SUCCESSFUL TREATMENT OF CUTANEOUS LEISHMANIASIS WITH INTRALESIONAL GLUCANTIME

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We performed a clinical trial to evaluate the efficacy and safety of intralesional glucantime in cutaneous leishmaniasis. Thirteen patients with cutaneous leishmaniasis were treated with intralesional glucantime using a 23-gauge needle. Each lesion was infiltrated with 1-2 ml of solution without local anaesthesia. Total number of injections was from 3 to 5, *each one week apart.*

Resolution of the lesions was obtained in most of the patients (9 out of 13). The location and duration of the lesion did affect the outcome of treatment. The treatment was generally well tolerated. Intralesional treatment of cutaneous leishmaniasis is safe, effective and cheap, and excellent cosmetics results may be achieved.

INTRODUCTION

The Leishmaniases are group of diseases caused by several species of the genus *Leishmania.* Clinical patterns are poor indicators of species, although certain characteristics may be commonly associated with a particular species [s]. The species are distinguished by 180 enzyme patterns and DNA analysis. Monclonal antibodies have also been used for identification. *Leishmania* spp. undergo a cycle of development in the gut of the female sand fly, of the genera *Phlebotomus* in the old world and *Lutzomyia* and *Psychodopygus* in the new world. Infection is transmitted by the bite of a sand fly usually at night. Human leishmaniasis is usually classified as cutaneous or visceral.

Cutaneous leishmaniasis of the old world is due to *L. major, L. tropica, L. aethiopica* and *L. infastius.* Cutaneous leishmaniasis of the new world is due to *L. donovani. L. mexicana, L. amazonensis. L. brasilienses brasiliensis, L. guyanesis, L. panamensis & L. peruiana.* Sand flies find their precise requirements for temperature and humidity in a wide variety of niches, commonly in rodent burrows, and crevices in the old world and in tree canopies and forest litter in the new world[9]. Man is commonly an accidental host, although there are situations in which man may be the reservoir in an anthroponotic cycle.

All previously uninfected individuals are susceptible. The incubation period is usually in months but ranges from days to over a year. One or more lesions occur on the unclothed parts of the body, easily bitten by *Phlebotomus* usually in a child. The face, neck and arms are the commonest targets. Lesions do not necessarily occur all at exactly the same time, but in endemic areas a family of children may all present with lesions and a history strongly suggesting infected sand fly bites all acquired in the same room on the same night. The sequence of nodule, crusting, ulceration and healing with scar formation is common to all the self-healing sores.

Several regimens[1] have been employed in the treatment of cutaneous leishmaniasis, including heat therapy[2], freezing[3], Co_2: snow curettage under local anaesthesia, infiltration of the lesion with sodium stibogluconide, or meglumine antimonide, and topical application of aminoglycoside aminosidine or paromomycin in an ointment, with proper formulation.[5]

Systemic treatment is with sodium stibogluconide, or meglumine antimonide, by intravenous or intramuscular route in a single daily dose of 10-20 mg antimony/kg body weight/day, usually for 15 to 30 days [6] and pentamidine isethionate in a dose of 4 mg salt/kg body weight once weekly, in case of resistance to antimony.

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MATERIALS & METHODS

13 patients, otherwise healthy (7 females and 6 males) with one or maximum four lesions were included in the study. The diagnosis of leishmaniasis was made on clinical grounds and confirmed by making a smear of the material from the sore and staining it with Giemsa Stain. Cultures could not be done.

TABLE-1: CLINICAL CHARACTERISTICS OF THE STUDY

No. of patients	13
Age	10-45
Sex M/F	6/7
Size of lesions	1-5 cms
Site of lesions	Face, arms, neck, legs
Duration of lesions	1 month-1 year
No. of lesions	1-4
No. of injections	3-5

The majority of the lesions treated were on the face and hands. The lesions were cleaned with 70% alcohol. 1-2 ml of solution was injected into the lesion depending on the size and site, using a 23 gauge needle. Local anaesthesia was not used. The response was assessed clinically. The patients were called weekly to assess the size and resolution of the lesions. Further injections were given, if needed, not exceeding 5 injections per lesion, each injection a week apart. Care was taken not to inject more than 850 mg of Stibogluconate/day/treatment. An excellent result was considered to be the total resolution of the lesions, with little hyper or hypopigmentation. Reduction in the size of the lesions and disappearance of the crusting and ulcer was recorded as a good result. Persistence of the lesions even after five injections each a week apart was considered as poor.

RESULTS

Results of efficacy of intra-lesional glucantime one week apart were obtained as follows: 3-5 injections were sufficient to produce resolution of the lesions in 9 out of 13 patients; this was considered as good to excellent results. The lesions of long standing duration responded poorly as did the lesions present on the legs and joints; this was considered as a poor result.

SIDE EFFECTS

The treatment was generally well tolerated and local anaesthesia was not considered necessary. The patients complained of pain during the injection and of headache, nausea, and giddiness alter the injection for 4-5 hours, starting alter an hour or so.

DISCUSSION

The major problem in treating leishmaniasis is the non-availability of antimony compounds and also the cost of the drugs, as each vial of 5ml can cost about Rs 150 to Rs 200 in the black market as the drugs are usually unavailable in the drug stores.

Intralesional treatment of cutaneous leishmaniasis is cheap, time saving, and convenient for the patient, as he has to take injections one week apart, rather than daily intramuscular or intravenous injections for 15 to 30 days. Good to excellent cosmetics results were obtained in 9 out of 13 patients. The lesions of long handing duration and those on the legs and joints responded poorly.

Side effects like pain during injection and headache, nausea, and giddiness after injection were generally not very troublesome. Our results compare very' favorably with previous published studies on the treatment of cutaneous leishmaniasis with intralesional glucantime.

In conclusion intralesional glucantime was found to be a cheap, effective, safe and convenient treatment of cutaneous leishmaniasis in patients with a few lesions and not of very long standing duration. We support the use of intralesional Stibogluconate in cutaneous leishmaniasis, in patients with one or few lesions.

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