Echoes of the Past.

LIFE IN A C.C.S: DURING THE GREAT WAR.

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GENERAL PRIEST AND GENTLEMEN—

I am a voice from the past. I am relying largely on my memory to give you some idea of how we lived and how we worked during the Great War.

What is a C.C.S.? Let us consider this question at the outset. A C.C.S. is primarily a unit, the function of which is to receive and clear casualties from the forward areas and evacuate them to the rear where, under safe surroundings, their injuries can receive appropriate treatment. That, I think, briefly but fairly describes the original function of a C.C.S., and prior to the Great War a C.C.S. was not regarded as anything other than a clearing station. Circumstances, however, alter cases, and what I hope to do, in the time at our disposal, is to show how the C.C.S. developed into what was, I think, the most important unit in the Medical Service, so far as the treatment of the casualty was concerned. To a large extent I must rely on my memory, and it must be realized that one's memory for things over twenty years ago is liable to play one tricks.

My experience of work in a C.C.S. started in 1916. A C.C.S. had then developed, as a result of the experience of the treatment of the wounded during the previous year and a half, and it had now become a unit at which early and efficient surgical treatment could be given. This development was made possible because, after the initial war movement in 1914, stationary warfare resulted, and so, like other units in the field, the C.C.S.s dug themselves in, built wards and operating theatres, and took up more or less permanent positions. By the end of 1915, and early in 1916, the C.C.S. was working not only as a clearing station, but as an operating theatre, standing behind the lines, and receiving casualties within a few hours of wounding.

The late Sir Anthony Bowlby, who was Consulting Surgeon to the B.E.F., played a very large part in this development. The C.C.S. to which I belonged consisted of a central block containing the office in the middle, the officers' ward at one end and the theatre and sterilizing room at the other. Around this central block were the various wards, both wooden and Nissen, with revetments of earth between to act as protection against bombing. Just outside the theatre was a small square hut known as the "Wendy Hut"; this was the office of the Sister in charge. A road ran up to the reception room bringing cases right up to the entrance.
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Our mess was a house opposite the station. Ambulance trains drew up at the siding on the opposite side of the road and stretcher cases were easily carried by hand from the C.C.S. to the train.

Our reception room was divided up for receiving walking and lying cases, and a portion of it was screened off for the performance of minor operations, dressings, etc. The casualties came in unceasingly, sometimes in small numbers, sometimes in overwhelming numbers, and from the reception room were distributed to the appropriate wards, after their particulars had been taken. The wards to which they went were the pre-operation ward, the resuscitation ward, the moribund ward, and the evacuation ward. Those casualties that went to the pre-operation ward were cases requiring surgical treatment and who were fit to take their turn in the theatre. They were undressed, washed and shaved, but left on their stretchers, being removed from the stretcher on arrival in the theatre, where they were placed straight on the operating table. To the resuscitation ward went those shocked, those pulseless, ex-sanguine cases, whose condition was too serious for surgical intervention until such time as they had recovered from the initial collapse, and it was the duty of the medical officer in charge of this ward to see that they came to the theatre in the best condition possible. To the moribund ward went those cases who were obviously dying.

It will be quite obvious that whoever is in charge of the pre-operation ward and the resuscitation ward must have very considerable experience. This is one of the most important jobs in a C.C.S. and will remain so. Choice of cases for evacuation was not always easy, and we had always to remember that the function of a C.C.S. had changed, the evacuation of casualties was still of the greatest importance, and for a C.C.S. to work at its maximum efficiency, its evacuation schemes as well as purely surgical schemes had to be planned and carried out, for it was no good a C.C.S. doing good surgical work coupled with poor evacuation or vice versa. Evacuation had also to be considered with the number accumulating for the theatre, for there must always be a limit to the number of cases with which a theatre can successfully deal.

The three great evil influences which had to be combated were shock, hæmorrhage, and sepsis. Of the three I think we found shock the most difficult and disheartening to deal with. Hæmorrhage was treated by intravenous saline and gum saline; with blood transfusion rapidly coming up to take their place. We chose our donors from our convalescent patients, and a transfusion was usually done in the theatre. The blood was not drawn from the vein through a needle; the vein was exposed, ligatures passed behind it and left untied, an incision made into the vein and a glass cannula inserted, the blood being drawn off into a vessel containing citrate. The same procedure was carried out on the recipient, and the blood run in.

I have, in these operation books, several cases which indicate the good results we obtained.
(Here several cases in which this type of blood transfusion was practised, were given.)

Our other bugbear, sepsis, is worth mentioning, especially in connexion with gas gangrene. For this we were always on the lookout, and the true gas gangrene case was one to be feared, but on looking through what records I have, and remembering other cases, I cannot say that gas gangrene was a common occurrence; cases of query gas gangrene, yes, but true gas gangrene, no; in fact any case of suspected gas gangrene was sufficient to bring us all to the theatre to see it.

We relied on the following points when we were considering a case of suspected gas gangrene:

1. A muscle deprived of its blood supply will not bleed when cut, and will die.
2. A dead muscle neither contracts nor bleeds.
3. A muscle in the first steps of invasion by anaerobes loses its normal resilience and has a brick-red colour.
4. In the later steps of invasion the muscle becomes crepitant, and exudes a dark, reddish-brown, foul smelling fluid.

I have a note taken at our C.C.S. on antigas gangrene serum; it reads as follows:

"The following are notes taken of the few cases treated since March 28, 1918, with Bull's serum. In addition there were a few cases treated by Major Bull himself. As regards the polyvalent antigas gangrene serum, left by General Wallace in the third week of April, and sent to him by Colonel Elliott, no case has occurred since that date of developed gas gangrene infection, suitable for its trial, and it was not considered expedient in any case in which frank gas gangrene had not developed."

I have not the date on which the note was written, but it cannot have been earlier than June, 1918, and it therefore shows that at least for two months no case of obvious gas gangrene occurred. I am not concerned in this paper with what the present treatment will be, should we have to deal with such cases.

To come back to our C.C.S. We have received the casualties and they have been distributed. All this time the theatre was at work. There was always something to be done, sometimes there was so much as to make one despair of ever getting through it. We were organized in teams, a surgeon, anaesthetist, sister, and two O.R.A.'s, together with half a dozen

* Captain G. H. Upcott, R.A.M.C., "Surgical Treatment of War Wounds in Medical Units of the Third Army."
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stretcher bearers. The sisters acted as assistants and rattling good assistants they were; the anaesthetists were sisters and many of them were good at the job.

The number of casualties coming in determined the number of tables working in the theatre. We could, and did, often run four tables, for we were always busy stationed as we were behind Arras, and taking in from that front and also from Vimy. Because of this, it was not often that we were sent to help other C.C.S.s; more often we had surgical teams to help us.

I was away three times in two and a half years, once to help the Australian C.C.S. at Steenwerke and the Messines Ridge show in June, 1915, and although I was only a few miles away when the mines went up I never heard them, and once to Aire where II Stationary Hospital were right up acting as a C.C.S., and once to the Canadian C.C.S., in 1918. We travelled in three ambulances, with a complete equipment, and we were able on arrival to be ready to operate within the hour. I can well remember speeding the departure or welcoming the arrival of travelling teams. There was never any lack of work in the C.C.S., often too much, and our periods of duty were sometimes long. We have worked for twenty-four hours or more, with practically no rest. During the Arras Battle in 1917, we worked for weeks, sixteen hours on, eight off, and I remember that very well, because out of the hat I drew as my tour of duty 4 a.m. to 8 p.m., and if I may advise anybody who has to do that in the near or distant future, I would say turn night into day, and at 8 a.m., having seen the patients on whom you have operated, are all right, go straight to bed having ordered breakfast, a real breakfast of bacon and eggs, coffee, toast and marmalade, for 3.30 p.m. Then go to the theatre feeling thoroughly "morningish," and get through your tour of duty well.

Our primary job in the theatre was to save life, and to operate as quickly as possible. The theatre at the C.C.S. was no place for the slow operator, for admissions accumulated so quickly as to make it impossible, especially during the big battles, to cope with them, and many cases had to be sent down to the Base who would undoubtedly have benefited by early treatment in the C.C.S. I well remember how even one case of multiple wounds held up the work and how two of us or even three would work on the one man in order to shorten his time on the table and so give him his chance of surviving. Bombs were the cause of multiple wounding in most cases. Painful dressings requiring anaesthetics also held up the work in the theatre. We soon learned the value of the impromptu consultation in the theatre, and more often than not these consultations were on the fractured femurs, the problem before us being whether or not to amputate. The value of cooperation between the surgeons in the theatre of a C.C.S. cannot be overestimated. It was very seldom that we saw the case for operation until it was on the table, and often the patient had been anaesthetized before we knew what his condition was. This certainly led to variety.
May I now say a few words about the "follow-up" of cases.

It is, I think, of the greatest importance that the surgeon at the C.C.S. should know the result of his labours. The Medical Research Committee issued cards; I have some here for your inspection. The cards were filled up with brief notes by us and accompanied the patient down the line to the Base and to England. They were returned to us completed at each stage, and so, in many cases, we were able to see what was the ultimate fate of our patients. The cards were of the greatest value, and we used them freely. I feel sure you will be interested in them. I am sorry that they are all the cases of one surgeon, but that I cannot help. On looking through these records of twenty years ago I am compelled again to pay tribute to our very efficient theatre clerk whose care and thoroughness in record-taking was of the greatest benefit to us.

Even in quiet times we would get thirty cases in the operating theatre during the day, not all severely wounded, but all requiring surgical treatment. Different methods of treatment were tried: the salt-pack, the flavine pack, the soap-pack, the paraffin pack, Carrel tubes and bipp, but the fundamental principle, which gave good results, was free excision of all damaged tissue and thorough cleansing of the wound, and in 1918, with Sir Cuthbert Wallace, then Consulting Surgeon to the First Army as our guide, philosopher and friend, we were steadily heading to a line of treatment in which asepsis was supplanting antisepsis.

Life at a C.C.S. was a happy one, and a busy one. We at a C.C.S. always claimed it to be the best medical unit in which to serve. The field ambulances naturally did not agree with us, but there can be no doubt that the opportunities for service at a C.C.S. are unsurpassed. For the keen surgeon, who is a quick operator, and capable of making quick decisions, and has youth and vigour to withstand the long hours and the strain involved, there is no finer unit with which to serve. I knew no C.C.S. where the spirit of the place was not one of cheerfulness, optimism, and of co-operation, and I remember the days I spent in my own C.C.S. with thankfulness and gratitude, on having been able to have the opportunity of service there.

Whether the C.C.S. of the future, either near or distant, will be a replica of the C.C.S. I knew, I cannot say. It seems that this will largely depend on the type of warfare we have to meet, but whatever type of work the C.C.S. is called upon to do must, I think, always be one of the most important points in the whole medical machinery. I realize that there must be many omissions in this short sketch of the C.C.S. as I knew it, but I hope that I have been able to give you some idea of how we lived, and how we worked, during the war of 1914–18. The Great War to end war?