

I sincerely trust that in the changes which are under consideration, by a committee in which, by the way, the Medical Department is but feebly represented in numbers and voting power, our organization may not be disturbed. It was developed by that liberal-minded statesman, Lord Landsdowne. It is prized by us, and has created *esprit de corps*, stimulating us to work up to our motto, "In arduis fidelis." The most urgent want now, and for years past, is an increase in the personnel, and given that increase, leave for study and a due proportion of home service will become possible, but to obtain that increase the Service must be made more attractive in one way or another. Even with the difficulties that existed in South Africa, which I have attempted to describe—and they were mainly due to military exigencies—I take consolation from the conclusion of the Royal Commission's report: "And all witnesses of experience in other wars are practically unanimous in the view, that taking it all in all, in no campaign have the sick and wounded been so well looked after as they have been in this." That is the verdict given after an exhaustive trial, and when the history of the war is written, that verdict, I am convinced, will be upheld.

Sir William MacCormac, President of the Royal College of Surgeons, England, in proposing the toast of "The Public Medical Services," observed that it seemed to be a matter of course that after every war an inquiry into the medical arrangements should be held. The Royal Commission sent to South Africa had found some minor defects, but on the whole its report was most favourable. But incompetent critics were not satisfied, and the effect of the injustice with which the Service had been treated was shown by the fact that there was at the present moment not a single candidate applying for admission to His Majesty's Medical Service. He thought it was impossible to say too much in the way of admiration of how Surgeon-General Jameson had met every requirement that had been made on him.

WAR EXPERIENCES OF A TERRITORIAL MEDICAL OFFICER.

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(Continued from page 281.)

CHAPTER XXII.—THE EXPEDITION ACROSS THE JORDAN.

At the time of my return the Corps was busy with plans for further activities. The new operation was in the eastern direction again and took the form of a fairly extensive raid. It was intended, if the move were successful, that we should hold on to part at least of the country occupied.

As has already been mentioned, we were now holding the western half of the Jordan Valley, from the Dead Sea to the Wadi Auja.

The Jordan, roughly, runs down the middle of the valley which at this part is about fourteen miles across and an almost flat plain. Jericho, the

only village of any size, is about five miles west of the Jordan, and therefore about two from the foot of the western hills.

Seven miles to the east of the Jordan the ground begins to rise rapidly again. As seen from the Mount of Olives, this rise looks in the distance like a wall, and constitutes the well-marked feature of the view across the Jordan known as the Mountains of Moab. In reality, though steep, it does not constitute an abrupt rise and is broken by wadis running down through it, up which there are a few rough tracks. There is only one real road. This is continuous with that which passing through Jericho crossed the Jordan by an iron bridge at a point known as Ghoraniyeh. The Turks had entirely destroyed this bridge in their retreat across the Jordan.

The road strikes the hills at a small village called Shunit Nimrin, where a well-marked wadi with a stream meets the plain from the hills. The road which is macadamized and well engineered, makes its way up the valley formed by this stream, and after about twelve miles ascent in a north-easterly direction reaches the top of the plateau at the town of Es Salt. This place, before the War, had a population of about fifteen thousand, of whom about four thousand were Christians. There was an English Mission Station there with an English doctor. The people are wild and fanatical, but well to do. From Es Salt the road crosses the high ground of Moab in a south-easterly direction for about twenty miles, until it meets the Hedjaz Railway at Amman. The railway comes down from Damascus and for the whole of its course keeps close to the desert margin.

Amman is the site of the Rabbah of Ammon of the Old Testament, besieged by Joab, David's captain (2 Samuel xii. 26-31), and eventually taken by him. David came over from Jerusalem to make the triumphal entry. This siege was the occasion of the disgraceful doing to death of Uriah, the Hittite, who was purposely put into the forefront that he might meet his end and no longer stand in the way of the king's lascivious design.

The idea of the operation in view was firstly to force the crossing of the Jordan, then to push rapidly up the hills to Es Salt, and finally the mounted troops were to make a raid on Amman and cut the railway at that point.

The troops detailed were the 60th Division with one brigade of the 53rd Division attached, and the Anzac Mounted Division. The command of the expedition was in the hands of Major-General Shea, G.O.C. of the 60th Division.

The Jordan, at this part of its course, is a very tortuous stream lying in a deep bed, and is lined on either side by a belt of undergrowth. Outside this is a series of white chalky hillocks formed by chalk deposits, referred to in the Bible as the "slime pits," a name which well describes the character of the ground during the rainy season. At this time of the year the river was not fordable and the stream was muddy and rapid. It varied in width from about fifteen to twenty yards.

It was originally intended to cross the river in three places. The main crossing was to be at Ghoraniyeh, where the Turkish bridge was built; another about six miles further down at Makhadet Hajla, and a third at a ford higher up.

Makhadet Hajla is the supposed site of the baptism of Christ by John the Baptist, and one of the regular places visited by pilgrims.

The operation began on March 21. Owing to the rapid flow of the stream the main crossing failed, but after considerable difficulty a crossing was effected at Makhadet Hajla. An officer swam across with a line and a party followed in a punt without being discovered; a pontoon bridge was fixed which enabled a force to get over and establish a "bridgehead."

I paid a visit to the field ambulances in the Jordan Valley on March 22, to meet the D.M.S., General Swan, and found everything working smoothly.

With the A.D.M.S. 60th Division and the O.C. 2/4th London Field Ambulance I went down to the Jordan banks at Makhadet Hajla and found a steady stream of casualties being brought across from the bridgehead which had just been established. It was easy to see how difficult a piece of work it had been to establish a crossing. The river almost up to the level of its banks was racing down, carrying in its current much floating and suspended matter. The Turks were only just across the other side, and there was an absolutely continuous rattle of machine-gun and rifle fire from both sides. The 79th Brigade of the 60th Division were nearly all across and the 80th were on their way down to join them. None of the cavalry were yet across. It was not till the following morning that the New Zealanders crossed and by a splendid rush cleared the east bank as far as Ghoraniyeh in time for the new bridge which was now being constructed there.

The push forward to Shunet Nimrin did not begin till March 25. The advance was rapid after a short resistance at the foot-hills at Shunet Nimrin. The Turks retired precipitately and allowed our troops to move up the valley without further opposition. Es Salt was occupied and the two brigades of the Anzac Division moved on to Amman with one brigade of the 60th Division.

After four days of heavy fighting the small force was unable to capture the town of Amman, though they managed to destroy pieces of the railway both north and south.

As fresh Turkish reinforcements were reaching Amman from the north, and also as Es Salt was threatened from across the Jordan, it was decided to withdraw the whole force in the night of March 30. The retreat was a very arduous one especially for the medical units who had to carry all their casualties with them; every available vehicle and camel was utilized for carriage of wounded. All the wounded were got away except two belonging to the Anzac Division who were too ill to be moved. The state of the roads, owing to the exceptionally bad weather made this one of the most

difficult pieces of medical work that had faced us. The arrangements were in the hands of the A.D.M.S. 60th Division, Colonel Dowsett, and reflect the greatest credit on him.

I visited the valley on the 29th and crossing at Ghoraniyeh, made my way to Shunet Nimrin, where the 2/5th London Field Ambulance had a dressing station. I made an attempt to get on up to Es Salt, which was then in our hands. It had rained heavily on the 25th and 26th and though beautifully fine that day, the state of the roads was terrible. After getting about six miles up the road, out of the twelve to be traversed, I was obliged to turn back as my Ford could get no further. The road, like all the Turkish ones of recent construction, is well designed but badly carried out. The soft stone of the country will not stand traffic in bad weather, and in this case had been churned up into mud often eight or nine inches deep.



2/4th Field Ambulance Camp near Jericho.

The valley of the Nimrin, up which the road winds, is very beautiful and at this time of the year was luxuriant with wild flowers.

Palestine in springtime is famous for its wild flowers, and certainly in the spring of 1918 it did not belie its reputation. Within a radius of not more than ten yards while eating my lunch one day by the roadside between Jerusalem and Ramleh I picked more than thirty varieties. It is not so much the number of varieties as the mass of varied and brilliant colour that gives its charm. The flower season, however, is short; six weeks and it is all over. There is no rain after April and the drought soon reduces the landscape to one of bare rocks with a tinge of reddish brown where there are deposits of the red fertile soil which lines the valleys and the hollows of the grey limestone hills.

The 2/4th Field Ambulance commanded by Lieutenant-Colonel Layton stationed at the foot of the hills on the Jerusalem side of the Jordan valley had been specially equipped with tents and a surgical operating unit. Serious

cases were dealt with there and retained comfortably in bed until they were fit to be moved back to Jerusalem. The entire distance from Amman to the nearest casualty clearing station at Jerusalem was over fifty miles. Cars could not be used beyond Es Salt and were available only for a small proportion of the casualties beyond the Jordan.

By the night of April 2 the total number of casualties, sick and wounded, evacuated during this expedition was one thousand, eight hundred and eighty-six.

Nine hundred and eighty-six prisoners were taken and a large number of Christian refugees, for whom accommodation had to be found in and around Jerusalem, came away with the troops from Es Salt for fear of reprisals.

After this the responsibility for the Jordan Valley was handed over to the Desert Corps, who conducted the next attempt across the Jordan a month later. In this the 60th Division were again employed, but under the directions of the staff of the Desert Corps. It was less successful than the first, as although the mounted troops, using a more northern route, managed to occupy Es Salt, the Turks who had been strongly reinforced could not be driven out of Shunet Nimrin.

April brought about great changes in the Egyptian Expeditionary Force.

The German advances on the Somme raised a great cry for reinforcements in France, and General Allenby had to part with a large proportion of his best troops at the very time that he was meditating and preparing for a further advance.

The 20th Corps lost the 74th Division on April 23, and the 21st Corps the 52nd, Lowland, Division. Besides the loss of these complete divisions preparations were made to part with twenty-five battalions from the other divisions and fill their places with Indian troops, many of whom at the time of their arrival were only half trained. All the divisions, except the 54th, belonging to the 21st Corps, were to be reconstructed on a mixed basis. Each infantry brigade was to consist of three Indian and one British battalion. The cavalry was to be changed in the same way, but to a less extent, as the Australian and New Zealand Mounted Brigades remained untouched. The artillery was left intact, except in the case of some of their drivers.

The changes profoundly affected the medical organizations. All our field ambulances had to be reconstructed and we had to part with a large proportion of our well-trying British personnel, and receive in their place for the most part raw drafts of Indians, most of whom were quite uneducated, and many of whom had not even been taught the rudiments of drill. They had, moreover, been recruited from all over India, and spoke many different languages. The best establishment for a field ambulance to do the medical work for a mixed division of the nature described above was a vexed and debated question.

The pre-War arrangement in India, where mixed brigades were the usual system, had been found hopelessly unsuitable when it came to bear the test of active service in Mesopotamia, as anyone with any grasp of the use of field ambulances in war might have foreseen.

To each Indian division were allotted four field ambulances, one British and three Indian, each equipped to look after the troops of their own race only.

It ought to have been obvious to anyone who had ever served with a field ambulance that this was quite unworkable in the field. If it is to be of any use a field ambulance must be in very close contact with the troops it is serving. By the mixed brigade system the British troops will be scattered all over the area occupied by a division during operations. To expect the one British field ambulance to deal with casualties from the whole of a division in action is obviously impossible. In consequence of the discovery of the impracticability of this arrangement when the Indian Army went to Mesopotamia, an alteration was made and a mixed unit known as a Combined Indian Field Ambulance was formed. This unit consisted of four sections, one British and three Indian. Three combined Indian field ambulances were allotted to each division. This was an improvement, but did not go far enough, because field ambulances practically always have to be split up on active service, and each separate part must be able to deal with both British and Indian soldiers. It is essential, therefore, that each section of a field ambulance should be organized on a mixed basis, and in the 20th Corps we drew up an establishment providing for this and obtained permission to use it provisionally. The British personnel of the British section was divided among the other three sections so as to make three composite ones.

The Indians make excellent stretcher bearers; they are brave, untiring and devoted, but from their lack of education can never be taught more than the barest rudiments of first-aid and nursing. Whereas the men that formed our old Territorial and New Army field ambulances had become quite first rate in both. The combination, when thoroughly shaken together, formed a really satisfactory unit, but it took time, tact and hard work to bring about the final result, especially as none of the new units had more than two officers who could speak to their Indian troops in their own language. Besides the language question there were great difficulties in some units in the matter of caste. No high caste Hindu will eat food that is prepared or handled by one of a lower caste. Each detachment working by itself has therefore to be provided with a cook of the right caste for the Hindus and another for the Mohammedans. On the other hand no high caste man will do any menial office for a patient so that a proportion of low caste men must also be provided for those duties. In practice things did not work out as badly as might be expected. The Indian, strong in his religious beliefs and very tenacious of maintaining his customs as far as they can be maintained, is not as a rule unwilling to do his bit in a tight

place, even though he may have to break some caste rule, for which he hopes to get absolution afterwards. The one thing necessary was that the officers should show they were in sympathy with the caste rules of their men and that they should do what was humanly possible to make the observance of such rules practicable.

It must be remembered that this formation of new units had to be done in the face of an enemy, while all the routine work of evacuation of sick and wounded from the front line to the casualty clearing station was going on as usual. It was never possible save on rare occasions to get the whole unit together for training which had, therefore, to be done spasmodically, piecemeal and by actual practice in the field. That so good a result was obtained in the few short months available before active operations were recommenced speaks volumes for the commanding officers and all their subordinates, British and Indian, who had to bear the brunt of the training work. I must say that when I first inspected some of the raw levies that came to us from India in the guise of organized field ambulances and compared them with the splendid highly trained material we were giving up to be converted into infantry, my heart sank within me, and I looked forward with the greatest anxiety to the day when the lives of our wounded and our own medical reputation would be in their hands. But as time went on patience and perseverance worked miracles. The majority of Indians are natural soldiers. Bravery, endurance and discipline are inherent and they only require good leading to be moulded into that shape which the mind of the leader has set up as his ideal. When the time of trial did come these units did not fail. They had great difficulties and strenuous work to face, but they got through without bringing discredit on the Service which is always open to criticism, and for which few allowances are made, even when much more is asked of it than is provided for in the book. Another difficulty in the new reorganization was the provision of a proper regimental service. According to the Indian establishment each battalion should have, in addition to its medical officer, an assistant surgeon, a grade of unqualified but highly trained dispensers, peculiar to India, who are capable of treating minor ailments and whose ministrations are not scorned even by Europeans in emergency. Unfortunately there were practically none of these available for the battalions that came to us. The civilian Indian dispensers, who were sent in very insufficient numbers to take their place, were practically useless. Also, too many of the Indian civil medical officers who came with the new troops were of very poor type and in some cases could hardly be trusted to go into action with their units. At length we obtained the concession that an R.A.M.C. corporal should be attached to each Indian unit to assist the medical officer and to take charge of and train the regimental stretcher bearers. This was a great help and though the N.C.O.'s position was a little difficult as he was often the only British N.C.O. in the unit, the system worked well. To get this concession from the autocrats who were directing the man power scheme and who had

little sympathy with the difficulties of medical administration, was like drawing blood out of a stone, but it was accomplished at last. It must be said in fairness that some of the civil Indian medical officers were most excellent and both in camp and in action maintained as high a standard of medical efficiency as was to be found in the best British units. No regular I.M.S. Officer, British or Indian, could be spared for regimental work, as they were all required for service in the field ambulances and hospitals.

(To be continued.)

Current Literature.

DUKE, H. L. **Some Recent Advances in the Biology of the Trypanosomes of Sleeping Sickness.** League of Nations. Epidemiological Report of the Health Section of the Secretariat. Nos. 10-12, 1936.

The author states that in spite of the uncertainty that still surrounds some of the major problems of human trypanosomiasis there are certain clear indications to direct those called upon to administer the infected territories in Africa.

It is clear that man must be protected not only from *G. palpalis*, but from game-feeding tsetse. In *palpalis* areas the control of sleeping sickness is simply a question of breaking contact between tsetse and man. The enormous numbers of affected people and the wide distribution of this tsetse along streams and rivers are the main obstacles to success. In game-tsetse areas the problem is not so difficult as the population affected is nothing like so extensive. Human settlement in game country must be protected from game tsetse. Where settlement is necessary in game-tsetse areas the game must be exterminated as part of the measures to ensure protection of the population against game tsetse.

Isolated settlements in areas mainly given over to tsetse supply the conditions favourable to the appearance of *T. rhodesiense*. Settlements in the vicinity of game tsetse should be under a form of supervision by which the natives are enabled to co-operate with the authorities to ensure their own protection. Experience in the Congo, in Tanganyika and the Southern Sudan has shown how much can be effected by concentration of scattered settlements in the campaign against tsetse.

Game preserves must be properly defined and measures devised to supervise visitors, black and white, who are liable to exposure to tsetse. The value of Bayer 205 as a prophylactic against infection must be borne in mind.

Simultaneously with measures to break contact between population and tsetse, there must be organization of the resources of the territories to ensure proper agricultural development.