been on milk diet without result for some time, he was put on it at once, the milk always having been boiled, and 10 grs. of sodium bicarbonate being added to each pint. If this failed, or had been previously given without success, arrowroot, beef essences, teas, and juices, egg albumen, jellies, small amounts of chicken, and lightly-cooked beef were given, with the following combination of drugs: $\mathcal{R}$ Sodii bicarb., bismuthi carb., pulv. ipecac. co. aa grs. x. Fiat pulv. 4 tis horis. For the acute pain morphine was a necessity, and never failed. For the distressing mucorrhœa, which was often difficult to get rid of, injections of solutions of silver nitrate or quinine were most useful. The injections must be large, and, of course, very slowly and carefully given. Treatment on these lines seldom failed to produce a rapid and apparently complete recovery. Treatment by large doses of ipecacuanha was a complete failure.

"Natal sores" deserve mention, since we had a fair number of cases; they appear to be the "veld sores" of other parts of Africa, and are not by any means easy to cure. I personally suffered, having two ulcers, which, though quite small, were so painful that it was with difficulty that I could walk about. They are in many cases caused, I have no doubt, by the tick which abounds in the long grass of the veld. The small sore they produce, if not removed soon after they have managed to cling on, tends to get gradually larger, showing a great reluctance to heal even under treatment. When the sore has attained a certain dimension, it is given the title of "veld" or "Natal sore," as the case may be. We found that the best treatment was to apply fomentations of perchloride of mercury, 1 in 1,000; the milder antiseptics, such as boracic acid, as a fomentation or in ointment form, failed altogether. When the ulcer had become clean, and looked as though about to heal, a mercurial ointment took the place of the fomentation.

In conclusion, I cannot speak too highly of the railway arrangements, and the way in which Mr. David Hunter, the General Manager, did everything in his power to help us. The residents in the neighbourhood were very good in sending gifts of fruit, and Mr. Stevens, the owner of the Pinetown Bridge Estate, did all he could to further the success of the hospital.

VELD SORES.

By ALEXANDER OGSTON, M.D..

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THE "veld sore," as it is styled, appears, so far as my somewhat limited experience extends, to be a disease peculiar to South Africa. In the Soudan campaign of 1884-5 nothing identical with it was met with, if I remember aright.

In our own country and in Europe generally the disease is never seen, although kindred affections are not uncommon. For example, the well-known onychia of millworkers is an analogous disease, and behaves somewhat similarly. And in working men and women engaged in occupations entailing minor wounds, punctures, and abrasions, into which septic material may enter, epidermic spreading blisters, breaking in the centre and suppurating centrifugally, with neighbouring erysipelatoid inflammation, and in bad cases concomitant lymphadenitis of moderate degree, with rarely slight lymphangitis, are not uncommon in European countries, and really deserve a separate name and description. They might aptly be termed "digital erysipelatoid vesication." They are closely allied to the "veld sores," and require exactly the same treatment.

"Veld sores" resemble epidermic vesication, but are not vesicles. The epidermis is elevated into a semitranslucent swelling, often with ill-defined margins averaging about $\frac{1}{4}$ inch in breadth, which fade gradually into healthy skin, as if the cuticle were swelled and infiltrated by an abundant watery œdema of its deeper layers, leaving the surface layer intact and dry, but irregular, as if from numberless minute blisters or tiny cavities containing serum. Yet the margins are vesicular only in appearance, and, if punctured, do not exude fluid and collapse. But though this is true of the margins, a small spot in the centre soon forms a blister-filled with clear fluid, which at once bursts, and bursts so soon that it is rarely seen entire. Where it gives way an ulcer is seen

involving the true skin, and increasing in extent as the margins go on spreading peripherally.

Around the outermost margins is a halo of diffuse erythematous or erysipelatous redness, varying in breadth and intensity with the severity of the disease, but never very intense, and seldom causing inflammation of the lymphatic vessels and glands.

The sores occur mostly on the hands and forearms, as well as on the feet and legs, but seldom upon the less exposed parts of the body; and on the face they are also infrequent. On the arms and legs they are not very severe, looking usually like lazy blisters, which slowly spread and will not heal; but on the thick scarf skin of the fingers, palms, and backs of the hands they are more intense, although never so violent as the "digital erysipelatoid vesication" already named as being frequent in our own country. Their usual size is that of a shilling or less, but this size may be exceeded; they are often multiple. When they are large and severe, the true skin underneath is thickened and inflamed, although usually dermatitis is not well marked. The disease is in its essence an affection of the epidermis.

Suppuration is not a characteristic of the veld sore. The vesicular-looking margins yield no pus, and the open centre of the ulcer very little, if any, but crusts from the serous discharge tend to form on the latter.

A breach of the epidermis seems to be necessary for the origin of the disease, and possibly it may frequently result from the bites of mosquitos and other insects; but most usually, I think, it is due to the inoculation of a virus into some already existing abrasion, and placed there by house flies, which are both numerous and persistent in South Africa.

If the peripheral vesicular-looking part be scarified, and the fluid in it subjected to examination, it is found to contain enormous numbers of an organism, a micrococcus resembling the gonococcus in appearance, though it cannot be that organism, as the absence of suppuration proves. The serum appears to contain a pure culture of the peculiar micrococcus. I have no doubt it is a special form.

As there were no appliances for collecting and preserving organisms in any of the places where I studied the disease, I was unable to bring any away in a condition enabling them to be cultivated. Indeed, there were even no microscope slides or cover glasses, and had it not been that I fortunately found some minute fragments of broken glass at the site of an abandoned camp, I should not have been able to obtain the specimens of the organism that are here photographed. I am indebted to Dr. Duncan, Assistant Professor of Pathology in the University of Aberdeen, for photographing them for me. On these treasured fragments, carefully cleaned, some of the liquid from the sores was spread in an extremely thin layer, dried, and preserved until I was able to stain it after my return. It presented a pure culture of great numbers of coccus-bacteria growing in pairs, and each coccus dividing at right angles to its own line of fission. This micrococcus campaneus, as it may perhaps be called, is evidently the cause of the disease. It is probably an inhabitant of the vegetation and soil of the veld, though circumstances prevented me from investigating this.

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, Tsolo; 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 Tsolo 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