

Cutaneous leishmaniasis in the Libyan Arab Jamahiriya: a study of the Yafran area

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داء الليشمانيات الجلدي في الجماهيرية العربية الليبية: دراسة في منطقة يفرن
عبد الناصر علي البوني وإبراهيم جليل واللؤلؤة ظاهر بن ظريف

خلاصة: درسنا 445 حالة مصابة بداء الليشمانيات الجلدي في منطقة يفرن خلال المدة من شباط/فبراير 1991 إلى كانون الأول/ديسمبر 1992. وقد سجلت أعلى معدلات الإصابة عند نهاية فصول الانتقال في ذروتين، واحدة في تشرين الثاني/نوفمبر 1991 والثانية في كانون الأول/ديسمبر 1992. وكانت النسبة بين الذكور وبين الإناث المصابين بالعدوى هي 1.85 إلى 1.00. ووجد أعلى معدل للعدوى في الفئة العمرية 11-20 سنة من العمر. وذلك يعني أن هذا المرض ليس جديداً في منطقة يفرن.

ABSTRACT We studied 445 cases of cutaneous leishmaniasis in the Yafran area during the period February 1991 to December 1992. The highest incidence rates were recorded at the end of the transmission seasons in two peaks, one in November 1991 and the second in December 1992. The ratio of infected males to females was 1.85:1.00. The highest rate of infection was found among people 11-20 years of age. This indicates that the disease is not new in the Yafran area.

La leishmaniose cutanée en Jamahiriya arabe libyenne: une étude de la région de Yafran

RESUME Nous avons étudié 445 cas de leishmaniose cutanée dans la région de Yafran pendant la période allant de février 1991 à décembre 1992. Les taux d'incidence les plus élevés ont été enregistrés à la fin des saisons de transmission en deux niveaux maximums, le premier en novembre 1991 et le second en décembre 1992. Le ratio hommes/femmes infectés était de 1,85:1,00. Le taux d'infection le plus élevé a été trouvé chez les personnes âgées de 11 à 20 ans. Ceci indique que la maladie n'est pas nouvelle dans la région de Yafran.

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Introduction

Cutaneous leishmaniasis (CL) is widespread in the north-western region of the Libyan Arab Jamahiriya. The first two cases of CL were recorded in 1930 [1]. Another 40 cases have been recorded in Nalut near the Tunisian border [2]. Several CL cases have been recorded west and south-west of Tripoli among residents and new settlers in towns, villages and agricultural projects [3,4].

Yafran is a town of about 3000 residents situated south-west of Tripoli near the western mountain range of Jabal Nafusa. It is located in semi-arid highland about 550 metres above sea level. Olive trees, fig trees and wild aromatic herbs grow in the area. The average annual rainfall is about 90 mm and the monthly average temperature ranges from 6 °C in January to 42 °C in July, when the humidity level reaches 80%. We studied the incidence of CL over the period February 1991 to December 1992 in the Yafran area.

Patients and methods

Patients suspected of having CL were examined by dermatologists at Yafran Hospital. Smears from the edge of the lesions were confirmed microscopically. Positive cases were treated with sodium stibogluconate (0.1 mL/kg body weight) daily for 6–10 days.

Results

A total of 445 CL cases were recorded during the period from February 1991 to December 1992. Figure 1 shows monthly records indicating that by February 1991, the disease was already at, or past, peak incidence. The number of cases declined to the lowest level during the study period in May 1991, and then increased to reach the first peak in November 1991. The number of cases then dropped dramatically in April 1992, and then increased to reach another peak in December 1992.

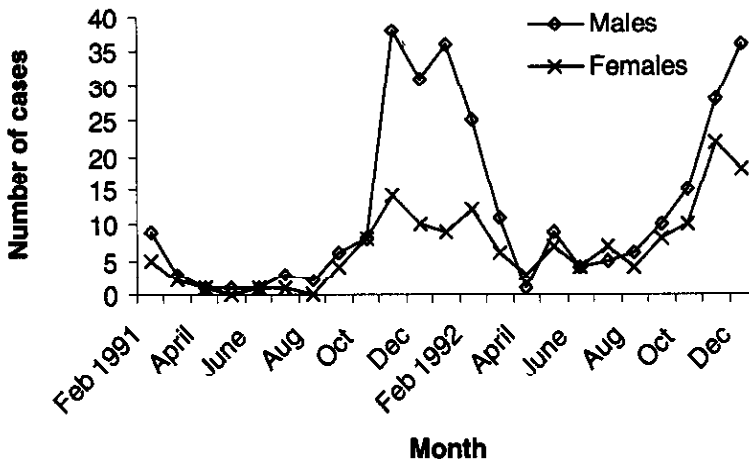


Figure 1 Recorded cases of cutaneous leishmaniasis in the Yafran area during the period from February 1991 to December 1992

Table 1 Sex and age group distribution of cutaneous leishmaniasis in the Yafran area

Age group (years)	Males	Females	Total	%
< 1	2	3	5	1.1
1-10	59	35	94	21.1
11-20	74	40	114	25.6
21-30	75	32	107	24.0
31-40	45	16	61	13.7
41-50	14	11	25	5.6
51-60	13	12	25	5.6
61-70	4	5	9	2.0
71-80	3	1	4	0.9
81-90	0	1	1	0.2
Total	289	156	445	

The age distribution of CL cases is shown in Table 1. There were 289 (64.9%) males affected and 156 (35.1%) females ($\chi^2_1 = 39.8$, $P < 0.001$). The ratio of males to females was 1.85:1.00. There were 114 cases (25.6%) of CL among people aged 11-20 years, followed by those aged 21-30 years (24.0%) and those aged 1-10 years (21.1%). The differences between the age groups were significant ($\chi^2_8 = 341$, $P < 0.001$).

Sandfly species were collected in the Yafran area. *Phlebotomus papatasi* was

the most common species found, followed by *P. sergenti*. Wild rodents including *Meriones libycus*, *M. shawi* and *Gerbillus gerbillus* have been found in the studied area and are possible animal reservoirs.

Discussion

CL is an endemic disease in the north-western part of the country [3-5]. The high rate of infection among younger age groups indicates that this disease is not a new occurrence in Yafran. Elderly individuals may have been infected in the past and have developed immunity against reinfection. In this area of the country, younger age groups are at great risk of acquiring CL.

The higher incidence of infection among males in the younger age groups may be due to two factors. First, women do not seek medical advice and tend to have fewer activities outside their homes. Men have a habit of sleeping outside their homes during hot nights where they may be more prone to infection.

P. papatasi is the proven vector for *Leishmania major* in Tunisia, Egypt and the Libyan Arab Jamahiriya [6-8]. *M. libycus* and *M. shawi* have been found to be infected with *L. major* in endemic areas in the north-western region of the country [3,9,10].

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