The cases were treated by clipping away the whole of the epidermis involved, on the same plan which best ensures eradication of the digital erysipelatoid vesication which we have at home. By means of dissection forceps and fine scissors the whole of the affected cuticle was removed to the very margin of the involved area, and even, if possible, beyond it. This is easily done in the home disease, but more difficult in the veld sores. The cause of the difficulty lies in the fact that while in the former there exists vesiculation, that is, a real separation of the epidermis by a cavity beneath it, in veld sores none such exists, the epidermis being thickened and saturated with an infiltrating gelatinous or mucoid serum, so that it resembles the structure of the cornea, only being less transparent, appearing more in colour and consistence like the flesh of a barely ripe green-gage or plum.

After as much epidermis as possible has been removed, any good antiseptic, such as carbolic or salicylic acid, applied in solution, or, still better, in vaseline, speedily brings about a cure.

SOME OBSERVATIONS ON VELD SORE.

By W. H. HARLAND, M.R.C.S., L.R.C.P.,

Medical Officer to the 17th Lancers, Field Force, South Africa.

By the term "veld sore" should be described a cutaneous lesion distinct from the so-called veld sore following some injury or abrasion of the skin, which has become dirty and infected, and assumes somewhat the same character as the lesion I am about to describe. Such cases, however, form a large proportion of the diseases to be treated by the medical officers of a regiment continually on the trek.

I have personally been lately the subject of two attacks of veld sores, and thus have had excellent opportunities of observing closely their clinical history. The veld sore is generally first noticed as a small papule, about the size of a large pin's head; the presence of the papule, which rapidly increases in size, is often preceded by a slight amount of itching or smarting at the site of the lesion. The papule is filled with clear, yellowish, serous fluid, which gradually in the course of a day or two becomes turbid; the skin covering the papule is very thin, and easily broken. The papule usually increases in size if not broken, or if it is not covered by some protective material.

The usual characters, when seen by the surgeon for treatment, are a somewhat painful, dirty-looking sore, the size varying from that of a threepenny bit (1.6 cm.) to a five shilling piece (3.8 cm.), covered with a dirty scab, exuding serum and pus freely. The sores are generally multiple, and their position almost invariably on the extensor aspect of the hands and fingers. If the papule is incised before it reaches the state above described, the base is seen to be pale, the edges dirty, purulent looking, and generally appear to be exuding sero-pus. Almost invariably accompanying the sore in the form which is brought for treatment—that is, the dirty-looking variety—is a certain amount of lymphangitis, and the epitrochlear and axillary glands are tender and enlarged. Constitutional symptoms, as elevation of temperature, headache, constipation, are often present. Occasionally the patient presents himself for treatment with an enormous flat pustule, in some cases completely covering the back of the hand, and extending upwards under the skin of the forearm.

The treatment of these sores is simple. Incisions are made into the papule or pustule if necessary, and in most cases the frequent application of boric or carbolic fomentations, with rest of the affected limb, together with the administration of a mild aperient, usually causes the sore to lose its painful character, gives it a healthy appearance, and removes the attendant adeno-lymphangitis and constitutional symptoms. The after-application of a simple dressing of boric ointment ensures complete healing; the healing process is generally slow, but this is often due to the early enforced use of the limb, when on the march or when fighting. A feature of the lesion is the scarring which ensues, the scar remaining smooth and bluish, and very obvious for some considerable time after healing.

Veld sores occur generally in otherwise perfectly healthy

men who live under the best conditions, are well supplied with good food, a good amount of ripe fruit, and live the healthiest of open-air lives. I have noticed their frequency in mounted troops; my experience is that they are rare in infantry soldiers, the so-called veld sores seen in them, often in base hospitals, being infected sores due to injuries or parasites, or in debilitated subjects. The form of veld sores which I have described is not found, or very rarely, in men who are inhabitants of this country; the Colonial troops are practically immune, as are also the Boers.

Any sore following a cutaneous injury or abrasion, and becoming infected, is liable to be wrongfully called a veld sore. Possibly continual exposure to a very fierce sun and to a hot wind might cause the blisters in the first place, but the greater frequency of their existence in mounted men and men who are continually in contact with horses, as compared with infantrymen—their hands being exposed to an equal extent to the sun and wind—is against this. Another possible cause which has been suggested is the bite of the insect known as the tick, which infests the veld; but were this so the foot-soldier would be more subject to the lesion than the horse-soldier, which is not the case. The most probable cause, in my opinion, is the sting of large brown horse-flies, which, especially at the present time (February), occur in large numbers, and frequently settle for a moment on the unprotected back of the hand or fingers. The cases of veld sore at the present time are very numerous, in proportion, and there has been a great increase in the numbers of this brown horse-fly. Unfortunately, being continually on the trek with a flying column, I have had no opportunity of making a microscopical or bacteriological examination of the fluid from the sores.

REPORT ON 295 CASES OF ENTERIC FEVER, GENERAL HOSPITAL, TIN TOWN, LADYSMITH.

By DAVID MELVILLE, M.D., M.C.,

District Surgeon, Tsoolo; late Civil Surgeon to Natal Field Force.

DURING the months of May, June, and April, 1900, enteric fever was very prevalent in the neighbourhood of Ladysmith, consequently large numbers of enteric cases were admitted to the General Hospital, Tin Town, Ladysmith. These notes are taken from the records of 295 cases of enteric fever which were under my care whilst stationed at that hospital. The disease was of a malignant type, the symptoms differing considerably from the general run of cases in England, but resembling enteric as usually seen in Cape Colony.

The Rose Rash.—In about 40 per cent. of cases no rash was found, and in about 20 per cent. the rose spots were found thickly scattered over the trunk and the extremities, whilst in the remaining 40 per cent. the spots followed the usual distribution. In Cape Colony the rash is more frequently absent than present. In 1898 there was an epidemic of enteric in the Tsoolo District of Griqualand East. I saw some hundreds of cases but was only able to find the rash in exceptional instances. There was no instance of the rash being thickly scattered over the trunk and the extremities. The cases in which the thick rash was found all seemed to come from the one locality—the south-east of Lombard's Kopje. I had no cases from any other locality. It is also interesting to note that the cases of dysentery coming from the same place usually had an attack of jaundice during their convalescence from the dysentery. Many cases came from the same camps either with no spots or with the usual eruption. What influence locality has on the eruption it would be difficult to say. The presence, absence, or excess of the eruption seemed to have no bearing on the severity of the attack as far as I could make out.

Diarrhoea.—In only 5 of my cases in Ladysmith was there any diarrhoea, and in these cases lead and opium pills acted like a charm. Constipation, on the other hand, was constant and difficult to deal with. This condition is a feature of the disease as met with in South Africa.

Cerebral Symptoms.—As a general rule the delirium was of the rambling or muttering type, giving rise to no anxiety and calling for no treatment. In 2 cases there was violent

maniacal excitement necessitating the constant attention of two or more orderlies. One of these cases ended fatally.

General Symptoms.—The temperature, aspect of the patient, pulse, breathing, spleen, urine, and pupils, together with anorexia, abdominal symptoms, etc., were all of the usual character associated with this disease, and call for no special mention.

Inoculation.—Of my 295 cases 30 were inoculated, the remaining 265 being unprotected in this manner. A few statistics comparing the results obtained in the two classes of cases is not devoid of interest. From the following table it will be observed that the uninoculated cases compare very favourably with the inoculated. The complications were more numerous, the duration of the fever longer, and the death-rate higher in the inoculated.

	No. of Cases.	Complications.		Duration of Fever Days.	Deaths.	
		No. of Cases.	Per-centage.		No. of Deaths.	Per-centage.
Inoculated ...	30	12	40.00	29.57	2	6.67
Uninoculated...	265	55	20.75	21.38	5	1.89
Total ...	295	67	22.71	22.21	7	2.38

The subjoined table sets forth the nature of the various complications met with compared with those met with in the inoculated:

	Relapse.	Malaria.	Pneumonia.	Hæmorrhage.	Thrombosis.	Cerebral.	Peritonitis.	Erysipelas.	Total.
Inoculated ...	5	2	2	1	1	1	—	—	12
Uninoculated ...	18	3	9	16	4	1	3	1	55
Total ...	23	5	11	17	5	2	3	1	67

Hæmorrhage, the most frequent complication of enteric, occurred in 17, or 5.77 per cent. of these cases. In the majority of cases the hæmorrhage was not very severe, but in several it was copious. Three cases will illustrate this.

CASE I.—Private R. Y., 1st Devons, aged 32 years, transferred from field hospital on May 17th, 1900, after ten days illness, with temperature of 102° F., muttering delirium, nervous prostration, enlarged spleen, abdomen distended, and usual symptoms of typhoid. The temperature was normal on May 22nd, but rose again on May 27th, reaching 102.2° F. on May 29th and on the evening of that day he had a severe hæmorrhage. He had eight hæmorrhages on May 30th, and on the next day one severe hæmorrhage, followed by six more, but these were only slight. During the next seven days there were several slight hæmorrhages each day. From that date the patient made steady progress, and was sent to England convalescent.

CASE II.—Private H. C., 13th Hussars, aged 32 years, transferred from field hospital after an illness of one month, on May 18th, 1900, with a temperature of 104.8° F., delirium, nervous prostration, cardiac failure, face congestion, spleen much enlarged, and abdomen greatly distended. On the 23rd the temperature was 104° F.; patient had two severe hæmorrhages, followed by two more in the night. On the 24th there were three more severe hæmorrhages, and the patient died that evening from syncope. No post-mortem examination was made. The treatment adopted in these cases was icebags on the abdomen, ice to suck, subcutaneous injections of morphine and ergotine, whilst a mixture of brandy and champagne was given freely. The diet was, of course, limited to milk. Gallic acid, acetate of lead, turpentine, etc., were tried, but were not so good as the injection of morphine and ergotine.

CASE III.—Private J. D., 13th Hussars, aged 24 years, transferred from field hospital on May 18th, 1900, after an illness of ten days, with a temperature of 104.2° F., and well-marked symptoms of enteric. The temperature became normal on May 30th. On June 4th he had a severe attack of epistaxis, lasting several hours. There were further attacks on the four succeeding days, when they stopped, and were not repeated. After the second attack, however, the trunk and extremities were found to be covered with small petechiæ, whilst here and there larger extravasations were to be met with. There was a large extravasation under the skin of each calf. These were true purpura spots. This was the only case of this kind I met with. The patient made a good recovery.

Peritonitis.—Perforation, which occurred in 3 cases, all of which terminated fatally, was the cause of death in 43 per cent. of fatal cases. This is very high percentage, but was

due to errors of diet on the part of the patient in each of the 3 cases making up this percentage—in one from eating bread, another from eating currant buns, and the third from eating butterscotch. The patients obtained these articles from well-meaning but injudicious friends during the absence of the nurse, and ate them hurriedly in fear of the nurse returning before they should have finished.

Pneumonia.—This complication became very common in the month of June. Previously there had not been a case in hospital. There were 11 cases in all, or 16.4 per cent. of complications, and of these 1—double pneumonia—ended fatally. In this country pneumonia is very fatal, and is one of the commonest causes of death at this time of the year—the only wonder is that so few cases came under observation. There was nothing unusual in the type of case.

Thrombosis.—This occurred in 5 cases, or 7.4 per cent. of complications. Embolism did not result in any instance, nor did the condition give rise to any trouble.

Relapse.—Relapse occurred in 23 cases, 34.4 per cent. of complications of 7.8 per cent. of cases under review. This is rather a high percentage, but by no means abnormal. The interval between the first attack, and the beginning of the second varied. It was three days in 6, four days in 10, five days in 4, eight days in 1, nine days in 1, and ten days in 1, making the average interval between the attacks 4.5 days. In no instance was there a second relapse. These relapses were of a more or less severe character, the patient passing through a typical attack of enteric fever, extending over a period of from fourteen to twenty days. All the patients made a satisfactory recovery.

Malarial Type.—There were 5 of these cases, or 7.4 per cent. of complications. These cases were very interesting, for as the typhoid fever came down the malarial element asserted itself. In 3 instances the three-day malarial type of fever was well marked; in one case there was a rigor every day, and the other case was of a four-day type. All these cases quickly subsided on the administration of quinine, and gave rise to no further trouble.

"Typhoid Toes."—There was one instance of this curious condition which is worth recording, since cases of this nature are by no means numerous.

Corporal R., 1st Royal Dragoons, aged 23 years. Transferred from field hospital to Ladysmith on May 14th, 1900, after an illness extending over twenty-five days. There were all the usual signs and symptoms of enteric. The temperature became normal on May 24th, and so remained until May 31st, when a slight rise took place. On that day the patient complained of intense pain in the toes of both feet. On examination of the parts all the toes of each foot were found to be normal in every respect with the single exception that pressure of the slightest nature gave rise to excessive pain; so marked was the hyperæsthesia that the weight of the sheet made him cry out with pain. This condition prevailed all over the toes as far as the metatarso-phalangeal joint, but beyond that the tissues were apparently normal. The patient could not move the toes without experiencing severe pain. So tender were the toes that a cradle had to be placed over the feet to prevent even the bedclothes from touching them. The condition remained the same for several days, and then gradually subsided, and by the end of a fortnight he could move his toes freely, and could bear pressure to any extent without experiencing any unusual sensation.

Treatment.—The diet consisted of milk diluted with barley-water, beef-tea, and calves-foot jelly administered at regular intervals. The diet was increased both in quality and in quantity as the condition of the patient indicated. The general rule for the administration of stimulants was followed with satisfactory results. Cold water and painting the mouth with glycerine were found to quench the thirst most readily. Milk was also available for this purpose. There was a moderate supply of fresh milk, and unlimited quantities of every variety of tinned and condensed. As a routine practice all patients were put on carbolic acid, mij every four hours. This was maintained several days after the temperature had reached normal. As a natural result the wards were always sweet. Pyrexia was treated by systematic sponging, which was kept up night and day. It was the practice to sponge all patients with water of a temperature of 102.5° F., or over. Occasionally it was found necessary to use the icepack, and this answered admirably. No drugs were used to reduce the pyrexia. For cardiac failure strychnine and digitalis were administered either hypodermically or by the mouth as indicated, and stimulants were pressed to their utmost limit. The best stimulant was obtained by diluting brandy with champagne. This mixture was found to act very well. In a few cases in which diarrhoea occurred, lead and opium, together with starch and opium enemata after each motion, acted like a charm. Constipation was rather difficult to treat. The ordinary soap-and-water enema had no effect. Calomel was often, even in large doses, perfectly useless. The best results were obtained by adding turpentine to the enema. Glycerine enemata often produced the desired result, but as often failed to have any action. Tympanites was also greatly relieved by using turpentine enemata when the usual means had ended in failure.

I attribute the low death-rate in these cases to the use of carbolic acid internally and to sponging, together with excellent nursing. All the nurses in my wards were unremitting

in their care of the patients, and never seemed to be able to do enough for them. Too much cannot be said in praise of the nurses who worked hard night and day doing their utmost to relieve the sufferings of their patients, to whose welfare they seemed to be devoted. They infused the same spirit into their orderlies, who one and all did most excellent work under the most trying circumstances.

ENTERIC FEVER IN SOUTH AFRICA: EFFECTIVE STERILISATION OF EXCRETA.

By MAJOR H. A. CUMMINS, R.A.M.C.,
In Charge of No. 1 Model Military School, Pretoria.

[SECOND REPORT.]

IN my paper on the above subject published in the BRITISH MEDICAL JOURNAL of November 10th, 1900, p. 1369, I stated that further investigations would be made regarding the efficiency of the process there described. Since that time the system has been largely used.

Surgeon-General Wilson, Principal Medical Officer of the Army in South Africa, and Dr. Turner, Medical Officer of Health, South Africa, approve of the method, consequently it has been introduced, and with success, into several hospitals, of which I may mention the following: The Imperial Yeomanry Branch Hospital, Pretoria; 19 General Hospital (late Model School Hospitals, Pretoria; two sterilisers in use); No. 7 General Hospital, Johannesburg; and No. 11 General Hospital, Kimberley. It is also used at the Pretoria Civil Hospital, and I believe it is to be introduced into the hospitals connected with the refugee camps.

Dr. R. W. Dodgson, on special service for bacteriology in South Africa under the War Office, was kind enough to make the two following series of experiments on the contents of the sterilising cauldron:

First Series.—One tube of broth was inoculated half a minute after an enteric stool had been emptied into the boiling cauldron. This tube showed an extensive growth of bacterial colonies. After twelve minutes four tubes were inoculated. They remained absolutely sterile. The same was the case with a tube done after thirteen minutes.

Second Series.—A fair quantity of enteric faecal matter was poured into the cauldron. One minute later a culture was taken, and so on every minute for five minutes. The tube infected after one minute showed a pure culture of large bacilli in chains. The other tubes were incubated for several days at blood heat, but remained absolutely sterile.

These experiments are interesting, inasmuch as they show that in these cases at least many bacteria survive for half a minute, while after one minute only one species remained alive; at two minutes all forms of life had become extinct. Even spores lost their vitality in spite of their usual tenacity of life.

The contents of all bed-pans, slop-buckets—in fact, anything likely to carry infection—are thrown into the cauldron. The multitude of organisms destroyed in this way is, of course, enormous, and the power of reducing these dangerous organisms to harmless organic matter on a large scale, as is done, is a matter of the greatest importance. The so-called “destructor” is unnecessary, as the sterilised matter can be disposed of like normal excreta.

The cauldron in use in this hospital has a capacity of 40 gallons. It is emptied every evening for cleansing purposes; 20 gallons of a solution of izal or crude carbolic acid in water, 3 ss to the gallon, is poured into it, and when this has been heated to near boiling point the apparatus is again fit for use. I desire again to point out that no nuisance is caused. Smell from the boiling cauldron is practically absent, and flies do not approach it. If the contents are not kept sufficiently fluid, charring takes place, with the evolution of ill-smelling gases. This can only occur through carelessness on the part of the attendants.

The sterilised matter taken from the apparatus during the day, and when it is completely emptied for cleansing purposes at night, has no smell, as the putrefactive bacteria in the original matter have been destroyed, while those introduced from the air, buckets, etc., after the matter has been removed from the apparatus, take over twelve hours to produce any fermentative action which could give rise to noticeable odour.

VENESECTION IN THE TREATMENT OF GUNSHOT WOUNDS OF THE CHEST.

By CAPTAIN F. J. W. PORTER, R.A.M.C.,
Colonel White's Column, De Aar.

LIEUTENANT R. was shot through the right chest on January 3rd when the force was ambushed by the Boers about 4 P.M. When I picked him up at 8 P.M. he was rather collapsed and very breathless, and his condition was critical. We reached camp by 10 P.M., and it was seen that there had been a good deal of hæmorrhage into the right pleural cavity. At noon on the following day he was put into an ambulance and taken across country towards Heilbron. He complained greatly of the jolting of the waggon, and one had to inject morphine to relieve his pain and discomfort. At 6 P.M. he was very livid and quite delirious.

At 8 P.M. his condition was so bad that I arranged to halt for the night. His pulse was small and the heart's impulse diffuse. The lividity was very great. I opened the median basilic vein and withdrew about 10 ounces of very dark blood. The stretcher was replaced in the waggon, and he immediately turned on the wounded side and went to sleep. Next morning he was quite rational and expressed himself greatly relieved. We marched until 4.30 P.M. and then reached Heilbron. We had trekked over 50 miles in 28½ hours. Next morning he was taken by train to No. 3 General Hospital at Kroonstad and has made an uninterrupted recovery.

I am perfectly certain that he would have died on the night of January 4th but for the venesection. His heart was unable to drive the blood through the undamaged lung, and was relieved by the reduction of the volume of blood in circulation. I cannot help thinking that many cases of this sort might be treated with great benefit in the same way, and also that many cases of ordinary pneumonia occurring in strong, full-blooded men might be treated by venesection with advantage.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

CONCLUSION OF A CASE OF REMOVAL OF SCAPULA FOR SARCOMA IN THE INFRASPINATUS MUSCLE.

IN the BRITISH MEDICAL JOURNAL of August 21st, 1897, I recorded the case of a girl, aged 8, in whom I had treated a sarcoma in the infraspinatus muscle by removal of the scapula. The tumour, which was reported on by Professor L. R. Sutherland, was composed of spindle cells mostly; there were also present round cells and multinucleated masses of protoplasm. The girl remained well till December, 1897 (twelve months after the operation), when she developed a cough. This continued till April, 1898, at which time there was evidence of consolidation of the left base. In the course of the following month she had hæmoptysis, and complained of “cramps” in the abdomen; ascites was detected. There was also some rigidity of the spinal column. Pleural effusion on the left side was noted on May 27th, and she died on the following day with dyspnoic symptoms just seventeen months after the operation.

Post-Mortem Examination.—Nodules of sarcoma were present in the heart and right lung and right third intercostal muscle; the upper lobe of the left lung had been transformed into a bulky tumour. The peritoneum and abdominal lymphatic glands were extensively involved. Tumours were found in the kidneys, adrenals, pancreas, stomach, intestines, liver, diaphragm, right ovary, and in the bodies of the last lumbar and first sacral vertebrae.

The Microscopical Examination was carried out by Dr. M. L. Taylor, of the Pathological Department of the University of Glasgow. He finds characters resembling, on the whole, those of the primary tumour in the scapular muscle (*vide supra*). All gradations are present, from spindle to round-celled growth. In the heart nodules some of the large spindles show transverse striation; there are also some multinucleated giant cells present. The giant cells largely predominate in the adrenal tumours, and some of them do not show nuclei. In the retroperitoneal glands, ovary, and intestines spindles predominate, while in the lung and intercostal tumour round cells are present in almost equal number with the spindles.

This case, from its clinical course, points to the scapular