

TREATMENT OF CUTANEOUS LARVA MIGRANS WITH ALBENDAZOLE. PRELIMINARY REPORT.

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SUMMARY

Twenty three patients with Cutaneous Larva Migrans syndrome were prospectively treated with 400 mg/day of Albendazole for 3 consecutive days. Clinical response, compliance and tolerance was excellent. Patients were asymptomatic within the first 72 hours of treatment and recurrences did not occurred. Preliminary results with three additional patients suggest that a single oral 400 mg dose may be effective as well.

KEY WORDS: Cutaneous larva migrans; Treatment; Albendazole.

INTRODUCTION

The Syndrome of Cutaneous Larva Migrans (CLM), also known as creeping eruption, is a disease commonly found in inhabitants of tropical or sub-tropical regions of the world. It is caused by the penetration through the skin of infective larvae from various animal nematodes. *Ancylostoma braziliensis*, a hookworm of cats and dogs, is responsible for most cases, although other nematodes such as *A. caninum*, *Uncynaria stenocephala* and *Bunostomun phlebotomus* are occasionally involved¹.

Oral thiabendazole at the dose of 25 mg/kg per day for two consecutive days is currently considered the drug of choice. Alternatively, topical application of an aqueous 10% suspension of the compound (500 mg per 5 ml) or a 0.5 g tablet triturated with 5 g petroleum jelly, has been advocated as equally effective and essentially devoided of toxic side effects⁴.

MATERIAL AND METHODS

Twenty three patients (sex ratio: 13 males, 10 females; age range: 4 to 48 years), with the clinical diagnosis of CLM seen at the outpatients clinic of the Tropical Medicine Institute of Caracas, were prospectively treated with albendazole (Zentel, Smith Kline & French Laboratories), at the rate of 400 mg per day in a single oral dose, for 3 consecutive days.

Each patient was evaluated on a daily basis by the same physician during treatment and twice a week for three weeks afterward, in order to evaluate clinical response. Efficacy was classified according to the time necessary for the symptoms and lesions to clear up and the occurrence or not of recurrences after ending therapy, as follows: Excellent (disappearance of all baseline signs and symptoms relevant to the lesions);

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Good (remission but without complete disappearance of all baseline signs and symptoms relevant to the lesions); and Regular or Poor (no remission of baseline signs and symptoms or recurrence of original lesions despite therapy).

Four patients had undergone previous unsuccessful courses of topic carbon dioxide snow and/or oral therapy with mebendazole without apparent improvement.

Cutaneous tracts per patient ranged between 1 and 14; length of evolution ranged between 2 and 10 days; most lesions were located in the feet (82.6%) or hands (17.4%), and occasionally in other areas. Whenever secondary bacterial infection was apparent, coverage with a broad spectrum oral antibiotic (cefadroxil, 500 mg BID/day VO), was given for one week also.

As thiabendazole has become unavailable in many countries of the world and since other suggested alternatives, such as oral or topical mebendazole, have not lived up to early expectations⁵, any addition to the therapeutical armamentarium against CLM will certainly be most wellcome. Therefore, we decided to evaluate the clinical efficacy of albendazole, a broad spectrum antihelmintic which has shown larvicidal activity against human and animal hookworms³.

RESULTS

All patients showed an excellent clinical response. Improvement was noticed within the first 24 hours; progression of the cutaneous tract and sensation of larval movement disappeared after 48 hours and most patients were basically asymptomatic after 72 hours.

Controls performed up to the third week post-treatment did not revealed any evidence of larval activity in all patients, regardless of the original number of lesions.

Compliance and tolerance were good. No toxic side effects were noticed during the period of observation.

Three additional patients that received only one single 400 mg dose of albendazole showed the same excellent clinical evolution aforementioned.

DISCUSSION

When larvae from common cat or dog hookworms penetrate the skin of an "abnormal" host, such as man, they may undergo prolonged migrations for weeks or months in the epidermis and leave pruritic, elevated, serpiginous, erythematous trails along the path of their migration. A sensation of tingling or itching at the site of penetration is recalled by many patients. It is then followed by the appearance of a red, pruritic papule within a few days. Cutaneous trails develop as the larvae migrate at a rate of 1 to 2 cm/day in the stratum germinativum, with the corium as a floor and the stratum granulosum as a roof.

A Loeffler's like syndrome has been observed in a significant percentage (up to 50%) of patients with creeping eruption. Transient eosinophilic infiltration occurs in the lesion. A slight eosinophilic leukocytosis develops less often, except in those with Loeffler's syndrome⁶.

In the western hemisphere, *A. braziliense* is distributed most heavily in the Southern United States, coastal regions of Mexico and Central America; as well as in tropical or sub-tropical areas of South America. Favorable conditions for development of larvae typically include moist and warm sandy soil, loam or humus heavily contaminated with dogs or cats feces.

Traditional therapy includes freezing of the area surrounding the leading trail with ethyl chloride spray or carbon dioxide snow. However, it is impractical in patients with multiple lesions and does not always provide permanent relief, since larvae may be several centimeters in advance of the trail's end in any direction.

When available, oral or topical thiabendazole remains the treatment of choice. If the standard 25 mg/kg/day oral dose is not effective, it may be doubled and repeated.

Recent experimental studies suggest that various broad spectrum antihelmintics, such as levamisole, thiabendazole, oxfendazole, fenbendazole and flubendazole are active against *A. caninum* larvae in the skeletal muscle of mice². On the other hand, albendazole has proved larvicidal against *N. americanus* in human volun-

teers experimentally exposed to transcutaneous infection with 8 day-old larvae³.

Our results indicate that albendazole 400 mg/day for three days represents a convenient, effective and safe alternative to thiabendazole in the treatment of CLM. Further studies are necessary to evaluate whether a single dose of the compound may be equally effective.

RESUMEN

Tratamiento del Síndrome de Larva Cutanea Migratoria con Albendazol. Reporte Preliminar.

Veintitres pacientes con el síndrome de Larva Cutanea Migratoria, fueron tratados prospectivamente con 400 mg/día VO de albendazol por tres días consecutivos. La respuesta clínica, aceptación y tolerancia del tratamiento fué excelente. Todos los pacientes se volvieron asintomáticos durante las primeras 72 horas de tratamiento y no se observaron recurrencias de lesiones. Los resultados preliminares obtenidos en

tres pacientes adicionales, sugieren que la dosis única de 400 mg puede ser igualmente efectiva.

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