

THE WAR.

MEDICAL ARRANGEMENTS OF THE BRITISH EXPEDITIONARY FORCE.

[From a Special Correspondent in Northern France.]

ANTISEPTIC PASTES.

I SHOULD have preferred to make no further mention of antiseptic pastes, but the reasons for their introduction and other circumstances give them so definite a place in the history of the treatment of wounds in this war that further reference to them is inevitable.

In my previous note on the subject it was indicated that the clinical results of a certain treatment, the introduction of which was ascribed to Sir W. Watson Cheyne, were not happy, and gravely disaccorded with the laboratory results on which advocacy of its use had been based. I have now to add that these clinical results were duly weighed at a recent meeting of the kind of Advisory Board constituted by the consultants to the army in France and the officers of the general staff of the D.G.M.S., and it was decided that use of the treatment should be no longer countenanced.

This treatment is one the devising of which was definitely foreshadowed as long as seven months ago, and, thanks to the references that have been made to it in the BRITISH MEDICAL JOURNAL, those out here have been able to follow its development not only with interest but with some closeness.

In an address to the Medical Society of London, published in the BRITISH MEDICAL JOURNAL of November 21st, 1914, p. 865, Sir W. Watson Cheyne gave his views as to the treatment that ought to be adopted in dealing with the gravely septic wounds seen in this war. The outstanding or differentiating feature of the treatment was the recommendation that all ordinary wounds coming under observation within twenty-four hours, and all earth-soiled wounds within forty-eight hours of the time of their infliction, should have their interiors carefully painted with liquid carbolic acid. After the lapse of the periods stated all antiseptics ought to be avoided in dealing with the interiors of wounds—even in wounds which had not been painted—though washing them out with hydrogen peroxide was relatively harmless. When circumstances permitted the wounds to be painted as described—by a surgeon, of course, and under an anaesthetic if necessary—their septicity would be abolished and their subsequent progress satisfactory. Still it would be a great advantage if even initial sepsis could be avoided, and it seemed possible that this might be effected by providing a strongly antiseptic bougie or something of that kind, which the soldier himself, or a first-aid orderly, could pop into his wound forthwith.

Despite the fact that to those personally acquainted with the condition of wounds at the front the idea of painting them with liquefied carbolic acid did not seem very hopeful, Sir W. Watson Cheyne's advice on the subject did not go unheeded. The treatment, in short, was duly applied by surgeons attached to the advanced medical formations. But definite reasons for abandoning it were soon perceived. While at the best it was no more effective than the simpler process of douching wounds with iodine, its use imported some very distinct risks.

This failure did not, however, in itself lessen interest in Sir W. Watson Cheyne's allusion to his endeavours to prevent sepsis altogether, and to this subject he returned in his Hunterian oration before the Royal College of Surgeons. He then gave some account of the laboratory work done by a Naval Medical Research Committee of which he was president. It had devised an effective destructor of septic organisms in the shape of a paste containing lanoline, white wax, and cresol, which, under the title of cresol paste, could be introduced into wounds out of a collapsible tube.

About the same time Dr. Albert Wilson recorded in the BRITISH MEDICAL JOURNAL some clinical results obtained by him in a French Red Cross Hospital with salicylic acid and some laboratory experiments performed by a colleague at his request, and this led a member of the committee mentioned to state in the JOURNAL that salicylic acid was one of the drugs with which it had been experimenting, and to indicate that, very happily, fruitful results seemed

in view. In the same issue (March 6th), moreover, a general account of the work of Sir W. Watson Cheyne's committee appeared in the form of an editorial on the antiseptic treatment of wounds; and on March 20th Dr. Seligman again drew attention to the outstanding statement in Sir W. Watson Cheyne's Hunterian oration by mentioning his experience many years previously with a paste of somewhat similar composition to that of the remedy advised by Sir Watson Cheyne.

Information as to scientific researches in progress at home naturally spreads somewhat slowly among men so preoccupied with clinical work of instant importance as are the surgeons over here. Nevertheless, as a consequence of the foregoing circumstances, most men were already fairly conversant with the general idea of "borsal powder and cresol paste" treatment, when, on May 8th, p. 812, the BRITISH MEDICAL JOURNAL again made reference to it, and suggested that it might be worth while to try it, despite the conclusions which it seemed must be based on Sir Almroth Wright's work in France itself. The acquaintance of a certain number with the treatment was at that time something more than theoretical, for the suggested trial had already commenced.

That trial was continued for about a month, the net outcome being that already stated—namely, that it was decided that "the Watson Cheyne treatment," as it was colloquially termed, should not be used any longer. This decision was based on a consideration of reports received from various quarters tending to show that the remedy could not safely be served out for use by all and sundry; that even when applied by skilled persons the results were liable to be very unhappy, the cases arriving at the base hospitals with blocked drainage and an even graver degree of sepsis than usual; and that the most that could be said in its favour was that when applied to widely open, superficial wounds, and used not as originally designed, but much like any other antiseptic, such wounds acquired and preserved a healthy character, though not demonstrably more quickly or assuredly than by other means.

This result will not surprise those who fully realize the character and extent of the infection of the wounds seen in this war, as also the patience, ingenuity, and skill that surgeons at the front have long since shown in their endeavours to bring chemical antiseptics effectively to bear upon it. Nevertheless, the result will be deeply regretted by all, for apart from the fact that a remedy such as Sir W. Watson Cheyne and his colleagues believed they had produced would be of untold value, this particular one arrived in France better fathered than any of its predecessors. Nevertheless, it is well that the facts should be promptly recognized and the failure be frankly acknowledged, so that men's thoughts may be turned in other directions.

When the consignments of this remedy reached France it was distributed to certain advanced medical formations and applied by the officers attached thereto, the results being gauged by these if they could keep the cases, and otherwise by the surgeons at the base hospitals to which the cases were sent. Nor were such officers left to apply the remedy according to their own lights, but were enabled to do so in a fashion in keeping with the intentions of its inventors, thanks to being supplied with printed copies of the instructions for its use sent to France by Sir W. Watson Cheyne. Furthermore, it was not only at these particular formations that borsal powder and cresol paste treatment was used. It was applied also to a large number of cases at other advanced medical units by a temporary officer of the Royal Army Medical Corps who had had the advantage of studying under Sir W. Watson Cheyne's own guidance the work done in the laboratories of the Naval Medical Research Committee. It is on the basis of the reports received from these various sources that the verdict stated was delivered.

GAS POISONING.

After about a fortnight, during which very few cases of gas poisoning arrived at the Boulogne base, and those only light ones, there has been a fresh set of cases. During a recent night attack the Germans managed to use gas with success, the result being that the wards were once more full of gas cases of varying severity. After a general inspection of them I brought away an impression that in some

cases the superficial phenomena were somewhat different from those accompanying the first set of cases; but this impression, I found, was not shared by colleagues. Nevertheless it is worth mentioning, for it now seems to be clear that the underlying cause of the general phenomena of gas poisoning cannot in all cases be the same.

I saw, for instance, yesterday the remains of a leaden shell which had been dug out of the ground just behind the trenches occupied by the men who had been gassed. Despite the number of days that had elapsed since it was fired, the mud in its interior had a strong smell. I could not identify the odour, but it very closely resembled that of a hyacinth. After inhaling it strongly several times, I seemed to experience a certain "fullness" in the head. This may have been auto suggestion, but I do not think so; for I was afterwards told that the sappers who had dug it up—bending closely to the ground the while—had turned giddy and sick.

The explanation of this last set of gas casualties would seem to be double. Most of the men were asleep in their dug-outs when the gas cloud reached the trenches, and were already half stifled by the time they awakened. There is also some tendency in regiments which have not previously undergone gas attacks for the men to discount its dangers, so that they are careless about keeping their respirators handy; moreover, not all units had been supplied with the finally approved pattern of gas protection outfit. All these loopholes are now being steadily closed, a respirator drill having been instituted as a feature of daily life.

In regard to the effects of gas poisoning as seen in the *post-mortem* room, I gave some details in a note about a month ago. The cases then in question were comparatively late cases—that is to say, cases which had not succumbed until they had reached a base. The phenomena in very early cases seem to be of the same general character, but nevertheless present some differences. Thus, in the cases seen at Boulogne, a striking point was the intensely cyanotic condition of the kidneys. In cases which died, self-drowned within a few hours of inhalation of the gas, this condition did not exist, the kidneys being merely somewhat congested. Other points observed were submucous haemorrhages in the stomach (subpleural haemorrhages I saw at Boulogne), as well as on the surface of the lung, dilatations of the right side of the heart, and its blockage with fresh, not *ante-mortem*, clots, congestion of the respiratory mucosa in the neighbourhood of the trachea, and a very marked condition of emphysema along the edges of the lungs, the divisions between the alveoli being obliterated. It was also found that the blood-clotting period in still living patients was materially reduced, and that the liquid coughed up from the lungs was almost pure serum. In four cases there was an especially curious feature. The patients were the subjects of well marked surgical emphysema, extending from the neck down to the top of the thighs. All these cases recovered, so that the precise cause of the emphysema was not ascertained. An observation in an ordinary case seen *post-mortem* suggested, however, a possible explanation. There was a large submucous haemorrhage at the base of the trachea, and it was easy to imagine this quickly becoming an ulcer and allowing air to escape from the peritracheal tissue during coughing and straining.

CASUALTIES IN THE MEDICAL SERVICES.

ROYAL NAVY.

DURING the three days May 25th to 27th the British navy lost three ships, the battleships *Triumph*, 11,985 tons, and *Majestic*, 14,900 tons, torpedoed in the Dardanelles, on May 25th and 27th respectively, and the *Princess Irene*, an armed merchantman, one of the Canadian Pacific Line, blown up in Sheerness Harbour on May 27th. In the first two cases, fortunately, the loss of life was small—3 officers and 53 men on the *Triumph* and 49 men on the *Majestic*—but small proportions of the crew of a battleship. On the *Princess Irene*, on the other hand, the loss of life was great, the whole ship's complement of 130, with only four exceptions (three men ashore at the time and one picked up alive), and 76 dockyard artificers who were working on her at the time. According to the last *Navy List* available on this point, the medical officers on the *Triumph* were Staff Surgeon G. M. Eastment, Surgeons David G. Arthur, and A. J. Patterson; on the *Majestic* Fleet Surgeon Edwin Follitt, Surgeon Richard F. Quinton, and temporary

Surgeon Arnold Viney. The *Princess Irene* carried only one medical officer, Surgeon Frederick Whitby Quirke, R.N., who perished in the explosion. He was educated at St. Mary's, took the M.R.C.S. and L.R.C.P. Lond. in 1908, and entered the navy as surgeon on November 6th, 1903. The *January Navy List* shows him as serving on H.M.S. *Hannibal*.

Wounded.—Surgeon E. G. Schlesinger, R.N., Howe Battalion (Dardanelles).

ARMY.

Died of Wounds.

Captain Gordon Clunes McKay Mathison, of the 5th Australian Medical Corps, who is reported in the casualty list of June 1st as having died of wounds, was educated at Melbourne, where he had a very distinguished career. He graduated M.B. Melb. in 1905, B.S. in 1906, and M.D. in 1911; he took first class honours in chemistry, physiology, medicine, and surgery, had filled the posts of house-physician and house-surgeon at Melbourne Hospital, medical tutor of Ormond College, Melbourne University, and Sharpey scholar and assistant in physiology at University College, London. In 1910 he was appointed a Beit Memorial Fellow to make researches at the Institute of Physiology, University College, London, into the nervous control of respiration, the effect on respiration of changes in the chemical composition of the blood, and the mechanism of biliary secretion and its general effect in digestive processes. He contributed a paper on the estimation of ammonia in urine to the *BRITISH MEDICAL JOURNAL*, and on phosphorus in urine to the *Bio-Chemical Journal*. He had also written on heart-block during asphyxia, and on the action of asphyxia on the spinal cord and medullary centres.

Wounded and Suffering from Gas Poisoning.

Captain L. C. Hayes, R.A.M.C.

Wounded.

Major H. L. de Legh, R.A.M.C.(T.F.).

Captain H. B. Cunningham, R.A.M.C.(T.F.) (Dardanelles).

Captain W. E. F. Tinley, R.A.M.C.(T.F.).

Captain E. U. Russell, R.A.M.C.

Captain J. Murdoch, R.A.M.C.(T.F.).

Lieutenant (Special Reserve) J. P. Mitchell, R.A.M.C.

NOTES.

THE KING GEORGE HOSPITAL.

AN article appeared in the *Daily Express* of May 29th, headed "The Medical Muddle," in the course of which it was suggested that the resident medical officers at the King George Hospital might be more suitably employed at the front, and that the work of the London military hospitals, consisting in many instances of "attending to convalescent soldiers and those suffering from minor ailments (practically out-patients) could be done in three or four hours a day by local practitioners." The article also suggested that the salaries attached to the appointments were unduly high.

Mr. Edmund Owen has been good enough to inform us that when Sir Frederick Treves and he were asked to select the honorary visiting staff of the King George Hospital they got together what they considered an extremely strong body of physicians and surgeons, whose names would command respect all through the profession. Their anxiety was to do the very best possible for the sick and wounded soldiers, and it was realized that many of the patients admitted would be suffering from extremely serious lesions, and that a large proportion of the injuries would be suppurating wounds. As the risks of secondary haemorrhage would always be great, it was felt that the surgeons should have allocated to them a staff of resident medical officers who would be constantly at hand to deal with emergencies. It was considered that a rota of general practitioners to carry out the duties of resident medical officers would not be convenient and satisfactory. They could not give the kind of service required unless they devoted their whole time to the duties. Mr. Edmund Owen added that he had heard suggestions that the resident medical staff was unnecessarily large, but he could not admit that, having regard to the fact that so large a proportion of the patients were likely to be in a serious condition. Moreover, not only were there twenty-five surgeons operating in the course of

the week, but the staff also included six honorary dental surgeons, six surgeons in the throat and ear department, and several in the ophthalmological department, all of whom would require help in their departments. When the selection of resident medical officers was begun some months ago it was found that practitioners having the necessary experience could only be secured by offering the pay of lieutenants in the R.A.M.C.

In reply to an inquiry as to whether it would have been possible to limit the appointments to men beyond the age at which they would be accepted for military service abroad, Mr. Owen said that some of the resident medical officers were over 40 years of age. Apart from the difficulty of obtaining older men already established in practice, he believed that younger men were best suited to the position of resident medical officers.

SERBIA.

Typhus which wrought such terrible ravages in Serbia in the early part of the present year is now said to be almost stamped out. Relapsing fever and enteric also claimed a large tribute of victims, and cholera and small-pox threatened to add to the horror of the situation. The origin of the typhus and relapsing fever infections was traced to Valjevo, where these diseases broke out among the Austrian prisoners and spread over Serbia. Nish and Kragujevatz in particular were for a time like hospitals without sanitary arrangements, baths, or even beds.

The efforts of this country and America to help in checking the ravages of the epidemics have been briefly described in the BRITISH MEDICAL JOURNAL, but the story is far from complete. An account of the work of some of the hospital units sent out from this country, including the Serbian Relief Fund, the Wounded Allies' Relief Hospital, and the Scottish Women's Hospital, appeared in the *Times* of May 28th. On February 15th the British Army Medical Service sent out a sanitary mission under Colonel Hunter and Lieutenant-Colonel Slammers. They reached Salonika early in March, and at once proceeded to Nish, where they were warmly welcomed by the Serbian Government.

Apart from the wounded, there were 37,000 sick in the army, including 15,000 cases of fever, of whom more than 8,000 were suffering from typhus. There were also nearly 8,000 cases of relapsing fever, and nearly 1,500 cases of enteric. It was difficult to ascertain precisely the condition of the civil population; but in Kragujevatz alone, a town of 20,000 inhabitants, there were 1,400 cases of typhus, and the number of deaths in three months had been 3,400, or thirty-four times the normal. By all indications typhus and relapsing fever were increasing rapidly.

Vigorous measures for disinfecting the hospitals and destroying lice were at once taken by the sanitary staff. Lieutenant-Colonel Slammers fitted up wine barrels as disinfectors, and distributed them through the towns and villages. "Clothes, blankets, or linen treated in these were free of vermin in half an hour." Among preventive measures one of the chief was inoculation against cholera. Whenever it was possible bacteriological laboratories were established where the investigation of the sources of the various infections was carried out. After several weeks of strenuous work the scourges began to be got under control. "On April 5th there were 8,198 cases of typhus in hospital; on April 18th only 948. In the same period relapsing fever had declined from 7,693 cases to 4,861, and enteric from 1,443 to 1,126."

Experiences of a Dresser.

Blackwood's Magazine for June publishes the diary of Miss E. L. Fraser, a dresser in the Serbian Unit of the Scottish Women's Hospital. She gives a graphic description of the conditions in which they had to work, which recall the worst one can imagine of mediaeval hospitals when there was no attempt at sanitation, and when several patients suffering from different diseases and injuries were crowded into one bed or lay huddled together on the floor where they could conveniently exchange microbes. She worked at Kragujevatz. Speaking of Dr. Ross (who has since died), she says:

She is working in a fever hospital here, where there are also two Greek doctors, and she told us that conditions there are really terrible. It is shockingly dirty, of course, alive with vermin, and with no nursing at all; the patients are never even washed. It is very overcrowded; one finds a recurrent fever, a typhus, and a dysentery case lying three on two mattresses and exchanging germs. There is not even enough food. It is

really heart-breaking work for one doctor or nurse from our country to offer service to a hospital like this. Several are doing it, including three nurses who came out here with us. They feel almost hopeless, as there is so much to do, and find men are dying like flies daily from sheer neglect.

Afterwards Miss Fraser visited the First Reserve Hospital, where the typhus wards were under the charge of Dr. Ross. She says:

They say that twenty-five doctors have died there of fever since the war began. Six are ill of typhus now, mostly Greek doctors, and most of these will die. There are other fevers as well, but we saw only the typhus wards. There are long, connected corridors, and here the patients were lying so closely together on mattresses on the floor that one could not pass between them, and the doctors must walk on the mattresses to get to a patient. The air was quite indescribable; it was like entering a sewer. We saw Dr. Ross's own room, which opened off a dark corridor crowded with beds, on which one could dimly see patients lying in the dark. She took us through her typhus wards, and here we walked carefully, keeping well away from the beds to avoid the swarming vermin which carry the disease. The air was even fouler than in the corridors. I have seen some of the worst slum dwellings one can find in Britain, but never anything to approach these wards in filth and squalor. Men lay crowded together on mattresses. We saw three shivering together on two mattresses. No one washes them; they lie there in the weakness of fever, becoming filthier and filthier. When a man dies the next comer is put straight on to the same dirty mattress, between the same loathsome sheets. . . . This town is terrible; but they say that Valjevo, farther north, is worse still, that more than 3,000 men lie there untended!

This gives an indication of the state of things in January. Yet Miss Fraser, who is enthusiastic about Serbia, says that there was "never a word of complaint, never a question of surrender."

SCOTTISH WOMEN'S HOSPITALS COMMITTEE.

Girton and Newnham Colleges have collected £1,800, which they have given to the Committee of the Scottish Women's Hospitals for Foreign Service. At the request of the French military authorities the committee proposes to use the money to equip a hospital unit of 200 beds for the wounded at Troyes. It will be established in the Chateau Chataloup, and the patients will be under canvas.

MONTENEGRO.

The Wounded Allies' Relief Committee has sent a typhus hospital unit to Montenegro. It left England on June 3rd. Dr. Gerard Carré is the head of the unit, and the other members are Dr. Lillias Hamilton, Head of Studley Horticultural College; Dr. Isobel Ormiston, Chief Medical Inspector of Schools to the Government of Tasmania; and Dr. Slater, a lady who has practised many years at Lucknow. There is a matron with seven nurses and one male nurse attendant, besides a compounder, a secretary, and a storekeeper. Another matron and five other nurses will go out later. Colonel Joseph A'hearne, V.D., who has been appointed medical superintendent of the Committee's Serbian hospital, will travel with the party. It will take large quantities of stores and equipment, the unit being entirely self-supporting. The hospital will have 200 beds, and its initial work will be to assist in checking typhus in the Ipek and Djakora district. Later it is hoped that the decline in the epidemic may permit of the unit being adapted for surgical purposes, a transformation which is already contemplated in the case of the Committee's Serbian unit now stationed at Kragujevatz.

MEDICAL OFFICERS WANTED.

1st East Anglian Field Ambulance.

Two medical officers are required at once for this unit, about to proceed abroad. Applications to Officer Commanding, 1st East Anglian Field Ambulance, Watford, Herts.

King George Hospital.

A staff of anaesthetists has been appointed to the King George Hospital, and arrangements have been made so that only one attendance is required in each week. There are still vacancies for those who can help on Tuesday mornings, Tuesday afternoons, Thursday mornings, and Friday mornings.

THE Crown Prince of Serbia has invested Sir Thomas Lipton with the insignia of Grand Commander of the Order of Saint Sava, in recognition of the work done by him in supplying help in the epidemic of typhus, which is now virtually extinct.

THE James Buchanan Brady Urological Institute of the Johns Hopkins Hospital, the foundation of which was made possible by a gift of £30,000 from Mr. Brady, was formally opened on May 4th. Addresses were delivered by Dr. Hugh H. Young, head of the institute, and by Dr. William H. Welch.