MASS TREATMENT OF ORIENTAL SORES.

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Baluchistan is an area in which oriental sore is endemic. It is a condition which occurs in waves according to the prevailing climatic conditions. In Quetta the conditions were very favourable, following the earthquake, for the breeding of sandflies. At the beginning of 1936 an epidemic of oriental sores arose, and 628 cases were treated among British troops, Indian troops and families. The dogs, as is usual where oriental sores are endemic, were heavily infected. Their lesions were about the nose, eyes, lips and ears. Many of these were easily missed unless specially looked for.

When it was realized that oriental sores were prevalent they were particularly looked for on the routine monthly inspection, which included troops, private servants and followers. The dogs were also occasionally inspected.

The diagnosis was easily confirmed. The ulcer or nodule suspected was cleaned up with spirit, and a puncture made with a straight skin needle about one-eighth inch from the edge, and serum expressed, the third drop being used to make a smear in the same manner as a blood film. When sepsis has supervened a negative result invariably follows, so a clean nodule or ulcer should be selected for examination.

The routine treatment adopted was ruthless curetting with a Volkmann's sharp spoon under gas, followed by free cauterization with pure carbolic acid. It cannot be over-emphasized that the curetting cannot be too thoroughly done, even on the nose, lips and face. The scarring left is almost negligible. The discoloration round the edge gradually disappears. Besides the heaped edge of the ulcer the base should also receive attention.

A few chronic ulcers in which Leishman-Donovan bodies were not found were scraped. After some experience it became obvious that these were not oriental sores, as they were fibrous and painful when scraped, and the patient tended to move even though under gas, while the oriental sores were softer and not fibrous, and came away rather as a cheesy mass leaving a hole one-eighth to three-sixteenth inches deep which was rapidly filled up again. There is no tendency for the patient to move while under gas, so apparently they are not as sensitive as ordinary chronic ulcers while being scraped. After scraping and cauterizing, the wounds were covered up directly with elastoplast and left covered for two weeks. They healed in two to three weeks, those which remained fairly dry healing in two weeks, and those which exuded serum or blood taking three weeks.
Two cases relapsed. Leishman-Donovan bodies were present on re-examination, and being early cases were probably insufficiently scraped in the first instance. The case which is apt to be insufficiently scraped is the officer, officer's wife or child, not the soldier. One officer with face lesions, who did not wish to have gas, was done under local anaesthesia without success.

Quite a number of small and even large ulcers were treated successfully by the application of pure carbolic acid alone on alternate days for three, or four applications.

Berberine sulphate ¼ grain in 1 cubic centimetre of sterile water was injected around and into several ulcers. It is only useful in the papular stage in small ulcers. It is a painful treatment and rather a waste of time if many cases or many ulcers have to be treated.

An alternative method was tried: after scraping tannic acid was dusted into the wound with the idea of acting as a styptic. The wounds healed just as well, but took seven to ten days longer, i.e. three to four and a half weeks.

With a view to economy sterile vaseline on gauze was used as a dressing in place of elastoplast. The vaseline stopped the dressing sticking, but the wound would not heal completely even in two or three months, unless the vaseline dressing was discontinued because it caused exuberant granulations. If the wound was left exposed to the air or was dressed with any antiseptic it would heal. Eusol caused irritation and kept the wound open. We actually used a watery solution of acriflavine.

Forty-eight cases were treated, in addition, with a trivalent antimony compound—sodium antimony tartrate—in sterile water by intravenous injection commencing with ¼ grain dose increasing by ¼ grain every alternate day up to 1½ grain or 1¼ grain dose, according to the tolerance of the patient to the larger doses. At first the dose was given in 10 cubic centimetres of sterile water, and later under 1 grain in 4 cubic centimetres, and over 1 grain in 6 cubic centimetres, but it made no difference to the reaction, which was never great even after the larger doses. British other ranks appear to stand the larger doses better than the Indian other ranks: 10 to 15 grains were given according to the severity of the case. The cases selected for the combined treatment—scraping, carbolizing and sodium tartar emetic—were those with extensive lesions on the face or very numerous general lesions. At first we dissolved the tartar emetic in 5 per cent glucose solution, but found it quite unnecessary as sterile water gave no greater reaction. One thing noticed about the combined treatment was that the discoloration around the edge of the ulcer disappeared quicker with the combined treatment than after the scraping and carbolic acid alone. In either case the discoloration finally disappeared. One case developed keloid in one of the scars.

Two pentavalent antimony compounds have been tried, but they do not appear to be of any use in skin leishmaniasis.
The maximum number of sores on one patient dealt with at the same time was sixty. There were never any signs of carbolic acid poisoning. The maximum number of sores occurring in any one case was 164.

The routine adopted was to have the cases from the units paraded twice weekly at the minor operation theatre for treatment. Later each medical officer treated the case occurring in his own unit in the same way.

Cases were treated as out-patients, whether by curetting and carbolizing or by the combined treatment with antimony injections.

It was striking how few cases occurred on the faces of women. It has been suggested that the use of cosmetics by them discouraged or prevented the sandflies from biting. Those who were infected were obviously the type who did not use cosmetics.

It is however noticed that girls and boys suffered in the same manner as the troops in regard to face lesions.

It has further been suggested that the early treatment of cases may have prevented immunity developing. As most of the units have moved it is impossible to give an answer to this suggestion, but considering the slow development of the nodule and ulcer, it is more than likely that immunity has ensued before they seek advice or are discovered.

Twelve of the infected dogs were treated with 20 per cent copper sulphate in 5 per cent carbolic acid. The application was made on four successive days, and according to the severity of the case repeated in seven to ten days for one day, and if necessary seven to ten days later for one day, i.e. six applications in all. The ulcers were healed in one month. We treated these cases as a matter of interest and were not usurping the duties of the R.A.V.C. and I.A.V.C.

**Conclusion.**

(1) The best, cheapest, quickest and most convenient method of treating numerous cases of oriental sores is thorough scraping of the ulcers or nodules under gas followed by the application of pure carbolic acid, the whole area being then covered by elastoplast, which is left in position for two weeks, or renewed if it comes off or is removed for any reason.

(2) Trivalent antimony compounds, either alone or in combination with the above, are effective in treating oriental sores.

Pentavalent antimony compounds did not come up to expectation in the treatment of skin leishmaniasis.