

Clinical features, risk factors and efficacy of cryotherapy in cutaneous leishmaniasis in Sri Lanka

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(Index words: Poor compliance, North-central and Southern Provinces, preventive measures)

Abstract

Introduction The first autochthonous case of cutaneous leishmaniasis in Sri Lanka was reported in 1992. Several case reports from different parts of the island have been documented. The case incidence has increased in the recent past.

Objectives To determine the clinical patterns, risk factors and efficacy of cryotherapy for cutaneous leishmaniasis in Sri Lanka.

Patients Sixty-five patients with cutaneous leishmaniasis.

Design Prospective study.

Setting Department of Parasitology, Faculty of Medicine, Colombo.

Methods Direct smears prepared from lesion aspirates or punch biopsies, were stained and examined for *Leishmania* sp. All patients with positive smears were included in the study. A pre-designed questionnaire was completed based on clinical evaluation, and the patients were treated and followed up regularly. Investigations were repeated on day 14 and day 90 depending on the response to treatment.

Results Lesions were non-tender, non-itchy papules (early lesions), scaling single nodules or dry crust forming single or multiple ulcers. Young adult males with outdoor behavioural characteristics were mostly affected. Other risk factors were close proximity to jungles, potential reservoir hosts in the environment, lack of awareness and inadequate knowledge and use of preventive measures. Compliance rate for cryotherapy was 40%. The need for frequent hospital visits, the long course of treatment, limited availability and undesirable side effects were identified as reasons for poor compliance. Smear positive rate on day 14 after treatment was 89%.

Conclusions Cutaneous leishmaniasis is now an established disease in Sri Lanka. Raising public awareness, early diagnosis, definite species identification, availability of proper treatment methods and vector studies are important for its effective control.

Introduction

Leishmaniases designate a spectrum of clinical manifestations, which tend to differ between and even within regions, depending on various factors, including the

causative species. Over 1.5 million new cases occur worldwide each year and cases are reported from new endemic foci (1). There are three main types of leishmaniases: visceral, cutaneous and muco-cutaneous. Control of leishmaniasis is difficult due to the presence of over 100 reservoir hosts, unsatisfactory treatment methods (2) and civil war situations (3). Most of the available treatment methods have limited effectiveness (4,5). Parasite resistance to anti-leishmanial drugs is an important problem in many countries (6).

Cutaneous leishmaniasis cases reported in the past in Sri Lanka were limited to people returning from the middle east (7,8). The first autochthonous case was reported in 1992 (9). Since then there have been several reports of such cases from both southern and northern parts of the country (10,11). This pattern appears to have changed recently (11).

Methods

A detailed history and clinical examination were done on all patients included in the study. A pre-designed form was completed for each patient. Specimens were obtained by lesion aspiration and punch biopsy. Smears were made on glass slides, fixed in methanol, stained with Giemsa and examined under a light microscope ($\times 1000$ magnification) for the presence of *Leishmania* sp. amastigotes. All patients were given an investigation report and treated at the local dermatology unit. Patients were followed up fortnightly for 2 months and monthly for the next 2 months. At each follow up visit, the nature of the lesions was recorded and signs of healing noted. A lesion was considered as healed when it was completely epithelialised. On day 14 and day 90 after commencement of treatment, lesion aspiration smears were made and examined as described above.

Results

The duration of lesions at the time of presentation varied between 2 months to 6 years (median 3 months). Fifty patients (75%) had single lesions. More males ($n=59$) than females ($n=6$) were affected with ages ranging from 2 to 61 years (mean age 32 years). Most affected age group was 25 to 35 years ($n=40$), and the majority were military personnel ($n=50$). Lesions were commonly seen on the

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extensor surfaces (38/65). Patients also had lesions on the face (n=30), pinna (n=10) and back of the chest and abdomen (n=8). There were three types of lesions observed; single or multiple dry ulcers (Figure 1a, n=33, mean duration of lesion 13.2 months), single scaling nodules (Figure 1b, n=23, mean duration of lesion 7.9 months) and non-tender, non-itching, erythematous papules of about 2 to 3 mm size (Figure 1c, n=9, mean duration of lesion 4.7 months). Some patients (n=8) had satellite lesions around the main ulcer.

A majority of patients were from the North-central province (34). Others were from Eastern (20), Southern (8), Western (2) and North-western provinces (1). Most of the affected patients (82%) were living and working in close proximity to jungles. All patients had potential reservoir hosts in the immediate environment. 98% of patients were not aware of the existence of such a disease. All patients had little or no knowledge regarding the modes of transmission, likely vectors, reservoir hosts or preventive measures.

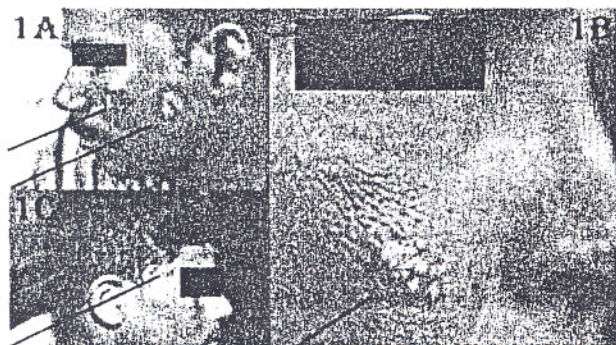


Figure 1. Facial lesions of the patients with cutaneous leishmaniasis.

Cryotherapy was used as the treatment method in all patients. It was given fortnightly during the first month and less frequently thereafter depending on the response. Only 40% (16/40) attended more than 4 out of the 6 follow up visits throughout the study period. During the follow up visits the main complaints were vesicle formation in and around the lesion, pain, redness, swelling and burning of the surrounding skin, difficulty in making frequent clinic visits and long distances to travel. A local hypersensitivity reaction after the first dose of cryotherapy was observed in one patient. The majority (89%, n=35) remained smear positive 2 weeks after cryotherapy. Three months after commencement of cryotherapy, lesions were completely healed in 4/16 patients and investigations were not repeated in this group. One to five treatment sessions were needed for complete clinical cure. Marked depigmentation was observed in the completely healed lesions. 8/12 patients were smear positive at the end of third month after starting treatment and are presently being treated and followed up.

Conclusions

Cutaneous leishmaniasis is now an established parasitic disease in Sri Lanka, especially in the North-central province. Outdoor occupational behaviours, close proximity to jungles, lack of awareness, and inadequate use of preventive measures were identified as associated risk factors.

Low compliance to cryotherapy, which is the principal method of treatment used in Sri Lanka, and long duration of smear positivity after treatment indicating the possibility of patients acting as reservoirs of infection promoting further spread, highlight the need for evaluation of alternative treatment methods (2,4,5) for cutaneous leishmaniasis. An active case detection program would help in determining the actual burden of the disease in the country. This would help in planning proper management and control activities. Studies are being done for definite species identification, and this will be of importance in determining treatment options. Public awareness based on health education programs, early diagnosis, treatment and surveillance are important to reduce the risk of further spread.

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Clinical examination in paediatrics at final MBBS: views of children and their parents

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(Index words: Informed consent, distress to children and mothers, gross inadequacy of honorarium)

Abstract

Introduction The final examination in paediatrics for medical undergraduates in Sri Lanka consists of a written and a clinical component. Each candidate at the clinical component sees one long case and two short cases.

Objectives To assess the views of the bystanders regarding their sick children participating at a clinical examination, and to evaluate the children's perceptions of the clinical component.

Methods An interviewer-administered questionnaire was discussed separately with the participating children and their bystanders at the final year examination in paediatrics of the Faculty of Medicine, Colombo, in 1999.

Results 116 patients participated at the clinical examination in paediatrics. 107 (92%) of the bystanders were the children's mothers. Informed consent had not been obtained for use in the examination from 59 (51%) of the children's mothers. Seven (6%) were not satisfied with the way their children were handled by the candidates, and 25 (21.5%) showed concern about the number of candidates examining their child. Bystanders who participated at the long cases were inconvenienced more than those in the short cases. 34 children above the age of 5 years were also interviewed. An explanation regarding the examination had not been given to 31 (92%) of them. Six children (17%) said they were examined for too long. A majority of the bystanders welcomed the payments received and all of them were satisfied with the medical students' conduct and politeness. All of them agreed that this form of clinical examination was a good method of evaluating a student's professional competence.

Conclusions Several aspects of the clinical component of the final examination in paediatrics for medical undergraduates need to be improved to minimise the inconvenience experienced by the children and their parents.

Introduction

The clinical part of the final MBBS examination in paediatrics consists of a long case and several short cases. Studies have shown that this form of patient oriented clinical evaluation is essential to assess competence in core clinical skills (1). Patients with common illnesses and important clinical findings are selected for this evaluation and examined by candidates.

Many details have to be looked into to minimise inconvenience to children during their participation (2). Some enjoy this experience whereas others are unhappy about it. In our experience patients have participated in this examination without much hesitation. The purpose of this study was twofold; to assess parental attitudes about their sick children participating in a clinical examination, and to evaluate the sick children's perceptions of examination by candidates.

Setting

Our study was conducted in 1999 during the final MBBS examination of the Faculty of Medicine, Colombo. The clinical examination in paediatrics was at the University Unit of the Lady Ridgeway Hospital for children in Colombo. It is a fully equipped tertiary care teaching hospital with 6 general medical wards and 4 general surgical wards.

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