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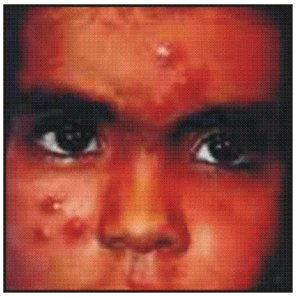
CUTANEOUS LEISHMANIASIS;
CLINICAL RESPONSE OF INTRALESIONAL MEGLUMINE ANTIMONIATE IN THE TREATMENT



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ABSTRACT ... drabrar786@yahoo.com **Objective:** The aim of study was to evaluate clinical response of Intralesional Meglumine Antimoniate (MA) in the treatment of Cutaneous Leishmaniasis (CL). **Design:** A case control interventional prospective study **Place & duration of study:** Scouts Hospital Wana, from Feb 2003 to Dec 2004. **Materials & Methods:** A total number of sixty patients were included in the study on the basis of demonstration of LT bodies in the slit skin smears and skin biopsies. These patients were randomly distributed in three groups. Group 1 constituted 20 patients who received 0.5 ml (42.5 mg of MA) in each lesion six days a week for a total number of 15 injections. Group II included 20 patients who received o.5 ml (42.5 mg of MA) in each lesion on alternate days for a total number of 15 injections. Group III included 20 patients, who were unwilling for treatment due to personal reasons and were used as a control group. Patients were then observed on 30 days and followed up at 3 and 6 months. **Results:** In group I over all cure rate was found to be, 12 of 20 (60% patients. In group II 17 of 20 (85%) patients and in group III spontaneous healing was found in 3 of 20 (15%) patients. **Conclusions:** Intralesional administration of pentavalent Antimonial compound (Meglumine Antimoniate) is an effective method of treatment in cutaneous Leishmaniasis.

Key Words: Cutaneous Leishmaniasis (CL), Meglumine Antimoniate (MA).

INTRODUCTION

Cutaneous Leishmaniasis is a protozoal disease caused by various subspecies of the genus Leishmania. It is endemic in tropical and sub tropical countries. In Pakistan it is endemic along the western border, tribal area, northern areas of Balochistan and Sindh. In Punjab a few sporadic cases have been reported especially from central and southern Punjab. A few cases had been reported so far in Azad Kashmir and NWFP[1]. The WHO (world health organization) had reported 400,000 new cases in the world each year[2]. The parasites may present as amastigote found in insect vector.

Epidemiological studies[3] had reported that the disease is usually rural type caused by L. Major which is commonest form in Pakistan[4] or Urban type caused by L. tropica. However in other words the parasites are L. mexicana, L. braziliensis found in many countries of the world. Human Leishmaniasis can be classified into cutaneous (Oriental sore), mucocutaneous (espundia) and visceral (Kalazar) types[5,6].

Antimonial pentavalent compounds Meglumine antimoniate (Glucantime) or sodium Stibogluconate (Pentostarm) are the first line drugs[7], however other modalities of treatment like Ketoconazole, Rifampicin, Paromomycin, Dapsone, cryotherapy/surgical excision, Amphotericin B and, cyclosporin have been used but with controversial efficacy. This study was conducted to evaluate the clinical efficacy of intralesional MA. in CL.

PATIENTS & METHODS

The case control study was conducted at Scouts Hospital Wana from Feb 2003 to Dec 2004. Sixty adult patients of all ages were included in the study. There was no sex distinction.

The inclusion criteria was two or more lesions, Lesions less then 08 weeks duration, demonstration of LT bodies in skin slit smears/skin biopsies. Any patient who had any partial treatment, patient with scars suspicious of previous cutaneous leishmaniasis was excluded from the trial. Patients with known sensitivity to pentavalent antimonial compounds were also excluded from the study.

Table: I. The Clinical Parameters

	No. of patients		
	Group I	**Group II**	**Group III**
Mean age	20	20	20
Male	28	31	27
Female	12	13	11
Number of lesions	8	7	9
Mean Lesions	0.3	2.5	3.5

Sixty patients fulfilling the inclusion criteria were consented to take part in the study. Patients were randomly allocated three groups. Group I comprising 20 patients received 0.5 ml of MA into the upper and mid dermis daily six days a week for a total of 15 injections. Infiltration was thorough and produced complete blanching of the base of lesion.

Group II included 20 patients who received 0.5 ml of intralesional MA on alternate days, a total number of 15 injections completing in 30 days. Group III included 20 patients who were unwilling for treatment because of personal reasons and were used as a control group.

The patients in all these groups were evaluated for clinical and pathological response at 30 days and then followed up at 03 months and 06 months interval.

The parameters for clinical response were epithelialization of ulcer, absence of erythema, exudation or pus, while pathological response was assessed by skin slit smears negative for LT bodies. Adverse effects were also noted during treatment.

Table: II. Results Data

	Group I	**Group II**	**Group III**
No. Of Patients	20	20	20
Response after 01months	13(65%)	16(80%)	4(20%)
Response after 03months	14(70%)	18(90%)	4(20%)
Response after 06months	02(10%)	01(5%)	01(5%)
Total cure	12(60%)	17(85%)	03(15%)

RESULTS

The comparison of healing as shown in Table 2, clearly indicates that clinical and pathological response in group II in which 0.5 ml of I/L MA was given on alternate days for a total no of 15 injections is superior to same dose administration per day, six days a week.

Group I

The response at 30 days showed healing of 13(65%) patients which improved to 14(70%) patients after three months, however 2 patients (10%) relapsed when followed up at 06 months so over all response was 12(60%).

Group II
The response at 30 days showed healing of 16(80%) patients which improved to 18(90%) after three months, however 1(5%) patient relapsed at 06 months so over all response was 17(85%).

Group III
The response at 30 days showed 4(20%) healing, however 1(5%) patient relapsed and over all response was 3(15%).

Adverse effects commonly reported were cellulitis, pain in injection site, drug fever, headache, body aches and anorexia. It indicates that systemic adverse effects like cardiomyopathy, renal or haematological toxicity were not observed with this modality of treatment.

DISCUSSION

First line treatment for cutaneous Leishmaniasis is still two pentavalent antimonial compounds[6] Sodium stibogluconate (pentostam) and Meglumine Antimoniate (Glucantime). Both have almost smillier efficacy and adverse effects. Although many topical[7], systemic[8], surgical[9] and combined modalities have been tried but with controversial efficacy.

Intralesional administration of MA. is an effective way of delivering high concentration of PVA to the effected area. Sharquie et al, and some other studies[11,12,13,14], proved good results after injecting PVA by the same method, comparable with our results (85%), the discrepancy may be because of different strains of parasite.

Intralesional PVA compounds have been proved effective and comparable to intramuscular therapy. This type of treatment is usually recommended for early lesions and limited disease especially in those patients who have concomitant cardiac, liver, renal or hematological disorder for whom toxic parenteral antimonials are contraindicated.

It is not practical for multiple or disseminated lesions and also unsuitable for sensitive areas like face. It is also cost effective as much less dose is required comparing with intramuscular dose (20 mg /kg of PVA max 850 mg). Inadequate or improper technique of infiltration may be a probable reason for failure in some previous studies[12].

It is also interesting that a small number of patients 3(15%) healed spontaneously in our study, so it may be postulated that the patient care be followed up for few months with out treatment if the lesions are one or two but not on a cosmetically problematic area giving disfiguring scar, trunk or back.

CONCLUSION

Pentavalent antimonial compounds like Meglumine Antimoniate may be considered the drug of first choice in cutaneous leishmaniasis and intralesional administration of these compounds 0.5 ml in each lesion on alternate days for a total number of 15 injections give excellent results which are much cost effective, produce least toxic effects and give excellent results.

REFERENCES

1. Mujtaba a, Khalid M. **Cutaneous Leishmaniasis in Multan, Pakistan.** Int J Dermatol 1998: 97, 843-6.

2. World Health Organization (WHO). **Report of expert committee.** The Leishmaniasis: World Health Organ Tech Rep Ser 70), 1984.

3. Rab MA, Azmi MA, Iqbal J, et al: **Cutaneous leishmaniasis in Baluchistan:** Reservoir hosts and fly vector in Uthal Lasbella. JPMA 1986 : 134-8.

4. Raja KM Khan AA, Hameed A. Rehman SB. **Unusual clinical variant of cutaneous Leishmaniasis in Pakistan.** Br J Dermatol 198; 139; 111-3.

5. Bryceson ADM. **Tropical dormatology.** Br J Dermatol 1976; 94; 223-6.

6. Kikuta W, Schmidt A. **Contribution to the progress of antimony therapy of kala. azar.** Chinese Med J 1937,52: 432-32.

7. Brenner S. **Topical treatment with imidazoles for cutaneous leishmaniasis.** Isr J Med Sci 1985;15;620-1.

8. Pareek SS. **Combination of sodium stibogluconate and Rifampicin in cutaneous Leishmeniasis.** Int J Dermatol1984; 23; 70-1.

9. Curred MA. **Treatment of cutaneous Leishmaniasis by curettage.** Br Med J 1983; 287; 1105-6.

10. Momeni AZ, Aminjanchri M. **Success full treatment of non healing cases of cutaneous Leishmaniasis, using a combination of meglumine antimoniate plus** allopurinol. Eur J Dermatol 2003; 13;40-3.

11. Al Khawaja AM, Larbi E, Al-Gindmy, Aba hussein A. Jain S. **Treatment of cutaneous leishmaniasis with administration: intramuscular vs intralesional,** Anntropa Med Parasitol 1997: 91: 899-903.

12. Sharqui KE, Al-Talib KKA, Chu AC **Intralesional theropy of cutaneous leishmaniasis with sodium stibogluconate antimony** the Br. J. Dermatol 1988; 53-7.

13. Bogenrieder T, Lehn N, Land thaler M, Stolz W. **Treatment of old world cutaneous leishmaniasis with intralesional Meglumine antimoniate using a dermojat device.** Dermatology 2003; 206; 269-72.

14. Hussain AB, Amanullah, DAS, Kakar F, Sadaruddin A. **The efficacy of intralesional treatment of cutaneous leishmaniasis with glucantime** Pak J Med Res 2002;41; 54-7.

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