

Acquisition, Development, and Treatment of Panamanian Cutaneous Leishmaniasis: A Case History

Byron N. Chaniotis, PhD*
Carl M. Johnson, MD**

Howard A. Christensen, PhD**
Anna Maria de Vasquez**

A single case of Panamanian cutaneous leishmaniasis is described from the day of infection to complete healing by ketoconazole. Topical application of tartar emetic for a month resulted in clinical but not parasitological cure.

In December 1984, the senior author acquired cutaneous leishmaniasis during a deliberate exposure to collect anthropophilic sandflies in a jungle site of the Panama Canal area. The site was selected for an ecological study of cutaneous leishmaniasis after a significant number of U.S. Army soldiers became infected during a three-day training exercise in July 1984.

Flies were collected by mouth aspirator from the exposed lower legs of the author over a two-hour period, during which time approximately 100 bites were inflicted. Fifteen days later all bites had healed with the exception of four erythematous nodules that continued to persist: one on the shin of the left leg 12 cm below the kneecap and three adjoining ones on the right leg 15 cm below the kneecap. At that point in time, the nodules had diameters ranging from 3 to 6 mm.

Thirty-five days post-infection the lesion on the left leg had increased to a diameter of 15 mm, and those on the right leg from 8 to 12 mm. Increased tenderness and initial ulceration became evident at the same time.

Forty-nine days post-infection, scrapings from the lesion on the left leg showed amastigotes in Giemsa-stained smears and promastigotes in Senekji culture medium. The parasite isolated from the culture was identified as *Leishmania braziliensis panamensis* on the basis of their morphology, behavior in culture, pathogenesis in hamsters, and isoenzyme analysis.

Fifty days post-exposure, treatment of the lesion of the left leg was initiated using 2% tartar emetic (potassium antimony tartrate).

At that time the lesion on the left leg had enlarged to about 30 mm in diameter, while the largest lesion on the right leg was approximately 25 mm in diameter. Treatment with tartar emetic was continued for four weeks and consisted of one change per day the first week and two changes per day the remaining three weeks. Tartar emetic was mixed in petrolatum jelly and was applied topically protected by a clean

gauze. The lesions on the right leg were untreated as controls.

Thirteen days after initiation of treatment with tartar emetic, the lesion on the left leg had begun to recede and appeared highly improved, whereas the lesions on the right leg continued to deteriorate. The superficial popliteal lymph nodes on the treated leg were normal, whereas those on the untreated right leg were enlarged and indurated all along the medial aspect of the thigh.

Seventy-seven days post-exposure, topical treatment of the already coalesced lesions on the right leg was begun with 2% Glucantime (meglumine antimoniate) in dimethyl sulfoxide, but no apparent resolution or healing was seen for a period of two weeks. Glucantime was applied with a dropper topically through an absorbent gauze covering the lesion twice a day.

At seventy-eight days post-exposure, scrapings obtained from the treated and clinically healed lesion on the left leg were negative in Giemsa-stained smears but positive in Senekji culture medium. Thus, the tartar emetic treatment resulted in clinical but not parasitological cure.

One hundred and thirteen days post-exposure, Pentostam (sodium stibogluconate) treatment was initiated (5 ml IM). However, because of adverse allergic reaction to Pentostam, treatment was discontinued after the first dose. The allergic reaction to Pentostam may have resulted from the sensitization to tartar emetic and Glucantime used earlier to treat the lesions topically.

One hundred and seventeen days post-exposure, treatment with the oral antimycotic ketoconazole (Nizoral) was initiated in a dose of 200 mg b.i.d., since studies have reported the efficacy of this compound in treating cutaneous leishmaniasis in the Old and New World.¹⁻³ Lesions were markedly improved after two weeks and appeared clinically healed after 28 days, at which time treatment with ketoconazole was discontinued.

One year after treatment with ketoconazole, there were no signs of lesion reactivation and the scar tissue appeared smooth and normal. It is, therefore, concluded that ketoconazole was an effective treatment for this strain of Panamanian cutaneous leishmaniasis with a daily dose of 400 mg for 28 days.

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* Preventive Medicine Service, USAMEDDAC Panama, APO Miami 34004.

** Gorgas Memorial Laboratory, PSC Box 395, APO Miami 34002.

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