



## Emerging of leishmaniasis in Zamzum, Libya

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### ABSTRACT

A pilot study on leishmaniasis was carried in the outpatient clinic, Zamzum, Libya, from 4 October 2018 to 31 May 2019. A total of 84 patients with cutaneous leishmaniasis (CL) were studied. The duration of the lesions varied from a few days to 3 months. Multiple lesions ranging from one to 21 were present in 78% of cases. Ulcerative lesions were found in 37%, nodulo-ulcerative in 22%, nodular in 30% and others, including infiltrated, fungating and warty lesions, in 3% of patients. The lower limbs were involved in 66%, upper limbs in 36% (Figure. 1), face in 89%, back in 6%, chest in 1%, and abdomen in 2%. Lesions were also found on the ear, scalp, genitalia and mucocutaneous junctions. Lymphatic involvement was present in 9% of the patients, secondary infection in 10%, fever in 12%, and pain in 40% and itching in 72%. Features of diffuse cutaneous leishmaniasis were noted in 3 patients. Slit skin smear was positive for parasites in 67 cases (highly positive in 34 cases). Various therapeutic regimens are discussed. Only patients with severe lesions (approximately 21%) were given 3 to 4 weeks' treatment with intravenous Pentostam, to which all except 4 responded satisfactorily with minimal side effects

## 1.0 Introduction

Leishmaniasis is a protozoan disease that is transmitted by the sand fly. It occurs widely throughout Africa, Asia, South America, the Middle East, and the Mediterranean region. The cutaneous leishmaniasis in Libya to be, sometimes at least, a rural zoonotic infection. The parasites are transmitted, probably by *Phlebotomus papatasi*, between the rodents *Psammomys obesus* and *Meriones libycus* and are observed in different geographical area. Cutaneous leishmaniasis affects both adults and children (Murray et al., 2005). The aim of the present study is to investigate the occurrence and clinical patterns of cutaneous leishmaniasis among cases attending Zamzum outpatient polyclinic, Zamzum, Libya.

## 2.0 Patients and Methods

We conduct a pilot study covering a 8 months period (October 2018 to 31 May 2019) in the Zamzum Hospital, Sirt in Libya. All medical reports of cutaneous

leishmaniasis are reviewed. Patients included are younger than age 17. The diagnosis of cutaneous leishmaniasis is based on a clinical presentation, or positive parasitic smear. Information is gathered for each patient, including age, sex, geographic location, previous history of leishmaniasis, a stay in an endemic area, the month of consultation, lesion location, and the number and size of lesions. We also note treatment and outcome

## 3.0 Results

T During this 8 months period, information on 84 (78 adult and 6 children) patients with lesions of cutaneous leishmaniasis was collected. Distribution according to age showed that leishmaniasis affected adult in 92.8 percent of the cases. Among the 84 patients were 26 female and 58 male. All of our patients lived in an endemic area. The patients gave a history of cutaneous leishmaniasis in other family members in 3.5 percent of the cases. The face was

the most commonly affected site (89 %). Clinical diagnosis was confirmed by the parasitologic smear. Giemsa stain revealed amastigotes, which appear pale blue.

#### 4.0 Discussion

Leishmaniasis is quite prevalent in Arab countries namely in Libya. The distribution is both in endemic areas and sporadic throughout the country (Akhlagh *et al.*, 2019, Ashford *et al.*, 1977, Mohammed *et al.*, 1999). The arthropod vector for all forms of leishmaniasis is the female sand fly. Adult female sandflies require a blood meal. During blood feeding, infected sandflies inject saliva containing leishmania organisms into the wound. The transmission cycle of the leishmania organisms requires an arthropod vector and a mammalian reservoir.

In our study, cutaneous leishmaniasis is frequent with a history of staying in an endemic area. A family history of leishmaniasis is relatively frequent, and it is necessary to examine all family members (Murray *et al.*, 2005). Regarding the ages and types of scars, our results are in similarity with results published by Safar and his colleagues from Iran (Safar *et al.*, 2006). There is no visceral leishmaniasis, nor post-kala-azar leishmaniasis in this area.

Figure 1. Erythematous ulcerative nodule lesion with crust about 7×5cm



Leishmaniasis is considered as an important public health problem in North Africa including Libya. More surveillance studies needed in the area of middle of Libya.

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