

A RETROSPECTIVE STUDY OF CUTANEOUS LEISHMANIASIS IN AL-BADARNA AND AL-JOSH, LIBYA

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This paper presents the results of a retrospective study of cutaneous leishmaniasis cases in Al-Badarna and Al-Josh during the year 1993. One hundred and forty nine CL cases from Al-Badarna and ninety eight CL cases from Al-Josh were referred to Medical Care Units in the two villages. The infection rates among the whole population in Al-Badarna and Al-Josh were 15.7% and 17.82% respectively. 74.5% and 68.4% of CL cases have been observed in age groups 11-40 years old in Al-Badarna and Al-Josh respectively, with males were higher affected than females.

The age distribution confirmed that cutaneous leishmaniasis is a disease of young people, while the old people may got infected in the past and developed immunity against it.

INTRODUCTION

Zoonotic cutaneous leishmaniasis (ZCL) caused by *Leishmania major* (MON25) causes much suffering in endemo-epidemic areas (North Western region of Libya).

Historical records of ZCL in Libya are dated back to 1912 (Onorato, 1931). From the reports recorded by Kadiki and Ashraf (1971); Bushwreb (1975); Ashford *et al.* (1976) and El-Buni *et al.* (1996) it appears that this disease is clearly common and endemic in the western mountain (Jabal Nafusa).

MATERIAL AND METHODS

Study area (Fig. 1)

Al-Badarna is a village of 1,500 of population, lies on the northern edge of Jabal Nafusa at an altitude of 500 m a. s.l. and Al-Josh is a village of 820 of population, lies on the foot of Jabal Nafusa at an altitude of 150 m a.s.l.

Records of ZCL cases between February 1992 to January 1993 were obtained from the local Health Care Division. Clinically suspected cases were examined and treated by local physicians in the two villages. Sodium stibogluconate is the drug of choice for the treatment of leishmaniasis in Libya.

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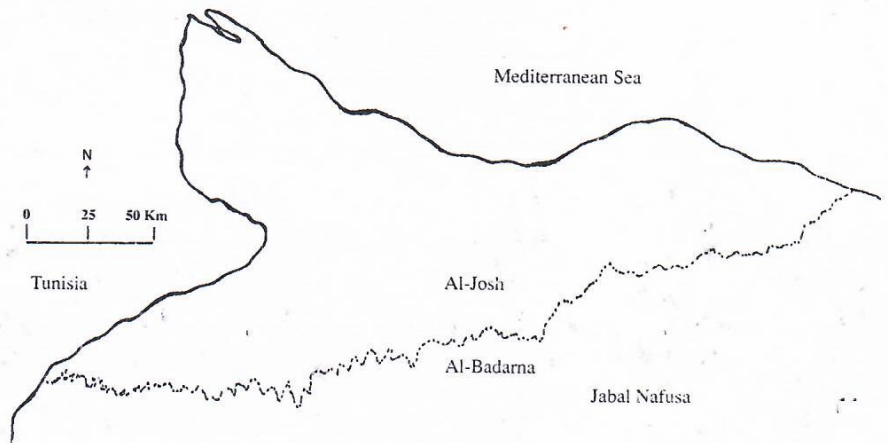


Fig. 1 - Map of the North-western region of Libya, showing the location of Al-Badarna and Al-Josh

RESULTS

Al-Badarna

A total of 149 cases of ZCL were recorded, of which 93 (62.42%) were males. The sex ratio (M:F) was 1.7:1.0. The monthly record of cases (Table 1) reveals that there was a peak of incidence in October (37 cases, 24.83%). The age distribution of ZCL cases is shown in Table 2. The highest number of cases (40 cases, 26.9%) was found in the age group 1-10 years old, followed by the age group 11-20 years old (34 cases, 22.8%).

Al-Josh

Ninety eight ZCL cases were recorded, of which 62 (63.3%) were males. The sex ratio (M:F) was 1.72: 1.00. Table 3 shows that there was a peak of incidence in November (15 cases, 15.3%). The age distribution of ZCL cases is shown in Table 4. The highest number of cases (27 cases, 27.6%) was demonstrated among the age group 1-10 years old followed by the age group 11-20 years old (21 cases, 21.4%).

Table 1 - Reported numbers of ZCL cases in Al-Badarna during the period from February 1992 to January 1993

| Months | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec | Jan. |
|---------|------|------|------|-----|------|------|------|-------|------|------|-----|------|
| Sex | | | | | | | | | | | | |
| Males | 3 | 1 | 2 | 2 | 2 | 4 | 8 | 8 | 25 | 15 | 12 | 11 |
| Females | 1 | - | - | - | 2 | 3 | 4 | 8 | 12 | 9 | 10 | 7 |
| Total | 4 | 1 | 2 | 2 | 4 | 7 | 12 | 16 | 37 | 24 | 22 | 18 |

Table 2 - Sex and age-groups distribution of ZCL cases in Al-Badarna

| Age | <1 | 1-10 | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | >70 | Total |
|---------|-----|------|-------|-------|-------|-------|-------|-------|-----|-------|
| Sex | | | | | | | | | | |
| Males | 2 | 25 | 22 | 15 | 9 | 7 | 7 | 5 | 1 | 93 |
| Females | 1 | 15 | 12 | 7 | 6 | 5 | 6 | 4 | - | 56 |
| Total | 3 | 40 | 34 | 22 | 15 | 12 | 13 | 9 | 1 | 149 |
| % | 2.0 | 26.9 | 22.8 | 14.8 | 10.1 | 8.1 | 8.7 | 6.0 | 0.7 | |

Table 3 - Reported numbers of ZCL cases in Al-Josh during the period from February 1992 to January 1993

| Months | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec | Jan. |
|---------|------|------|------|-----|------|------|------|-------|------|------|-----|------|
| Sex | | | | | | | | | | | | |
| Males | 1 | 1 | 2 | 2 | 4 | 5 | 9 | 8 | 11 | 7 | 7 | 5 |
| Females | - | 1 | - | 3 | 3 | 5 | 3 | 4 | 2 | 8 | 4 | 3 |
| Total | 1 | 2 | 2 | 5 | 7 | 10 | 12 | 12 | 13 | 15 | 11 | 8 |

Table 4 - Sex and age-groups distribution of ZCL cases in Al-Josh

| Age | <1 | 1-10 | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | >70 | Total |
|---------|-----|------|-------|-------|-------|-------|-------|-------|-----|-------|
| Sex | | | | | | | | | | |
| Males | - | 16 | 12 | 7 | 8 | 7 | 4 | 4 | 4 | 62 |
| Females | 2 | 11 | 9 | 2 | 2 | 3 | 2 | 4 | 1 | 36 |
| Total | 2 | 27 | 21 | 9 | 10 | 10 | 6 | 8 | 5 | 98 |
| % | 2.0 | 27.6 | 21.4 | 9.2 | 10.2 | 10.2 | 6.1 | 8.2 | 5.1 | |

DISCUSSION

Zoonotic cutaneous leishmaniasis is considered an endemic disease in the North-Western region of Libya (Kadiki & Ashraf, 1971; Bushwereb, 1975; Ashford *et al.*, 1976; El-Buni *et al.*, 1996). The higher incidence rate in young age groups than old age groups indicates that this disease is not a new occur-

ce in these two villages. Elderly individuals may have been infected in the past and developed immunity. The young age groups are at great risk of acquiring the infection.

The higher incidence rate of infection among males than females is may be due to that the females do not seek medical advice and males more often sleep in open during hot nights.

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