An Address ON THE APPLICATION OF THE PROFESSIONAL LESSONS OF THE WAR TO CIVIL WORK.*

BY

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THE subject of my discourse is one with very many sides to it, and can be appreciated fully probably only by those who saw service under the most varying conditions during the late war. I have no doubt that many of you have interested yourselves already in some of the things of which I shall speak. I crave the forbearance of specialists in medical politics, but at the same time I hope that I may be able to interest every one in some measure. In an educational centre like Dundee the results of teaching, especially such as were revealed under the stress and stimulus of war, when the minds of men were strung to a high pitch, must always be of surpassing interest. It is really the study of these results and a desire to help in improvement which has led to this address. That there is room for improvement in medical education and in facilities for work in civil life was, I am sure, appreciated by us all when we were face to face with the difficulties of war work. I am equally sure that we were not troubled with the big aspects of things so much as by the working out and application of details, without which big things were impossible. The well trained man pays attention to details. It is only the exceptionally capable man who in later life can surmount shortcomings of education and compete successfully with his better trained fellows. Judging from my experience in the war, I claim this power for the average medical graduate of Scotland, and on that account I venture to refer to the disadvantages of his present-day education in a somewhat forcible way. In saying that, with a better education, his prowess in the arenas of the world would be far more striking, I acknowledge again that I belong to the ultimate division in the Sassenach classification of those north of the Tweed—the Scotsman, the damned Scotsman, and the Aberdonian!

From the outset I wish you to keep in mind the fact that the problems of treatment, both preventive and curative, are virtually the same for the civilian at home as for the soldier in the field, and differ only in the urgency of appeal to our sentiments and to our best efforts. The honest civilian worker, whether of high or of low degree, should be regarded as doing equal service for his country under the conditions of peace as the soldier in war, although the latter, in the strenuous and dangerous conditions of the battlefield, appeals to our emotions in greater degree. The civilian worker is a combatant in the nation's fight for existence, and as such is valuable to the nation in proportion to his activities, and deserves as great consideration as the soldier when he is disabled. Sentiment has not, unfortunately, hitherto stirred the nation to proportionate effort on his behalf.

Civilian Need in Peace,

It has required the stimulus of a ghastly war to produce unprecedented efforts on behalf of the disabled soldier. It is to be hoped that equally strenuous efforts on behalf of the civilian will be forthcoming, but meantime it is regrettable that apparently, as soon as the war is over, the nation should again become apathetic. Instead of there being a general clamour for the very best possible treatment for the civilian worker, and for the provision of the best possible conditions and other facilities for that treatment, voices are being raised only here and there, officially or unofficially, in an attempt to maintain in civil life the high standard which was striven for and achieved by many during the war.

Of course there are great Government schemes in the making which aim at the organization of the medical service of the country, but these were being promulgated

before the war, and one cannot judge of them until they have been tried. My remarks apply especially to the everyday work of the medical man, be he general practitioner or specialist; but you will, I am sure, appreciate the necessity for having adequate organization to regulate such work, although, like myself, you may not be convinced that a State medical service will be altogether a good thing for the patient. Service controlled by "red tape" has its disadvantages as well as its advantages.

Improvements in Military Medical Work in France.

I have said that the stimulus of a ghastly war produced unprecedented efforts on behalf of the wounded soldier, but we cannot blind ourselves to the fact that these efforts fell considerably short of the ideal. In my position as a consultant surgeon in France I could well appreciate the difficulties which stood in the way there of attainment of the ideal, but the influences which led to the vast improvement in the treatment of the sick and wounded soldiers were also apparent, and some of them may be gleaned from the remarks I am about to make. I cannot speak too highly of many individual as well as concerted efforts which resulted in immense improvement in overcoming, and still more in preventing, the terrible sepsis which at first thwarted the efforts of men who had been trained practically entirely under conditions which gave them no experience of the ravages which such sepsis could produce in an incredibly short time. It was not to be wondered at that, at first, adverse criticism of the surgical work in France should be expressed, but I assert, in reply to such criticism, that the critics could not possibly grasp in their minds either what had to be tackled or the conditions under which the work had to be done. The work in these early days was most discouraging in its results, the conditions under which it was carried on were often most unfavourable, and the numbers of wounded were frequently so overwhelming as to fill the stoutest hearts with despair. The wonder to me is, on looking back, not that so many severely wounded men arrived on this side of the Channel in a precarious, septic state, but that so many arrived alive.

In reverting to the thesis that the civilian worker should be regarded as a combatant for the nation's welfare, I may be excused if I soliloquize a little on present-day conditions. War is, after all, but a hideous expression of antagonism of communities which has become so concentrated that it gets beyond control. In peace times controlled antagonism is called competition. This when under reasonable and equitable control is good and makes for advance, but when unreasonable and inequitable it really results in war; although of a less obtrusive and apparently milder type, yet, in its less direct and less apparent way, it may have equally disastrous results to the individual or section of the community which goes under. The late world war has been followed by intense resentment on the part of many workers who were in the past unjustly treated—it has driven many patriotic employers to recognize the justice of the claims put forward and to try to meet them. There has arisen a clamour for a reconstruction of relationships which has been, on the one hand, too hastily and too forcibly and unreasonably expressed to enable the balance to be preserved, and has resulted in a chaos which threatens the commercial prosperity and the health of the nation to an incalculable extent. It is a big thing to say, although it is easy to say it, but I believe that the present state of affairs is due to a want of education, and therefore of fulfilment, on the part of employers as well as of employees, of their responsibilities to each other, whether as private individuals or as members of the greatest nation and empire of the world. The application of the remedy is a difficult matter.

Although the members of the medical profession as a whole can, in virtue of their calling, claim in the past to have been probably more altruistic than any other class of workers—except, possibly, that of the allied very noble nursing profession—and although we may have constantly striven for better knowledge of disease, and for its more adequate treatment, yet the war has taught us many lessons which ought to be turned to great advantage to the sick and suffering. In putting my opinions before you I am deeply sensible that they may not agree with those of other men and women whose experience and judgement command attention.

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The rank and file of the medical profession are those splendid general practitioners who do the spade work and the hard fighting, and who count for most, after all, in the medical world, just as the equally splendid infantry soldiers of the line regiments were the men who, after all, counted most in the great war against the Boche and his dupes. But I do not think that the majority of our rank and file are paying enough attention to the application in their daily work of these important lessons which, when properly learned and applied, will help professional work to be better done, more easily done, done with greater satisfaction and happiness to ourselves, and consequently with greater benefit to the patients whom we attend. I mention general practitioners especially, as they form the backbone of the profession, and there must be a sound, efficient, active, well co-ordinated backbone in order that the body may make progress. That is why I think in medical schools like Dundee and Aberdeen, whose function it is especially to produce general practitioners, great care should be taken that those in charge of the training of students be not overtaxed, as I venture to think is occurring just now because of the too large number of students.

It is impossible, under the conditions at present existing, for example, in Aberdeen, to teach clinical work to the average student as it ought to be taught. It is impossible to give that individual attention to each student which clinical teaching demands. The education is perforce imperfect. It is the same meantime all over the country, and, unless the student exerts himself to an unusual extent in his efforts to acquire knowledge, there is a danger that this imperfection may lead to evil results and a temporary degradation of the profession.

I say again that I want you to appreciate that civil work can be compared in all respects to war work. The working class, whether performing skilled or unskilled labour, the so-called middle class with all its widely varying occupations, the upper class—all have their representatives in the navy and army, and although a few people did mighty little in both of these services during the war, the only class which did not have its counterpart is that comprising the idle rich. The citizen, the civilian worker, is to be regarded as a combatant fighting for the nation's welfare, and he should be educated and kept fit for his warfare just as carefully as the soldier. In certain circumstances he may require equally intensive training. As I have indicated already, I do not think he has been sufficiently educated to appreciate his responsibility at this time to put forward all his ability in making up for the waste of war, and there is too little realization of what this is leading to. Students can realize that if they do not work they will not pass examinations which loom in the future. If our nation does not work it will fail in an equal measure. The world's economic state demands an increase in effort all round. There are big proposals being mooted or set agoing to improve conditions of life, but unless the masses of individuals—for example, our general practitioners—bestir themselves to help out these schemes they cannot succeed as they ought.

The civilian must be kept in good health for his work in his particular fighting line, whether in the street, shop, or factory, and if disease or accident should overtake him, he must be made fit again to join his unit as soon as possible. In my experience during the war the surgical arrangements made for the fulfilment of these responsibilities to the soldier were wonderfully and increasingly well developed. The stimulus of war in its ordinary sense is not now present in the minds of the populace to enable us to obtain and maintain equally good and progressive provision for the civilian. It is difficult in this country to make the public see the economic importance of having the very best and fullest provision for the treatment of the sick and wounded civilian combatant. Even yet it is only here and there that the monetary value of good research work is appreciated. All ranks in our profession must join in an increasing effort to educate the people.

Time will not permit me to do more than touch upon the many facts of war work from which we can learn. If my remarks may seem at times somewhat curt and savouring of want of reverence for established customs, I tender a desire for brevity as my excuse, and hope that they will be taken in the spirit in which they are offered; I would add that my criticisms are directed against systems, not against individuals, as I fully realize the

possibility that some might consider that I myself should be included in the criticisms.

In my position as consultant in France, both in a large base area and in an important and oftentimes very active army and later as a consultant in special military surgery in the home service, I had ample opportunity of studying things from many points of view, and the following remarks are the result of my cogitations.

Their Applications in Civil Life.

When a man failed to make good in the army—that is, when he failed to keep pace with the standard set by the majority of other men in similar positions—he was replaced by a more likely man. Under stress of war at the front no post could be maintained for long unless good work was done. Here is our first lesson. Should not the same rule be applied to those in responsible positions, and especially in our schools of learning and in our hospitals? Yet we find that, in some of our universities, men are appointed for life to such positions and remain in office for as long as they alone see fit. Surely this is carrying the principle of "security of tenure" too far! It is absurd that in the most important posts connected with teaching the stimulus of reasonable competition should be excluded during the lifetime of the occupant of the particular appointment concerned. There can surely be found a satisfactory method of control, even although it may require an Act of Parliament to bring it about, whereby, if the standard set by occupants of similar posts elsewhere is not maintained, the delinquent could be deposed from the responsible position which he occupies. I may say that the memory of my experience in the war does not make me tolerant of those who fain would stick to inadequate arrangements merely because they are antiquated.

The stress of war, in that it revealed the necessity for making a combatant efficient again as soon as possible, gradually forced the authorities in control of the purse-strings of the nation to loosen these strings where provision of hospitals and suitable hospital equipment was concerned. I can say that the state of some of the casualty clearing stations—and I speak only of those under my supervision—even within a few miles of the fighting line in France, both in housing and in comfort, as well as in arrangements for professional work, were such, at the period before disorganization was caused by the German advance in March, 1918, that I would have preferred to be treated as a patient in one of them than in many of our hospitals at home. If such perfection was possible under conditions of war at the front, surely it ought to be more than possible under the peaceful conditions of this country. But the question of money and our innate conservatism stand in the way. Purse-strings must be loosened to a greater extent, generosity in subscribing for medical and surgical requirements must be more widespread—those who cannot give in money can give in labour if we are to advance as we ought to. Bigger, broader, more far-seeing ideas must be cultivated. This aspect of affairs is of acute interest in Aberdeen at present in connexion with the development of a big scheme which is being brought forward to improve our hospital service, teaching facilities, and opportunities for clinical study, as well as to conserve expense of working and the time of medical men and students. The scheme includes concentration of the hospitals of the city in one large compound, transference of certain departments of the university to the same site, and, finally, provision of a hostel for senior students, so that they may be on the spot to take advantage of experiences from which meantime they are largely debarred. It seems to me that intending subscribers to such a scheme may hold back on account of the uncertainty which is felt with regard to the future relationship of the Government of the country to hospitals generally. The Government should declare its policy clearly and firmly, and without delay, so that private individuals may know whether they have to undertake the responsibilities, and to what extent.

One of the great developments in connexion with the medical service of the war was that of "team work." The advantages of this were already demonstrated in civil life, notably on a large scale in the Mayo clinic in America, but little more than the talking stage had been reached in this country, and that only in very few centres. It was carried into actual practice, so far as pure surgical work was concerned, at the battle of Arras in April, 1917, and

its success was at once established by the fact that the number of operations then performed in proportion to the number of wounded was largely increased when compared with former battles, and the improvement in results was also very marked. In association with the establishment of surgical teams the whole working of the clearing stations was so organized that all the different departments of these hospitals were more closely linked up, and by the collaboration of the medical officers in charge of these departments the work as a whole was more efficiently and smoothly performed than ever before. Physicians, bacteriologists, skiagraphists, surgeons, administrative officers, nurses, orderlies, stretcher-bearers, cooks—all worked whole-heartedly, and, so to speak, hand in hand as a big team for the general good of the wounded soldier. Antagonism was barred, friendly competition and pride in work were paramount. It was found that the success of any team was proportionate to the driving force of its chief member. While it cannot be said that there is want of collaboration, for example, in such an institution as our Aberdeen Royal Infirmary, and even although there is a tendency to develop the team spirit in some quarters, yet there is a good deal left to be desired. This is not the fault of the medicos concerned, but rather of the conditions of work. I am afraid, however, that I must not discuss this matter further at present, except to say that the appreciation of the value of the system is reflected in the frequency with which the term "team work" is used in our everyday life. Seeing that no single individual can be expected to have accurate knowledge of all branches of his profession, "team work" amongst general practitioners is as desirable as in hospital practice.

Age and Youth.

The most striking phenomenon of the war to my mind was the way in which the young man came to the front. As time passed, positions of great importance became filled with increasing frequency by young men, and I believe that if the war had lasted another year, only a very few old men would have been left in France and Belgium, where the main issue lay, and these would have been old men who had remained young. It was remarkable that as the young men or the young old men got more power into their hands the work was better and more quickly done. It was being shown that there was no room in that strenuous field for the man whose faculties were so inert that he could not accommodate his outlook to, or keep pace with, the rapid developments which had to be made in order to cope with the kaleidoscopic changes occurring in such rapid sequence.

Is it not really exactly the same in civil life? Especially at such times as the present, can the nation afford to have obstructionists, whether passive or active, to what should be a strong stream towards success? A strong stream, when its passage is set in turbulent surroundings, entails eddies and backwaters. There are adornments to such eddies and backwaters which are out of place in mid-stream! It is but rarely that the old man, or the "dud" man, can appreciate the fact that he is getting old or that he is a "dud," and that he should step aside to let the junior or the better man have greater sway, and even if he does appreciate it, he can sometimes succeed far too long by his clever camouflage and much speaking. As I have said, the events of the war showed how well the young man could shoulder responsibility and how rapidly he developed sound judgement, foresight, and adaptability in the management of affairs. In the category of old men, as I have already hinted, I do not include him who, in spite of his seniority, could maintain his zeal, earnestness, and thoroughness when at work, who could rough it with the young men, and who could become young again in his off-times, and even play the fool on occasion with the most skittish of the youngsters. Such a man exerted a tremendous power for good among his younger colleagues. He was looked up to and his opinion and approbation were eagerly sought by them. It is such men whom we should cultivate and continue to honour when they retire to the less turbulent parts of the stream. A great truth, which was revealed to me more strongly than ever before by my experiences in the war, was that by trying to help on the younger men one helped oneself. I believe that I can say truly, and I say it in all humility, that when the young surgeon and his colleagues in France found that I was really "out" to help them in their work to the best of my

ability, they responded with a loyalty and devotion in carrying out suggestions which were most gratifying. Any kudos which accrued to me during my time in France was due to that spirit amongst these young men, and I shall cherish the privilege and honour of having served along with them.

Continuity of the Best Treatment.

The importance of developing means of ascertaining and establishing everywhere the best methods of treatment and of procuring continuity in treatment was increasingly impressed on everyone as time went on. During prolonged battles, which entailed stupendous, unceasing effort on the part of medical officers, it was impossible that they could keep abreast of the advances in knowledge which were occurring unless special provision were made. It was in this respect that the consultants could perform probably their most important function. They could encourage and direct investigation, and by carrying information from one place to another, by actual demonstration in one hospital or by informal conversations or special lectures in another, by stimulating men to meet and to discuss new problems, and by promoting collaboration between workers in units at the same stages and at different stages of the wounded man's progress, they could exert an enormous influence for good. The institution of consultants at home with the powers of those in the army may probably be resented at this stage of our civil professional development, but I cannot help thinking that the needs of all busy members of our profession are not quite so adequately catered for in this way as they were in France, and as they would have been still more had time allowed the aspirations of the consultants to be applied and developed more fully.

Collaboration between units of the actual fighting area and the casualty clearing stations, between the latter and the hospitals on the lines of communication in France, and between these again and the hospitals at home, practically did not exist until the war was well advanced. Communications from home hospitals or from hospitals down the line were almost entirely in the form of complaints as to the condition of the patients who had previously been treated under circumstances of stress and difficulty such as the complainants could not possibly visualize. On the other hand, medical officers of the more advanced units were rather inclined to despise others in so-called soft billets further removed from the fighting line, and to resent complaints from them, while advice from the same sources was almost equally unacceptable. I need not detail the means which were taken to bring about a better understanding, which was attended with happy results wherever it occurred. It is still too often the case in civil life that the hospital physician or surgeon, or even the student, forgetting the disadvantages under which the general practitioner has in many instances to work, is inclined to scoff at the treatment or mistaken diagnosis, which may have had to be made in a hurry—possibly, for example, in a box bed in a squalid cottage, with a spluttering candle as the sole means of light. On the other hand, does the general practitioner always look with favour on the consultant? Sympathy and collaboration are required as much at home as they were abroad.

Defective Medical Education.

The next point which occurs to me I mention almost with reluctance, but I do so because I realize my own shortcomings. One was very frequently impressed with the wonderful knowledge of obscure signs and often of fantastic theories concerning disease or injuries which was thrust at one, and one ought to have felt oneself to be a very inferior worm, but one took heart again at the thought that such phantasms and the "tall" language in which they were described helped not at all in the practical, life-saving problems which were crying out for solution. It was evident that something had been wrong with medical and surgical education when such theorists were found to be unable to dress wounds or apply bandages or splints efficiently. What some of our friends across the water call "horse-sense" of the majority saved the situation. It is a pity that some specialists who occupy teaching posts forget to impart the rudiments of a subject to the students under their tuition and speak to them of exceptional matters in "high-falutin" language, which is repeated in parrot fashion too often without understanding.

The student ought to be well grounded in the simplest, most common, and most useful things which pertain to the practice of his profession, and be taught to think and act for himself. The curriculum tends to become unduly crowded, and there is no time for consideration of subjects which are better suited for post-graduate study. As I have already pointed out, sensible teachers feel that at this critical period of university education each student must try to work out his own salvation, in view of the fact that owing to the unduly large number of students it is impossible to give that attention to individuals which is desirable. The important problem is how best to stimulate self-help, considering that the spirit of the age is so foreign to such a virtue.

It would appear that collaboration between teachers, with the object of eliminating unessential details which merely clog the minds of their students, is required more than ever. How much is the advice of clinical teachers, as to what is most useful, sought by those who deal with subjects like anatomy, physiology, chemistry or physics? Yet these and certain other subjects of study can only be regarded as preparatory to clinical work, and should therefore be adapted more closely than they are to the requirements of the average medical student.

Evils of Systematic Courses.

I cannot refrain from saying that my experience during the war has led me to object more strenuously than ever to the retention of courses of systematic lectures in the medical curriculum of our Scottish universities. These systematic lectures and the slavish taking of notes are relics of bygone ages which ought to be dispensed with. They were necessary even as late as 50 to 100 years ago, when such excellent textbooks as are extant at the present day were not available to the student. How many of us can honestly say that we retain any useful memory of the often wearisome lectures which we were compelled to attend day after day, during which our minds were distracted by the scrambling efforts of our pencils to keep pace with the lecturer, while our evenings were spent in the endeavour to make sense out of our notes and to supplement them with extracts from books? I think that under modern conditions the ordinary course of systematic lectures is very largely a waste of time both to lecturer and student. The professor should discourse much more on principles, leaving tutorial work in matter of detail to assistants. Especially in surgery, but also in certain other subjects, practical instruction should bulk more largely than it does.

Early Treatment and Transport.

The lessons taught by the war in the early handling and transport of patients who are seriously ill demand our very earnest attention. It was too often tragically brought home to workers in France how inattention to apparently trifling details was reflected in the whole subsequent course of a man's illness. For example, improper application of a bandage or inadequate fixation of a splint might result in the loss of a limb or even of a life. Medical officers as well as orderlies had to be trained in the application of specially suitable splints, and in all methods of resuscitation and preventive treatment which could reasonably be carried out in very advanced units. The prevention and curative treatment of shock and haemorrhage and of sepsis were the most important duties which faced the medical officer in these units quite apart from the problems of evacuation. The medical service at the front laboured under the disadvantage, when compared with civil service, in that the interests of the wounded man were subservient to the supply of ammunition, food, and reinforcements to the fighting line. Some of the work done by medical officers under these conditions was beyond all praise; for example, I know of many cases of severe gunshot fracture of the femur—a very deadly injury—which were so well attended to in advanced dressing stations during a big battle, when hundreds of severe cases were passing through such stations in a day, that the patients were passed along comfortably, free from delay and from any detriment, to hospitals in England, without having their original dressings and splints changed.

Lives are lost unnecessarily, even in our biggest towns, from the effects of shock and primary haemorrhage, and in other ways, owing to the want of better organized help. I do not wish in any way to depreciate the efforts of

ambulance societies and such like, but I do think that early arrangements for the patient who is stricken down by a severe injury in the street or at his work suffer in comparison with those which were instituted at the front. For example, what factory has a special aid post where the patient can be specially warmed and otherwise cared for? Are splints specially suitable for transport available? Are special rooms set apart and specially equipped for the treatment of shock and haemorrhage even in the large hospitals of towns where severe accidents are common? Or again, in how many institutions is the routine of unclothing and cleansing a badly shocked patient omitted or modified until he has recovered from his shock? Many other questions in the same vein crowd upon us, and yet we know that, within easy range of shell-fire in France, everything really useful and practicable that human ingenuity could devise was done for similar patients! What was necessary for the wounded soldier is equally necessary for the injured civilian, whether the injury be due to accident or disease.

Again I must revert to the education of the student with regard to these practical matters. Take a question asked the other day as to what occurs in our own medical school, and I may say that the same holds good with regard to some other schools, and the larger the school the less chance is there of really remedying the defect unless the amount of clinical material is adequate. How many students before their graduation have, in their clinical work, actually passed a catheter, given an enema, passed a stomach pump, administered a hypodermic injection, "put up" a fractured limb, or even "made a bed," and so on, or even seen these things done? It is hard for patients to have to be submitted to unpractised although anxious efforts later on, especially when the graduate is not supervised. I remember in my student days how many of us went to the hospital nearly every evening during our service as dressers, and helped the house-surgeon in all sorts of ways. Evidently, so far as Aberdeen is concerned, this custom has practically gone out of fashion. It is to be regretted that clinical teachers there have not greater power over the students. There were comparatively few emergency cases then such as are common nowadays, but we learned a good deal from the treatment of those we did see. Emergencies are admitted most frequently in the afternoon or evening, and are operated on as soon after arrival as possible. Such operations are interesting and very instructive. I wish it could be successfully impressed upon students, and graduates also, that the clamant necessity for prompt treatment of an abdominal emergency cannot be appreciated unless they see for themselves the appalling state of the interior of the abdomen which results from delay.

A Sufficiency of Hospital Beds.

I can touch only very lightly upon a few of the other many lessons of the war. A very striking fact, when one considers it a little, is that a wounded or sick soldier was always provided for at once in hospital when hospital treatment was thought necessary. His name did not go on any waiting list, yet the large waiting lists of the hospitals of this country are regarded with comparative equanimity. The same attitude is apparent with regard to the permanent injury to health, and even to the loss of life, which occur in epidemics of serious illness owing to the fact that skilled nursing under suitable conditions is not available in adequate amount. Sir Napier Burnett has shown that lives were lost in number amounting to several divisions during the influenza epidemic of a couple of years ago. Yet in one instance, where cases complicated by pneumonia were housed in an extemporized building and nursed by volunteers, the death rate was greatly reduced. There should be no greater difficulty in rapidly adapting suitable public buildings in emergencies of that sort than there was in adapting them for hospital work during the war. The need for doing so is equally great when we consider the preventable mortality. Schemes should be drawn up for meeting the requirements of such emergencies.

In these days of inadequate hospital accommodation throughout the country, I wonder if sufficient consideration is given to the class of cases which are permitted to occupy the available beds. Perhaps I can best bring out what I mean by referring to the very important question which cropped up in France during periods of severe

fighting during which surgeons and others were taxed to the uttermost—a state of surgical stress that may be compared quite reasonably to the general great demand for available beds in civil hospitals. The matter I refer to is this: Humane feelings, or even the surgical interest of a case, too often led surgeons to misplace their efforts by treating types of cases which required large expenditure of time, and which, after all, gave a low recovery rate. Thus, during a big “push,” it was difficult to persuade men to leave abdominal cases—in which under the best treatment, even in so-called “peace times,” the recovery rate rarely amounted to more than 50 per cent.—and to attend to other cases which, with timely operative intervention, recovered more rapidly and in far greater proportion, and of which two or three could be treated in the time taken up by one abdominal operation. If such promising cases were left over for a day or were sent down the line, by the time they were submitted to operation infection had gained such a hold that far more extensive measures had to be employed; in any case, a much longer convalescence was entailed, and in many cases even death resulted from the delay, and this even where the timely intervention would have resulted in the patients being fit for duty again in a comparatively short space of time. It was gradually being realized, however, that the exigencies of the military situation and the shortage of surgeons really demanded that the cases with the greatest prospect of recovery should receive preferential treatment, although consideration for the morale of the troops prevented this being carried out to any marked extent. The problem is really the same, when we come to think of it, in our civil practice. Man-power and conservation of time in relation to this ought to be considered more frequently. It is not good policy to sacrifice by delay in treatment any patient suffering from a disease or disability which can be rapidly cured, but which may develop to serious extent during the time of waiting for accommodation occupied by patients who are incurable, or who at best will never be able to display more than a low grade of efficiency. True it is, however, that some of these more hopeless cases must receive preference for admission to our educational institutions in order that our future medical men may be trained. One may be blamed for giving vent to inhuman opinions by those who do not care to face hard facts, but is it not the responsibility of the public to provide accommodation for all, and is it not our duty to bring this home to the public in every possible way?

The Best Sites for Hospitals.

Where should our large hospitals be situated? They represent the hospitals at the bases in France and in England. Only aid-posts, dressing stations, and so-called clearing stations were situated near the fighting line. The same arrangement could be made for civil combatants, as we have been calling the workers for the nation. Large hospitals need not occupy valuable space in their fighting area. These hospitals are much better situated in the green fields and woods on the outskirts of towns. Dressing stations and casualty clearing stations could be established in the busiest quarters of the town to perform functions similar to those they performed for the army.

Some Surgical Lessons.

The foregoing are some thoughts pertaining to general professional matters. Regarding more purely surgical subjects which I may be expected to discuss I do not intend to say much. You may hear and see in the wards of most hospitals from time to time the practical applications of many of the war lessons to surgical operations on civil patients.

The cruel effects of modern high explosives and the accompanying conditions of modern warfare forced the acceptance of many principles which were considered to be new. It is but just to say, however, that most of these principles had been advocated for several years before the war by certain surgeons. I shall mention only a few examples.

1. The treatment of infected wounds by excision of infected and devitalized tissue. This could sometimes be followed by suture of the wound, and in the hands of the best operators healing by first intention was obtained in the majority of cases which were amenable to such treatment. This, when compared with the general methods applied at the beginning of the war, was an incomparable

boon to the patient in all sorts of ways. It was not new. This method of treatment had been carried out in soiled wounds of soft parts as well as in compound fractures—for example, by Macewen of Glasgow, and, independently, by myself—for many years before the war; but unfortunately it was only tardily accepted as a routine procedure in the theatres of war. The application of the principle to the treatment of wounds of widely varying types in the different regions of the body met with such marked success that the saving of life, limb, and function was incalculable. The treatment, as I have indicated, is equally applicable to recently inflicted and even grossly infected civil wounds.

2. Perhaps the most theatrical of all general advances was in the treatment of severe wounds of the chest. At first practically all cases of severe thoracic wounds died—namely, those in which parts of the chest wall were blown away. So far as I could ascertain, these severe types formed about one-third of all wounds of the thorax in patients who reached the casualty clearing station alive. In a year and a half at Rouen base, the centre of many groups of hospitals, I did not see more than half a score of such cases. In one month at the front, during a battle, there were about 500 cases admitted to the casualty clearing stations of the army to which I belonged! In the last year of the war the best surgeons were operating on them so successfully that they were sending approximately 70 per cent. down the line, with every prospect that the patients would become useful citizens again. The war success in thoracic surgery has stimulated surgeons all over the world to cope with cases in a region which was previously left severely alone, save when comparatively simple measures could be applied. Yet before the war isolated surgeons in different parts of the world were striving to perfect technique along lines which the experience and stimulus of the war have shown to be correct. In no other field of surgery has development been so striking and so widespread. Experience in the war has at the same time shown that elaborate apparatus in the performance of such operations is not essential for success.

3. The effect of proper treatment of severe fractures was almost as striking as that in injuries of the chest. Severe compound fracture of the femur was, at the beginning of the war, one of the most fatal injuries in patients who survived long enough to come under the care of the medical service. The disastrous results were due to the effects of shock, haemorrhage, and sepsis. The late results in a large number of cases did not redound to the credit of the profession, yet by well-thought-out preventive work and extreme care in operative and after treatment gradually the mortality was enormously reduced and men were turned out again to civil life with marvellously useful limbs. In this class of case the institution of special hospitals with specially selected surgeons and equipment had much to do with the improvement.

In connexion with this class of injury, I must mention Thomas's knee splint. I do not suppose that Thomas in his wildest dreams ever thought that his splint would lead to the saving of literally thousands of lives in such a short period. This splint and its modification for use in fractures of the upper extremity are so valuable, especially during transport, that I recommend every one of you to become thoroughly conversant with the best methods of applying them. Thomas's leg splint and the similar arm splint should form part of the armamentarium of every general practitioner and surgeon.

4. The methods of combating shock and the effects of haemorrhage rise to one's mind in connexion with fracture of the femur. The description of such methods as were used at the front and which are so easily adapted for use by the general practitioner and hospital surgeon makes interesting and useful reading. We have to thank our Canadian and American *confrères* that the therapeutic value of infusion of blood or its substitutes became evident to the profession as never before, and this method of treatment is applicable to so many conditions in civil life that you should lose no opportunity of seeing it carried out.

5. The treatment of septic arthritis which was introduced during the war by Wilms, a Belgian surgeon, showed that time-honoured customs in surgical treatment, as in education, are not inviolate. Wilms demonstrated that the only way to drain a joint adequately is to provide free exit by means of ample incision, and then, by making the

patient move the joint spontaneously and vigorously, to cause the effusion to be forced out. Passive movements do harm. Under this treatment many even severely affected joints have recovered with free movement. To encourage movement of any sort while inflammation is still present in a joint, or indeed in any part, is contrary to all previous teaching, yet the recommendation is justified by results, as I have been able to prove to my satisfaction on several occasions during the war and since my return to civil practice. I wish to point out that the same factor as is involved in the use of active movements in joint sepsis is revealed at work in cases which recover after operation for peritonitis or pleuritis. In these, normal movements of bowel or lung speedily occur, and, mark you, it is better to dispense with drainage. If, in peritonitis, the bowel is so badly affected that peristalsis is paralysed, or if, after operation for pleurisy, the lung does not expand, recovery is, to say the least, a doubtful issue, even when drainage is established. In some cases of peritonitis, when the bowel is paralysed, temporary drainage of the bowel to remove its poisonous contents may have to be carried out in preference to other treatment, owing to the precarious state of the patient, or in bad cases of empyema all that may be possible is simple drainage of the pleural cavity. It seems to me, however, that in all these types of cases we are gradually being forced to rely more on the natural powers of the patient than on any artificial aids we can give. The rôle of the surgeon in such cases is merely to remove obstacles to natural processes of cure and then to clasp his itching fingers. My war experience has augmented the conclusion to which I had previously arrived, that, generally speaking, the use of drains must be included in the category of meddling surgery, or, in other words, that the necessity for the use of a drain is evidence of imperfect work. The trouble is that none of us can be sure of doing absolutely perfect work. Human limitations and mechanical weakness demand the occasional use of drains. For example, drainage of dead spaces which cannot be obliterated and drainage of a gall bladder to prevent distension of a sutured common duct may be necessary for safety. We must remember that, in the former instance, drainage is for removal of nutritive fluid only—that the presence of the foreign body, the drain, be it ever so soft, favours the growth of organisms. The less expert the operator, the greater the necessity for drainage.

One wonders whether drainage of septic joints, after removal of the cause of the sepsis or of the obstacle to healing, is really necessary any more than in a case of peritonitis. One wonders how long it will be before ordinary acute peripheral abscesses will be freely opened, wiped out, and immediately closed again by well-judged suturing. For years past I have been performing "delayed primary suture" in such abscesses.

As Wilms has shown, and as I had previously experienced during several years before the war, absolute fixation after so-called aseptic operations on joints is really a bar to rapid restoration of function. Is not Wilms's principle apparent in rational after-treatment of all sorts of cases? Should we not always encourage patients voluntarily to exercise normal functions as soon as possible, instead of interfering with natural processes by coddling them too long in bed, by using massage or electrical stimulation and other artificial so-called helps, when really the patient can better help himself?

6 and 7. Two instances of development of work at home deserve, I think, special mention. One was the enormous strides made by many surgeons in orthopaedic surgery in its various branches—bone-grafting, nerve-suture, and so on—and in appreciation of other than purely operative measures in orthopaedic treatment. This was largely due to the strenuous work of Sir Robert Jones, with whom I had the honour of being intimately associated for a considerable time. Another instance was the organization of the treatment of amputation stumps. Some of you may know from bitter experience what a nuisance a stump may be in itself, and that an artificial limb must receive very skilled attention before it is really serviceable and comfortable. Special centres have been instituted in various parts of the country to provide such skill for numberless sufferers. Sir J. Lynn Thomas of Cardiff has estimated that before the war there were 40,000 persons in the country who had lost one or more limbs. Surely this surprising fact is enough to make us preserve

at least some of these centres where the skill acquired will be still available, and to which we may send civilian patients to be properly fitted with artificial limbs and to be trained in their use.

I have said enough. I am afraid that I have dealt with my subject in a somewhat crude and superficial manner, but I hope that the suggestions which I have expressed may stimulate you, who have to deal with future developments, to think seriously and broad-mindedly about these and kindred subjects and to take an active part in the solution of the problems which are entailed.

Observations

ON

SPLENIC ANAEMIA: BANTI'S DISEASE.

PART OF THE BRADSHAW LECTURE ON THE SURGERY
OF THE SPLEEN.*

BY

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"BANTI'S DISEASE" is the name given to the condition described in 1863, and again in 1894, by Guido Banti of Florence. In 1866 Gretzel described a clinical condition of anaemia associated with splenomegaly to which Griessinger applied the name "splenic anaemia." The case occurred in a child 10 months old who suffered from dysentery and severe anaemia with considerable enlargement of the spleen, and enlargement, less considerable, of the liver and lymphatic glands. Examination of the blood showed that the proportion of white to red cells was not increased; the condition was therefore not leukaemic. In 1871 Wood described a "splenic form" of pseudoleukaemia, and reported a case in which the spleen was greatly enlarged, and there was severe anaemia without leucocytosis. Banti, in his later description mentioned above, considered the disease as possessing clinically three stages, merging gradually into each other. These stages were:

1. One in which there was enlargement of the spleen and a secondary anaemia, the duration being three to twelve years.
2. One in which the liver gradually enlarged, and the amount of urine underwent progressive diminution; the duration was brief.
3. One in which the liver gradually shrank in size and ascites appeared, the symptoms being those of an ordinary atrophic cirrhosis; the duration of this stage was between one and two years.

The disease was invariably fatal, and death occurred either from haemorrhage or from autointoxication from cirrhosis.

Clinical History.

Splenic anaemia was defined by Osler as "an intoxication of unknown nature characterized by great chronicity, primary progressive enlargement of the spleen which cannot be correlated with any known cause, anaemia of a secondary type, with leucopenia, a marked tendency to haemorrhage—particularly from the stomach—and in many cases a terminal stage with cirrhosis of the liver and jaundice." The clinical features of the disease, then, are the following:

1. A very chronic course, in which the symptoms progressively and steadily increase in severity, without amendment, and without any hope of spontaneous recovery.
2. A slowly progressive enlargement of the spleen. This is the first of all evidences of disease; the bulk of the organ undergoes an increase, at first apparently slight, but later more rapid. The ratio of increase probably remains unaltered throughout. The enlargement may finally be very considerable, though it is rare for the spleen to become as large as in myeloid leukaemia, or in some cases of Hodgkin's disease, or in malaria, or in Gaucher's disease. The spleen is not altered except in bulk, so far as physical examination shows; the surface is smooth, the notches apparent; there is no tenderness, nor is a friction rub felt or heard. It is said that a "bruit de diable" has been heard (Sippy, Rolleston) "due to eddies produced by slight torsion of the dilated veins in the gastro-splenic omentum or of the splenic vein." Seeing that clinical recognition of splenic enlargement is not possible until the

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