IMPORTED CUTANEOUS LEISHMANIASIS IN THAILAND

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Abstract. Eleven cases of imported cutaneous leishmaniasis are described based on clinical features such as sex, age, occupation, country visited prior to consultation, sites and numbers of lesions, duration of illness, treatment and outcomes. Ketoconazole was shown to be effective against imported cutaneous leishmaniasis. With the increasing numbers of cutaneous leishmaniasis due to exchange workers going to the endemic areas and the presence of vectors in some localities in Thailand, primary transmission of the disease in this country is possible if feeding habits of the vectors change.

INTRODUCTION

Cutaneous leishmaniasis is not primarily found in Thailand. The disease is endemic in the Middle East, the Mediterranean, Africa, Southern and Central Africa (Albanese *et al*, 1989). It is caused by a wide range of *Leishmania* species. This disease is transmitted by a vector known as the Phebotomine sand fly. In Thailand, Apiwathnasorn *et al* (1993) conducted a sand fly survey and found that *Phlebotomus hoepplii, P. argentipes*, a known vector of visceral leishmaniasis in India and *P. major major* a vector of visceral leishmaniasis in the Mediterranean area are found in some localities in Thailand. The last two species, however, feed on cattle.

The lesion of cutaneous leishmaniasis starts as a papule at the inocutated site, then it enlarges and forms a shallow ulcer with raised red margin eventually thought to heal by itself with scar formation in months to years (Saenz *et al*, 1990). Treatment of cutaneous leishmaniasis is difficult. The mainstay has been the pentavalent antimonials (Sb) complexed to carbohydrate in the form of sodium stibogluconate (Pentostam) or meglumine antimonate (Glucantime) (Berman, 1988). Among the non-antimonial antileishmanial regimens for cutaneous leishmaniasis are pentamidine, amphotericin B (Berman, 1988), rifampin (Paz *et al*, 1982), trimetroprim-sulfamethoxazole (Murphy and Bong, 1981), metronidazole (Long, 1973), ketoconazole (Berman, 1988) and itraconazole (Albanese *et al*, 1989). Ketoconazole is a potent drug against cutaneous leishmaniasis. Several studies reported a good response (Weinrauch *et al*, 1983; Viallet *et al*, 1986; Saenz *et al*, 1990; Navin *et al*, 1992).

The aim of this study was to describe imported cases of cutaneous leishmaniasis in The Hospital for Tropical Diseases, Bangkok, Thailand from 1984-1992. The clinical features, treatment and outcomes were evaluated. A review of documented cases of leishmaniasis in Thailand is also presented.

MATERIALS AND METHODS

Patients

A retrospective study was carried out to describe cases of imported cutaneous leishmaniasis in The Hospital for Tropical Diseases from 1984-1992. Clinical features including sex, age, occupation, country visited prior consultation, sites and numbers of lesions, duration of illness, treatment and outcomes were searched for and recorded in details.

Diagnosis

Diagnosis of cutaneous leishmaniasis was based on the presence of leishmania amastigotes on direct smear taken from scrapping of the skin lesions and/or biopsy which was stained with Giemsa stain and Hematoxylin and Eosin stain.

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Treatment

Treatment consisted of 400 mg of ketoconazole (Nizoral) for 28 days.

Outcome

Improvement was documented by diminution in size, dryness and scab formation. Clinical cure was based on complete healing of the skin lesions and/or scar formation.

RESULTS

There were a total of 11 imported cases of cutaneous leishmaniasis from 1984 to 1992. The clinical features are presented in Table 1. All patients were male workers from Middle East countries where cutaneous leishmaniasis is endemic. All except one patient had returned from Saudi Arabia. The age ranged from 25 to 42 years old. The skin lesions showed irregular raise borders with variable depth of ulceration. There were usually multiple involving mainly the extremities. The average duration of skin lesion before consultation was 3.6 months. History of sand fly bite could not be elicited in all patients.

Two patients had received topical treatment with either an antifungal agent (PC) or Pentostam injection (JK) before this admission. All were treated with 400 mg of ketoconazole (Nizoral) per day for 28 days. The time of follow up was 6 months. Data showed that nine of eleven patients were clinically cured. Two patients (PC and PS) had relapse at 5 and 1.5 months respectively. Another course of ketoconazole was given but both patients were lost to follow up. The patients tolerated ketoconazole well. Drug compliance was good. No side effect was observed in any patients.

DISCUSSION

Cutaneous leishmaniasis is now a global disease. It has been detected in non-endemic areas as imported cases (Singer *et al*, 1975; Nakayama *et al*, 1990; Norton *et al*, 1992). Thai exchange workers to the Middle East have a risk of being infected. The first documented case of cutaneous leishmaniasis in Thailand was in 1981 (Puawilai *et al*, 1981); Table 2 shows all known documented cases of cutaneous leishmaniasis. The largest series was reported by Nakjang *et al* (1987). The authors believe that many cases are still unpublished. Cases of visceral leishmaniasis are presented in Table 3. The first case was reported in 1960 (Laohapaibul

Table 1

Clinical features of imported cutaneous leishmaniasis in Thailand.

Patients	Sex	Age	Occupation	Country visited prior to skin manifestation	Sites of lesions	No. of lesions	Duration of lesions before consultation (months)	Outcome
PC	M	34	Driver	Libia	R & L arms	2	6	Relapsed
KP	M	38	Driver	Saudi Arabia	L forearm, back, L achilles	3	4	Cured
PS	M	37	Laborer	Saudi Arabia	R arm	1	1.5	Relapsed
CB	M	39	Carpenter	Saudi Arabia	R & L legs, R elbow, R foot	6	2	Cured
CC	M	25	-	Saudi Arabia	R & L legs	4	3	Cured
JK	M	33	-	Saudi Arabia	L arm	1	5	Cured
ST	M	28	-	Saudi Arabia	R & L wrist, neck	3	2	Cured
KS	M	37	-	Saudi Arabia	L leg	1	8	Cured
CK	M	36	-	Saudi Arabia	R leg	1	4	Cured
AS	M	42	-	Saudi Arabia	L leg	1	4	Cured
SB	M	29	-	Saudi Arabia	R & L arms, face	4	2	Cured

Table 2

Reports of cutaneous leishmaniasis in Thailand.

	No. of cases	Country visited prior to skin manifestation	Culture	Treatment	Outcome
Puawilai *et al*, 1981	1	-	-	-	-
Prakitrithanont, 1981	1	-	-	-	-
Piamphongsant, 1982	3	Saudi Arabia	*L. tropicana*	Rifampicin	Cured
Nakjang *et al*, 1987	24	Saudi Arabia & Iraq	*L. tropicana*	Rifampicin	Cured
Viriyavejakul *et al*, 1997 (present study)	11	Saudi Arabia & Libya	-	Ketoconazole	Cured 9/11

Table 3

Reports of visceral leishmaniasis in Thailand.

	No. of cases	Country visited prior to skin manifestation	Culture	Treatment	Outcome
Laohapaibul *et al*, 1960	1	Pakistan	-	Fuadin	Expired
Seksarn *et al*, 1984	1	Bangladesh	-	Pentamidine isothionate	-
Chutabuddhi *et al*, 1986		Saudi Arabia	*L. donovani*	Sodium stibogluconate	Cured
Chutabuddhi *et al*, 1986	1	Saudi Arabia	-	Sodium stibogluconate	Cured
Division of Epidemiology, MPH*, Thailand, 1986	1	Saudi Arabia	*L. donovani*	Amphotericin B	Cured
Division of Epidemiology, MPH*, Thailand, 1986	1	Saudi Arabia	*L. donovani*	Sodium stibogluconate	Cured
Suttinont, 1987	1	Saudi Arabia	*L. donovani*	Sodium stibogluconate	Cured

* MPH-Ministry of Public Health

and Siampakdi 1960) in a Pakistan lady, after which a few more cases were added.

Treatment of cutaneous leishmaniasis is a challenge. Several drugs have been documented to cure the disease though treatment failure has been occasionally reported. Among the newest systemic drugs, ketoconazole has demonstrated good clinical response in cutaneous leishmaniasis (Weinrauch *et al*, 1983; Viallet *et al*, 1986; Urcuyo and Zaias, 1992; Alsaleh *et al*, 1995). However, failure of ketoconazole has also been reported (Weinrauch *et al*, 1983; Dedet *et al*, 1986; Singh *et al*, 1995). Navin *et al* (1992) did a placebo-controlled clinical trial of sodium stibogluconate versus ketoconazole in Guatemala and concluded that outcome was influenced by species. Cutaneous leishmaniasis due to *L. braziliensis* responded better with sodium stibogluconate than ketoconazole while *L. mexicana* infected patients had better responses with ketoconazole. In the present study, we were unable to differentiate the species. Culture was not performed.

Monoclonal antibody methods and DNA hybridization were not available locally. The data show that ketoconazole is a suitable drug against cutaneous leishmaniasis. Additional research on placebo control clinical trial as well as research on a newer imidazole, itraconazole is recommended. Itraconazole is also a potential drug against cutaneous leishmaniasis (Dogra *et al*, 1990; Pialoux *et al*, 1990; Al-Fouzan *et al*, 1991).

In summary, we documented eleven cases of cutaneous leishmaniasis. Ketoconazole was shown to be therapeutically effective. Although the number of imported cases of cutaneous leishmaniasis in Thailand is low, the possibility of having more cases in the future is significant, as long as Thai workers continue to work in endemic areas. Furthermore, vectors, *eg Phlebotomus*, exist in the country; though they feed on cattle they may lead to disease transmission in the future.

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