countries, which have, for instance, made the name of Lister and of Virchow as familiar to the surgeons of each country as if its bearer had belonged to either.

Unfortunately the fact that the great war has found the men of literature and of science amongst the most active and polemical writers on either side, goes to show that the highest grade of mental cultivation has little influence on the elemental characters of man's nature. Thus while the Central Powers have gone so far as to strive to prevent their medical literature reaching their enemies' hands, the conditions of war have furthered a most intimate association between the medical services of the armies allied in the same cause. Not only has a brotherly alliance existed, unbroken throughout by any national jealousy, but the same lines of thought and the same tide of action and reaction in practice has been observable in all. The reports of the Inter-Allied Conference on the Treatment of Wounds furnish an excellent illustration of these facts.

Amongst the surgeons of the allied nations an increased spirit of fraternity and intimate co-operation has certainly flourished. Just as the armies of the different states have placed their resources of every kind at the disposal of each other, so the workers in medical science have pooled their knowledge and growing experience, and readily received and adopted variations or advances from whatever source they might emanate.

Those who were privileged to take part in the recent campaign will at once recognize that although omissions have no doubt been made in sketching this outline of the duties of the consulting surgeon, yet it embodies in the main what has been the practice in the British army, and a system which has been appreciated and even imitated in the armies of our allies. Still, as far as I am aware, the system remains founded upon usage during the war; it has resulted from a process of development in successive steps, and it is no doubt capable of further regularization and organization.

Conclusion.

The authoritative pronouncement of Sir Alfred Keogh in the *British Journal of Surgery* (vol. iv, No. 13, pp. 3-4, 1916) affords sufficient grounds to absolve me of any intention of wishing to magnify the office of the consultant, either at the expense of the regular service or of the splendid body of men for whom the nation was in the main part indebted for the hard work of the campaign. It should be realized, however, that the position assigned to the consultant with the army corresponds in dignity and importance with that of the professor in a Medical Faculty, and his power of influencing the whole character of the work is equally great. We cannot doubt that the experience gained will be utilized by clearly defining what the status and duties of the consultant will be in the future, but I would submit that these should be laid down while the facts that should decide them are still fresh in the minds of the powers that govern the Army Medical Service.

It is much to be desired that the principle introduced in 1903 of inviting civil consultants to form a part of the staff of the military hospital at Millbank should undergo further development, and be but a step towards the permanent association of civil practitioners with the work of the military hospitals throughout the service. Thus a connexion between the two branches of the profession in times of peace would be established which could not fail to simplify and render more efficient the change which must follow mobilization in the case of any war of magnitude.

These remarks upon the duties of the consulting surgeon cannot be closed without allusion, however brief, to the charms and pleasures of the position. For the first time in his professional career he attains an opportunity of practising surgery for the sake of surgery alone, a position which many a man with the responsibilities of the civil practitioner has longed for as the impracticable ideal. A routine occupation is suddenly transformed into a free and varied existence, with periods of strenuous work, it is true, but also others in which abundant opportunity is found to ponder over the many interesting problems which arise, and, moreover, a wealth of material which allows the acquisition of a practical experience which many years of civil practice would not suffice to acquire.

Lastly, the favourable conditions which are afforded of cultivating a close relationship with colleagues. Happy as the association of the consultant may be with those with whom he works in civil life, they cannot approach the free intercourse of mind with mind which obtains in

life in the field. Freedom of discussion, the constant sharpening of wits in encounters with young and ardent workers eager to assume the position of the pioneer, the social life and the charm of entering on equal terms a society such as brings back memories of youthful days, are but some of the pleasures only to be fully appreciated by those who have enjoyed the privilege of experiencing them.

No less happy are the somewhat novel relations which establish themselves between the consultants, and between the consultants and the officers of the regular service, which it is to be hoped form a presage of the future, a continuing co-partnership founded upon a common aim and mutual appreciation.

THE OPERATIVE TREATMENT OF SIMPLE ENLARGEMENTS AND TUMOURS OF THE THYROID GLAND.

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In this paper it is intended to consider the surgical treatment of certain simple enlargements of the thyroid gland by a review of fifty cases. Under the heading of simple enlargement the following types of case are included: (a) Colloid goitre, (b) diffuse adenoma; (c) encapsuled adenoma and cysts; (d) inflammatory conditions. Malignant disease and exophthalmic goitre are excluded from the cases under review.

A. COLLOID GOITRE.

This term is used in preference to parenchymatous goitre since histologically the most marked change is increase of colloid with distension of the vesicles. Clinically in early cases the gland shows a diffuse enlargement which is usually symmetrical; the surface of the gland is smooth, and the consistency is soft. In old-standing cases the surface is nodular, and the gland, as a result of fibrosis, is firmer in consistency; differentiation, both clinically and microscopically, from diffuse adenoma may be a matter of considerable difficulty; for this reason only the early "soft" cases are considered under this heading, the more advanced cases being grouped with the diffuse adenomata. A very large proportion of the early cases, where no fibrosis has occurred, are amenable to medical treatment; my usual plan is to give iodine internally, in the form of pil. iodoformi gr. $\frac{1}{2}$ t.d.s.; in many cases regulation of the bowels by means of liquid paraffin is essential, and intestinal antiseptics are often of value. Operation is rarely necessary, and should only be performed for definite symptoms or severe deformity. The symptoms most commonly complained of are due to pressure on or dislocation of the trachea, a condition which is most likely to obtain if the goitre is asymmetrical or partly intrathoracic. Occasionally dysphagia may be a prominent symptom; in one particular case a tongue of thyroid tissue was found passing between the trachea and oesophagus on the right side; removal of the right lobe gave complete relief.

Operations for cosmetic reasons require careful consideration and should only be performed if the deformity is severe and after a prolonged course of medical treatment; in this series I have performed an extirpation for this reason on three occasions only (one male and two female cases). In each case the patient was a servant and could not obtain employment owing to the disfigurement. In two cases the complete thyroid was extirpated with the exception of a small stump at each lower pole; in the third case the left lobe alone was removed as it was more than twice the size of the right lobe.

GROUP A.—Colloid Goitre.

Total operations (males 2, females 5) ...	7
Complete extirpation ...	4
Hemithyroidectomy ...	3
For dyspnoea ...	3
For dysphagia ...	1
For disfigurement ...	3
Average age 18; oldest 27, youngest 14.	
Mortality nil.	