

(March 20th, 1916.)

## Experiences in a Base Hospital in Egypt.

BY DR. W. T. CONNELL.\*

AT a regular luncheon of the Club held on the 20th March, Dr. Connell said:

*Mr. Chairman, and Gentlemen,*—I desire to thank the officers of the Canadian Club for their courtesy in inviting me to address them to-day. It was with much diffidence that I accepted this invitation, for I did not consider that my experiences were such as to have a great deal of interest to those here gathered. I did not have the opportunity of seeing any medical work done actually at the front, but dealt entirely with the sick and wounded at base hospitals.

The unit to which I was attached was No. 5 Stationary Hospital, which was raised by Queen's University, my particular position as second senior officer being the supervision of medical and laboratory work, as distinguished from the surgical side of the work. We left Canada in the early part of the year, and after a couple of months' stop at Shorncliffe, where we were for a time in charge of a tent hospital, our unit, together with Nos. 1 and 3 Stationary Hospitals, were lent to the Mediterranean Expeditionary Forces. We embarked on the hospital ship *Asturias* for the trip to the Mediterranean. This ship was excellently fitted out, as practically all ships in the hospital service are. The *Asturias*, a ship of 15,000 tons, had been engaged in the South American trade, and lent itself excellently for work in the tropics. The cabins had been largely removed, the space so left being fitted up into wards, and scattered through the wards were numerous electric fans which very materially added to the comfort of the sick and wounded in the Mediterranean summer. This ship had an excellent medical and surgical equipment, including a three-tabled operating room, large sterilizing plant, X-ray equipment, also a staff of surgeons, nurses and orderlies, etc. On the return trip to England just preceding our voyage, this ship had loaded 1,250 men right off the shore at the Dar-

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danelles, and had started with them direct to England, a ten-day voyage to Southampton.

The *Asturias* was thus practically the equivalent of a large hospital on land. What applies to the *Asturias* would apply equally well to many other hospital ships plying between France and England and between England and the Mediterranean ports. I think a great deal of credit is due the Transportation and Medical Services for the thorough equipment of such vessels and thus the very great comfort afforded to those who are so unfortunate as to be carried as patients thereon.

On our trip out we learned a great deal from the ship's staff as to the nature of the wounds being received at the Dardanelles, and the methods they found advisable to be employed. So our voyage out was very pleasant from the point of view of the trip itself and from the experience we gained from those on board.

When we left Southampton we did not know our destination, and, as you know, the Mediterranean covers a large area; but at Malta we were pleased to learn that we were to be sent to Egypt to act as a Base Hospital, while Nos. 1 and 3 were to go to Lemnos, to act as clearing stations. Probably you will take from the name Stationary Hospital that it would be a fixed Hospital not to be moved with the army; but it is usually established well in the rear of the forces, to act as a Clearing Hospital. Cases of two groups are retained in such hospitals, viz., those slightly injured, that a few days' treatment will restore to the fighting line, and those very severely injured, e.g., with serious head, abdominal or thoracic wounds, whose condition is such that it would be very dangerous to transfer further. Others are only kept long enough to receive the necessary first aid to allow them to be transported to the Base Hospital.

On arriving at Alexandria we were at once ordered to Cairo to open up our Hospital in certain blocks of the barracks at Abbassia, a suburb in the northeast portion of that city, on the edge of the desert. We landed early in August, the time of the year when the weather is as hot as at any time in the Egyptian summer; the sun is often unbearable in the middle of the day, as the temperature would run up in the sun to 120 to 125 degrees; and in the shade 90 to 99 degrees Fahrenheit. But by keeping under cover in the hotter hours we were soon able to care for ourselves and bear the climate, for though there one perspires freely, the perspiration dries up quickly.

Our first duty was to place the barracks in suitable condition to house our Hospital. Fortunately the buildings placed

at our disposal, being of modern build, large and roomy, with ample ventilation and having cross balconies on each side, lent themselves excellently for the treatment of our patients. These balconies by overhanging the windows protected the buildings from the great heat and glare of the sun, and were ideal places in which to place our patients during a large part of the day, and very often at night also, so we could treat them there directly as outdoor patients. We were fortunate enough too to have an ample supply of good filtered water, and a good sewerage system. In fact, with the large ward-like sleeping room of the barracks transformed into real hospital wards, one could readily imagine that the buildings had been built with the idea that some day they could be utilized for hospital purposes.

Our first work then was to put the barracks into proper shape for patients, after cleaning and disinfecting. As most of you know, Egypt is a land of insects. In the Book of Exodus we read of how Moses brought a plague of lice and flies upon Egypt because Pharaoh refused to let the Israelites depart. I assure you they have left a goodly host of descendants (laughter), and our first trouble was to get rid of one of these sets of insects which were found infesting the barracks in large numbers. We spent ten busy days in killing these, and cleaning and disinfecting the barracks. (Laughter.) I don't mean to disparage at all the previous occupants of the barracks, for these insects are received in the most aristocratic society in Egypt. (Laughter.)

We had to deal very largely with sick and wounded from the Dardanelles Expedition. I need hardly point out to this audience what an enormous task the transportation alone of this Dardanelles Expedition was. Remember that it is situated three thousand miles by sea from England, and consider what it meant to transport from a quarter of a million to three hundred thousand men those three thousand miles, carrying guns, equipment, food, etc., before they could even land and make an attack on the Turk. You will see that the transportation alone of this force was an enormous task. Further, the nearest bases of supply at first were Malta and Egypt. Malta is 750 miles away, and Egypt 650 miles and in Malta and Egypt were the nearest hospital bases. Of those hospitals established in Egypt—a number were in Alexandria, also a large number at Cairo. But with the large number of casualties which accompanied those large operations going on at the Dardanelles, very extensive hospital accommodation was required. So with our five hundred beds and necessary hospital equipment, we were very welcome.

It took us ten days to get the barracks ready, and twelve days after our arrival in Cairo we had got the beds in place, a temporary operating room equipped, our laboratory, dispensary and X-ray outfits in proper trim, and our kitchen and store rooms properly outfitted for the feeding of patients.

Our first patients were a convoy of wounded, forty in number, direct from the Dardanelles. These men had been brought 650 miles to Alexandria, a full two days' trip by sea, and as Cairo lies 130 miles farther up country, a four hours' train journey, we, in consequence, did not receive very seriously wounded men, as these were put off at Alexandria and not subjected to further train journey to Cairo. So our cases were only the moderately severe and milder cases, able to stand this additional train journey.

Our cases comprised largely wounds of the extremities, of the chest wall and the neck. We saw very few penetrating wounds of the brain, thorax and abdomen, as this class of injury is so serious as to require to be treated at the nearest hospital to which they can be moved. We had experience of wounds made by all kinds of weapons—rifle, machine gun, shrapnel, high explosive and hand grenade. Peculiarly, we did not see any bayonet wounds—though there was some very strenuous bayonet fighting on the Peninsula. One reason no doubt is that bayonet wounds are very serious injuries especially in the thorax or abdomen.—The ordinary explanation of Tommy was that it was the other fellow who got the wound. (Laughter and applause.)

I had no experience in France or Flanders, but from those who had known of the fighting there we learned that the wounds received in the Dardanelles fighting, as a whole, did better than those received in the fighting on Western front. The reason for this difference, I think, was very largely the difference in the ground over which most of the fighting was taking place. In France and Flanders the ground had been heavily manured for generations, and the country very thickly populated; hence the predominance in such ground of many soil bacteria, which, if they gain entry to wounds, lead to a high proportion of such infections as those of tetanus and gas gangrene. Cases of tetanus and gas gangrene were comparatively few in the Dardanelles, in consequence of the soil being less rich in decomposing organic matter.

As regards results in our cases of wounded, we were fairly well satisfied with the treatment: only two of our first four hundred cases wounded died as a result of their wounds. (Applause.) Of course, I must remind you that we were

dealing only with mild to moderately severe, not very severe cases, so we expected a very much higher percentage of recoveries. We had very few amputations, the modern idea of surgery being to save the limb where possible. Of the first four hundred men at least three hundred were able to return to duty inside from one to four months (applause); half of the balance after the same period were fit for garrison or home duty; so only about 12½% were more or less invalided.

It was not very long before sick began to come in in increasing numbers from the Dardanelles; in fact, on towards the middle of September, the sick began to outnumber the wounded, and from that on they very greatly outnumbered them. Of the first 1,600 patients in my three months' stay nearly 1,200 were sick. Of the sick about two-thirds were suffering from dysentery or dysenteric diarrhoea.

I want to discuss for a moment or two this question of dysentery. Dysentery, as many of you know, is a disease of an acute, infectious order, which is endemic in Turkey, Egypt and the East. There are two casual agencies, one a bacillus, the other a minute animal parasite, the amoeba of dysentery. In our Hospital the number of bacillary was somewhat greater than that of the amoebic cases. This epidemic of dysentery was decidedly the most important epidemic on the British side of the war, and in consequence the one which might serve as a possible basis of criticism of the sanitary service. Let me point out, however, the conditions under which it originated, and I think you will then conclude that the sanitary service cannot be criticized in this respect. I think it was no fault of the sanitary system that the disease became prevalent. The germs of the disease must be taken into the mouth from infected food, water or fingers, and these must have directly or indirectly infected with discharges from dysenteric patients. In the Peninsula large numbers of men were landed on limited ground space, and that ground too taken from the Turks, who have very primitive ideas of sanitation, like most Eastern nations, and among whom dysentery is very prevalent. The ground thus seized was already fouled to a considerable extent before our occupancy. Further, the territory which was seized was practically all under shell fire, so while sanitary contrivances were made, it was very hard to maintain them in proper order, and if the shell fire did not destroy them it disorganized them to a considerable extent. Still there was comparatively little sickness during the first few months of the campaign—May, June and the early part of July, even though the disease was fairly prevalent in the Turkish lines, if the statement of prisoners and deserters are to be credited. You will remember

that in the last days of June and the first week in July the Turks abandoned their defensive warfare, and began an offensive, to drive the Allies into the sea. The result was that the Turks were badly beaten, and left some thousands of bodies lying in front of our lines. These bodies lay there some days putrefying and polluting the soil, causing the breeding of enormous swarms of various types of flies, blue bottles and other blow flies. Over this ground, ten days later, the Allies made an advance, and were able to hold a large part of it. In such ground they dug their trenches again, and I need not dilate upon the possible effects of working under such circumstances.

I will read you a description taken from a correspondent there as to the condition of the ground over which this advance was made. He says: "All the way up there is a litter of debris of the camp and of the fight. Scattered bodies, half protruding from the ground, hundreds of rifles and bayonets, thousands of rounds of ammunition, tools, bread, kits and blankets, in fact all debris of a camp. Great fires were burning at intervals. They are avoided by all, and give forth a horrid sickly stench for on these the hastily collected Turkish dead are being burnt, for it is all important to get the dead out of the way as quickly as possible in this hot climate. Add to this a baking sun, some stagnant pools of green water, an indescribable smell of decaying refuse, and over all and everywhere swarms of flies, and the picture is complete."

Practically what this correspondent has written bears out the statement of the men who came back from there as a description of conditions on their own part of the British line. It was after this advance over this kind of soil, with air fetid and water scant in amount, that dysentery began to assume marked proportions. The men had to fight everywhere with the flies for their food, and to the conditions that bred them we must ascribe the prevalence of dysentery.

In Nelson's "History of the War," written by Mr. Buchan, there are several paragraphs that summarize better than I can the conditions in our lines in the Peninsula as the summer advanced:

"The discomforts of the life in the Peninsula grew as the summer advanced and the heat waxed greater. The whole of our position was honeycombed with trenches and dug-outs, like a colony of sand martins in the bank of a river. There was no shade from nature, as the copses were only scrub. The sun beat down pitilessly on the acres of rock and gravel, and was reflected from the blue waters around. Our men were very close together, and the whole earth became tainted in spite of all our care. Remember that there was no movement

or chance of movement. The troops had to stand still in their stifling trenches and every acre of that butt end of Gallipoli was searched by the enemy's fire. Sunstroke cases were few for the sun of Gallipoli is not the sun of India; but fevers and dysentery began to take their toll. The scarcity of water, the difficult journeys for the sick and wounded down communication trenches and cliff roads, and the long voyage before Hospital was reached, intensified our discomfort. And everywhere fell a plague of flies. Men who had fought in South Africa remembered the curse of the fly on the veldt, but the South African scourge was feeble compared to the clouds which hung over the baked Peninsula."

We thought we were suffering very severely from fly infection in Egypt but as one of the Tommies said when we were complaining, for every fly in Egypt there is a battalion on the Peninsula! (Laughter.)

I am not competent in any way to criticize the military aspects of this expedition to Gallipoli, and even if I were I would not be permitted to do so; but I do believe, that when the true history of that expedition is written, we can write down as one of the causes of the failure the great prevalence of dysentery, because I know that there were over 60,000 cases of dysentery or dysenteric diarrhoea, which incapacitated the men from service.

Typhoid fever is spread in very much the same manner as dysentery, and the conditions for it should have been ideal, but typhoid fever has caused very little sickness and mortality so far among the British or Canadian troops, and we can only ascribe that infrequency of the disease to the beneficial effects which have followed typhoid inoculation. (Applause.)

Besides dealing with these dysentery cases, we had a large number of cases of certain other diseases of the East, such as infectious jaundice. Also many cases of malaria and dengue, or "break-bone fever," as it is called in the United States, which are mosquito carried; and sandfly fever carried by that insect. We had no previous experience with some of these diseases but being warned of their prevalence we took the precaution to look up their treatment in our medical literature.

Cholera we did not see,—of course we did not wish to see it,—but we were all inoculated against cholera as a preventive measure, as some cases of cholera occurred among the Turkish prisoners. Of typhus, which was such a curse in Serbia, we saw no cases, and heard of no cases among British troops at Gallipoli. Typhus is a louse-carried disease, and

by taking proper precautions our troops escaped it, as anyone who takes precaution against the spread of this disease may do.

We were dealing in our Hospital largely with British troops; the Australians and New Zealanders were looked after by their own Hospitals, as they had a considerable number of Hospitals established at Cairo, Alexandria and Port Said. The British soldiers made excellent patients, obedient, non-complaining, very plucky, and very grateful for all the attention given them. In fact, on the whole, they were a very good class of patients, although they had not the life and mischievous propensities of our own soldiers as gathered in our work at Shorncliffe. The Australians and New Zealanders are much like our own men, though less disciplined and more careless, but braver men I think never lived. (Applause.) We found it very advisable to transfer most of our Australians to their own Hospitals when possible; we found that it would not be very long, if there were more than two Australians in a ward with Tommies, before the Australians would get up an argument with the British Tommies, and point out certain defects in British character as viewed through Colonial eyes. (Laughter.) So for the discipline of our wards it was very advantageous to have them transferred.

I was in this Hospital about three months when I was recalled home to resume my College duties, much to my personal regret. Altogether I feel that our Canadian Hospitals are doing very good work; the officers and men are gaining much experience which will really be very valuable to them when they return to Canada.

Canada has done exceedingly well as far as medical service is concerned, as we have, besides furnishing our full quota of medical officers for our regiments, ambulance and hospitals for our own Canadian soldiers, lent at least five Hospitals to the British Government for the care of sick and wounded, and in addition furnished over 400 medical officers to the Royal Army Medical Corps. (Applause.) So I think I am justified in saying that the Canadian Medical Service has done its part fairly well in this war up to the present time.

In conclusion I want again to thank the officers and members of the Canadian Club for their courtesy in inviting me to address them to-day. I assure you I appreciate the opportunity afforded me, and I thank you for your attention. (Applause.)