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Cutaneous leishmaniasis: A Report of its Treatment with Mectizan in Sokoto, Nigeria

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Skin ulcer healing-time was observed in forty patients of *Cutaneous leishmaniasis* given surgical or drug treatment of various types. It took averages of two to five weeks (± 1.41) and a maximum of nine weeks for ulcer of any of 22 patients who took mectizan (200-400 μg) to heal, leaving pale but smooth skin with no disfiguring cicatrix. This is a significantly ($p < 0.05$) better result than an average of ten and half weeks (± 4.95) ulcer healing-time observed in 14 patients treated with surgical curettage and wound dressing but no mectizan administration. Another 4 patients who took dapsone or rifampicin did not respond to treatment. It was concluded that mectizan showed promise and reliability when combined with surgical wound dressing to cure *Cutaneous leishmaniasis*.

Key words: Leishmaniasis, mectizan

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INTRODUCTION

Leishmaniasis is a protozoan disease of public health significance mainly in the Middle East, India and sub-Sahara Africa^[1-3]. Visceral manifestation of the disease is more malignant than *Cutaneous leishmaniasis* which commonly present in form of benign, self-healing, well-circumscribed nodular or ulcerative skin lesions^[2,4]. Nevertheless, treatment of *Cutaneous leishmaniasis* is necessary to reduce reservoir of disease spread and outbreak of infection. Moreover *Cutaneous leishmaniasis* is disposed to visceralization and may relapse into a diffused form resembling lepromatous leprosy^[3,4]. This complication and disfigurement left by healed ugly scar of untreated *Cutaneous leishmaniasis* constitute an important social and public health problem in Africa^[1,3,5]. Although chemotherapy is indicated, the choice of drug for treatment of *Cutaneous leishmaniasis* is either limited, inadequate or gives unsatisfactory result^[5-7]. Antimonial compounds commonly used as the first line drug of choice for *Cutaneous leishmaniasis* are often toxic and unreliable to give complete cure^[1,6,7]. Other drugs have also been used to treat *Cutaneous leishmaniasis* with varying degree of success^[8-12]. Immune manipulation and other anti-leishmanial methods such as corticosteroids injection are still experimental^[1,13,14]. Informed by the need for a more effective anti-leishmanial drug treatment^[1,5], we therefore report our observation on the response of some patients of *Cutaneous leishmaniasis* to mectizan, a standard filaricide mainly on chcerciasis drug^[15].

RESULTS

Skin ulcer healing time was monitored for forty patients of *Cutaneous leishmaniasis*, who were randomly given drug treatment and wound dressing of five different categories (Table 1). An average healing time of two weeks (± 1.41 SD) was recorded for each of four patients

given mectizan (Ivermectin) and whose wounds were treated by excision, suturing and dressing (Table 1). Mectizan was administered at a single dose of 200-400 $\mu\text{g kg}^{-1}$ to each recipient. This dosage of mectizan was repeated for patients whose lesions showed little or no improvement after four weeks. In the second and third categories of treatment, an average of five weeks of ulcer healing time was observed for each of eighteen patients who received mectizan and wound dressing along with or without curettage (Table 1). The result generally indicate that the ulcer healing time did not exceed nine weeks for any patients who took mectizan, irrespective of method of additional surgical wound treatment given. It was also observed that cicatrix left by healed cutaneous lesion treated with mectizan showed pale but smooth skin with no disfiguring scar. The fourth category of treatment shows (Table 1) that wound curettage and dressing without mectizan intake gave an average healing time of ten and half weeks (± 4.95 SD; range: 7-14 weeks). In a fifth category of treatment, the observation of wound was stopped when healing time exceeded sixteen weeks for each of four patients who took either rifampicin or dapsone or a combination of both drugs with or without wound dressing (Table 1). Rifampicin and dapsone had been given presumptively against cutaneous mycobacteriosis before laboratory confirmation of *Cutaneous leishmaniasis*. In addition to specific treatment administered all patients were given antibiotics against secondary infection of lesions. No side effects were observed in patients treated with mectizan.

DISCUSSION

This result suggests that mectizan facilitated the healing of wound on the skin of patients who had *Cutaneous leishmaniasis*. It also indicates that wound dressing or surgical treatment of *Cutaneous leishmaniasis* by wound curettage, excision or suturing gave better result when combined

Table 1: Treatment methods and duration of ulcer healing among patients of *Cutaneous leishmaniasis*

Treatment method	No. of patients	Healing time (weeks)			
		Range	Average	\pm SD	Z score
Wound excision, suture and mectizan	4	1-3	2	1.41	-0.92
Wound curettage, Scrapping and mectizan	9	4-6	5	1.41	-0.50
Wound dressing and mectizan	9	4-6	5	1.41	-0.50
Wound curettage and dressing	14	7-14	10.5	4.95	+0.33
Wound dressing and dapsone/rifampicin	4	16+	20	5.66	+1.60
	40		8.6		

One-tailed t value=2.668 at 95% CL (p<0.05)

with mectizan administration. Alternatively, it may be explained rather that mectizan gave dramatic cure of *Cutaneous leishmaniasis*, especially when combined with surgical wound excision, suturing or dressing treatment. The result also indicates that surgical treatment alone was less effective without mectizan while rifampicin and dapsone proved ineffective compared with mectizan in the treatment of *Cutaneous leishmaniasis*. The result is especially encouraging since no side-effects of drug was observed in this study and also that previous studies^[15] showed that mectizan is tolerable. This suggests an obvious advantage over standard anti-leishmanial drugs such as antimony compounds which are not innocuous and often fail to give full effective cure^[1,5,7]. Moreover, mectizan is usually given orally at a single dose and this is preferred, even at this cure rate, over the antimonials which patients avoid when it has to be given by injection or at high irritating dosages for a long period^[5,16]. This report therefore points to mectizan as an anti-leishmanial drug which shows promise and so it is recommended for further studies to determine more accurately the efficacy of the drug. This is important because mectizan may be useful in case of proven leishmanial resistance to standard drugs^[1,7] or where these drugs show clear limitations as enumerated.

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