CUTANEOUS LEISHMANIASIS IN THE ARMY (1965)

A PRELIMINARY REPORT

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This condition has long been recognised as of considerable importance from the point of view of British Army dermatology in certain overseas stations. The name needlessly to say has only been applied since the days of the work of Leishman himself. Many another appellation had been used before then, and even now it is almost universally accepted as "oriental sore". However, each country has in turn adopted its own particular nomenclature; in fact each locality has employed a term thought to be descriptive. The British Army has seen fit to describe it in many cases with appropriate and sometimes very accurate alliteration. This is due largely to the peregrinations of the British soldier through the Near East past the Middle East to the Khyber Pass and beyond. Boils were obviously popular, Baghdad has its "boil", but Biskra provides a "button", Aleppo and "evil", the Sahara a "chancre" albeit a French one, and Afghanistan a "plague".

The causal organism *Leishmania tropica*, is identical morphologically with the parasite that causes South American leishmaniasis and kala-azar. It is accepted that the disease is spread by biting *Phlebotomus* flies, often *Phlebotomus papatasii*. The incubation period is presumed to vary from two weeks to a year or more. The average is a month or so. The latest thinking on the incubation period is that the great variation is due to the number of organisms injected into the skin at the time of the bite. It is reported that if more than a few million organisms are injected the incubation period is short. The naturally infected fly is said to introduce an average of 20,000 organisms when it bites.

The sore looks primarily like an insect bite which of course it is. However, it is liable to pass unnoticed and only the knowledge that cutaneous leishmaniasis is common in the neighbourhood causes the patient to seek early advice. It itches but not more than any other insect bite. Certainly not more than that of the bed bug, *Cimex lectularius*, which has incidentally been mentioned as a possible source of the disease. The papule, however, unlike most insect bites does not resolve. It enlarges peripherally but seldom does it become heaped up. If untreated it gradually develops a scaling surface and in many cases breaks down forming an ulcer. This is usually shallow and has seldom the amount of surrounding erythema to be expected from one of its size and appearance. It can grow to quite a large size sometimes exceeding 10 centimetres. After a period of two to twenty months, in most cases, the ulcer gradually heals by cicatrisation leaving a thin depressed scar. Sometimes the sores are single but are more often multiple. They occur on those areas most liable to be attacked by the sandfly, to wit, exposed surfaces. However, since the British soldier these days goes out in the midday sun in the tropics with the least possible clothing, any area can be attacked. None, it should be recorded have been seen, lately at least, between the umbilicus and the top third of the thigh.

Geographically it has been said that the countries affected have been in the Mediterranean littoral, Turkey, Iraq, Iran, South Russia, Afghanistan, North India and China. It is recognised in African countries 10 degrees north of the equator. In America the countries so far associated have been chiefly in the central area, Brazil, Peru, Bolivia, Mexico and the Guianas.
During the war, troops serving in Iraq, Iran and North India, were well acquainted with it. Despite the numbers involved in Egypt, the Western Desert, Tunisia and Algeria, remarkably few cases were reported. Recently 10 cases originating in the Aden area have been recognised in the United Kingdom (Broughton, 1964), among naval personnel. Now the Army reports 16 further cases. It is indeed possible that many more have existed, but perhaps the lesions being small in size and few in number, causing little if any irritation, pain or inconvenience, have been ignored. It should be pointed out that from the Aden area only isolated cases have previously been described. Since 1957 the British garrison in those parts has been increasing in size. The majority of the soldiers affected have one thing in common. They have also served outside the Aden Protectorate in the Jebel or in the mountainous area right up to the Yemeni frontier. Unfortunately knowledge of the entomological situation in this area is somewhat vague, as it is for the country due North and East of this. Exceedingly mountainous and sparsely populated, it is scarcely surprising that this should be the case. Information regarding the incidence of the sores in the Yemen and Saudi Arabia is hard to come by, in fact apparently impossible. Little enough indeed in known of the situation in the more populated parts on the south coast.

Clinical Features

The history given by the patients has almost always been the same. When serving "up country" they complained of having been bitten by "mosquitoes" and the bites had not healed. Most of them had disregarded the sores, some had attempted treatment of their own, but comparatively few had reported to their medical officers. Thus it was that only when back in the United Kingdom and the sores persisted that they reported. The very first patient, Gunner F............. was seen as an outpatient at the Military Hospital, Tidworth. His ulcer was on the right calf. When examined on 19th November, 1964, it had been present for a period of two months. The condition was not then recognised, or even suspected, until the ulcer had of itself healed, but this was not until a period of a further two months had elapsed. By that time two other patients had been seen, both from the same garrison, and it was realised "oriental sore" had arrived in the United Kingdom.

The initial patients were soldiers from different units, but latterly the majority have been discovered in a single battalion which returned as a unit from Aden. The histories were similar in all cases. A variation existed in the number of months the patient had had his sore. The longest period was over a year. In this case the sore had healed over then started oozing again—a very typical history. This was associated with trauma.

Selected lesions are illustrated in Figs. 1—4.

Diagnosis

Diagnosis in such cases depends upon identifying the Leishmania tropica from serum obtained from the edge of the lesion. This is comparatively easy in the early stage where the surface epithelium has remained unbroken. When the ulcer or crusting has formed the presumption is that the organism tends to disappear with the advent of secondary infection. Unfortunately in all but one instance no organisms were found. Biopsy examination in several, however, confirmed the presence of a chronic granulomatous lesion, consistent with the diagnosis. Clinically, however, the lesions as they appeared were so suggestive that the diagnosis was a reasonable presumption.
Treatment

Treatment in the early stages of this condition can abort it readily. That which was used by the British in Iraq during the war has stood the test of time and produces excellent results. Mepacrine hydrochloride 100 mg. dissolved in 2 ml. of distilled water and infiltrated into the lesion gives good cosmetic results, and seldom does the sore break down. It does, however, tend to remain pigmented for a very considerable period thereafter. This is inevitable no matter what treatment is adopted. X-ray therapy is advised by many but such refinements are unlikely to be readily available in Aden. Berberine sulphate is still used, but although it gives good results the injection is painful.

When the sore has become ulcerated or crusted, infiltration is of little avail. Antibiotics, while clearing any secondary infection present, do not influence the indolence. Local applications of all varieties seem to produce little change. The method adopted has been to treat the whole affected area with electro dessication, afterwards painting the area with an aniline dye. Healing thereafter is extremely swift. Unfortunately, this method like all others leaves a very marked pigmented scar, which, if it is on the face, can be very disfiguring. The only method remaining is cosmetic surgery.
Where the lesions are multiple many authorities recommend systemic treatment as for kala-azar, that is one course of sodium stibogluconate (Pentostam) 6 ml. intravenously daily for 10 days which is usually considered sufficient. This method has not been used in any of the cases since none of them were considered sufficiently severe and most were treated as out-patients.

Reference

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NEW COMMANDANT FOR R.A.M. COLLEGE
Her Majesty The Queen has been graciously pleased to approve the appointment of Colonel K. F. Stephens, O.B.E., Q.H.S., M.B., F.F.A.R.C.S., to be Commandant and Director of Studies, Royal Army Medical College, Millbank, in the rank of Major-General, in February, 1966, in succession to Major-General A. N. T. Meneces, C.B., C.B.E., D.S.O., Q.H.P., M.D., F.R.C.P.

Keith Fielding Stephens was born at Taplow, Bucks, on 28th July, 1910. He was educated at Eastbourne College and graduate M.B., B.S., M.R.C.S., L.R.C.P., at London University (St. Bartholomew’s Hospital) in 1934. Since graduation he has obtained the Diploma in Anaesthetics (England) in 1946 and became a Fellow of the Faculty of Anaesthetics of the Royal College of Surgeons of England in 1953.

He was commissioned into the Royal Army Medical Corps on 23rd April, 1937, on a short service commission and was appointed to a permanent commission in 1942.

During his service he has served in the United Kingdom, India, Europe and in the Near and Middle East. His appointments have included Officer Commanding, British Military Hospitals at Tripoli and Cyprus and Assistant Director of Medical Services, Headquarters, Cyprus District. He is at present Consultant in Anaesthetics at the Queen Alexandra Military Hospital, Millbank, and Adviser in Anaesthetics at the Ministry of Defence (Army).

He was awarded the O.B.E. in 1957, and appointed Honorary Surgeon to The Queen in 1964.

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