

## A STUDY OF PERIORAL LESIONS OF CUTANEOUS LEISHMANIASIS

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أجريت دراسة مراجعة على ستائة واثان وتسعون مريضاً من المرضى السعوديين المصابين بمرض اللشمانيا الجلدية والمراجعون لقسم الجلدية في مستشفى عسير المركزي بأبها في المنطقة الجنوبية. وتبين إصابة ١١٤ حالة باللشمانيا في المنطقة الجلدية المحيطة بالخد والأنف بنسبة ١٦,٥٪ من مجموع الحالات. شملت هذه الدراسة ٣٤ مريضة بنسبة (٢٩,٨٪) وثمانون مريضاً من الذكور بنسبة (٧٠,٢٪) وقد اتضح من هذه الدراسة ارتفاع نسبة الإصابة باللشمانيا في المنطقة المحيطة بالفم في الأشخاص الذين تقل أعمارهم عن عشرة سنوات كما تبين أن الإصابة في الشفة السفلى فاقت الإصابة في الأماكن الأخرى (٤٦,٤٪) وأقل نسبة للإصابة كانت في جلد الخد وكذلك الأنف (٤,٤٪) كما أظهرت أيضاً هذه الدراسة نماذج لبعض الأشكال الإكلينيكية للمرض في المنطقة المحيطة بالفم والفحص المستولوجي لهذه الحالات ومحاولة المقارنة وتمييزها عن الأمراض الأخرى ذات الأعراض الإكلينيكية المماثلة.

A retrospective study of 692 cases of cutaneous leishmaniasis was carried out to analyze incidence and sex prevalence, The clinical and histological features of perioral lesions particularly affecting the upper and lower lips, corner of the mouth and skin of the cheeks and nose are reported. There was a total of 114 patients (16.5%) with this condition involving perioral sites of which 34 were females (29.8%) and 80 were males (70.2%). All age-groups seemed to have been affected but a higher incidence (48.3%) was evident in the under 10-year-old age-group. The lower lip showed a high percentage of cases (46.5%) followed by skin of the cheeks while the nose (4.4%) was the least affected sites.

### Introduction

Leishmaniasis is a disease caused by a flagellated protozoal parasite of the genus *Leishmania* which manifest itself in three forms, namely, cutaneous, mucocutaneous and visceral. The clinical manifestations depend on the cell mediated immunity of the patient and the species of leishmania.

Cutaneous leishmania "oriental sore" is endemic in Saudi Arabia which is predominantly caused by *Leishmania tropica* [Fig. 1]. This form of disease may affect any area of the skin but more likely the exposed parts of the body.<sup>1</sup>

This retrospective study was prompted by a large noticeable number of cases involving the lips and adjacent areas of the face seen at the Dermatology

Department of Asir Central Hospital in Abha, southwest highland of the Kingdom of Saudi Arabia. There is also a need that clinicians in general and oral surgery in particular be acquainted with this condition since it resembles other well known orofacial lesions in its clinical presentation.



Figure 1. An acute lesion of leishmaniasis of the upper lip.

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**Materials and Methods**

The histopathology reports were reviewed retrospectively for diagnosed cases of cutaneous leishmaniasis involving particularly the perioral sites (upper and lower lips, the corner of the mouth, skin of the cheeks and nose) for a period of four months (October 1986 to January 1987) after which all charts concerning leishmania cases were transferred to the Leishmania Center in the Medical College, Abha Branch.

Age, sex and nationality of each patient were recorded. Almost all cases had the diagnosis confirmed by means of smear tests. Standard hematoxylin and eosin stained tissue sections for each case were reviewed.

**Results**

From October 1986 to January 1987, the Dermatology Department received 692 cases of cutaneous lesions of leishmaniasis out of which lesions in 114 patients (16.5%) occurred in the perioral sites. Thirty-four patients were females (29.8%) and 80 were males (70.2%). Table 1 shows incidence among various age-groups. Table 2 shows site distribution with the highest incidence on the lower lip (46.5%), the corner of the mouth

Table 1. Age distribution of the disease among 114 patients.

Age	No. of Patients	Percentage
0-1	3	2.6%
1-10	55	48.3%
11-20	35	30.7%
21-30	9	7.9%
31-40	7	6.1%
41-50	2	1.8%
51-60	2	1.8%
61-70	1	0.8%

Table 2. Site distribution of the disease among 114 patients.

Site	No. of Patients	Percentage
Lower lip	53	46.5%
Upper lip	42	36.8%
Corner of mouth	5	4.4%
Cheek skin	9	7.9%
Noseskin	5	4.4%

and the skin of the nose were the least affected perioral areas (4.4%). Majority of the patients (75.8%) exhibited only one lesion, 19.2% presented with two lesions and 15% had three or more lesions.

Clinical presentation of leishmaniasis varied from an active mucocutaneous lip lesions [Fig. 1] to a plaque with scale formation of a cutaneous lesion on the skin of the cheek [Fig. 2], Circular depression on the skin with a shiny surface are evident after completion of healing [Fig. 3]. Histopathological examination of eosin and hematoxylin tissue sections [Figs. 4 and 5] demonstrated a massive infiltration of the dermis by histiocytes and mononuclear leukocytes with abundant non-flagellated Leishman-Donovan bodies. These bodies appeared round or oval about 2-4 μm. The bodies were not capsulated and each of them presented a relatively large basophilic round nucleus of about 1 μm in diameter and a small rod-like paranucleus or kinetoplast.



Figure 2. A scar showing healing of lesion on the skin.

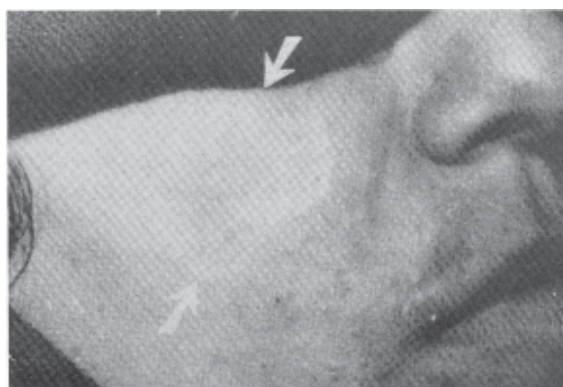


Figure 3. Photograph showing the circular depression of a completely healed cheek skin lesion.

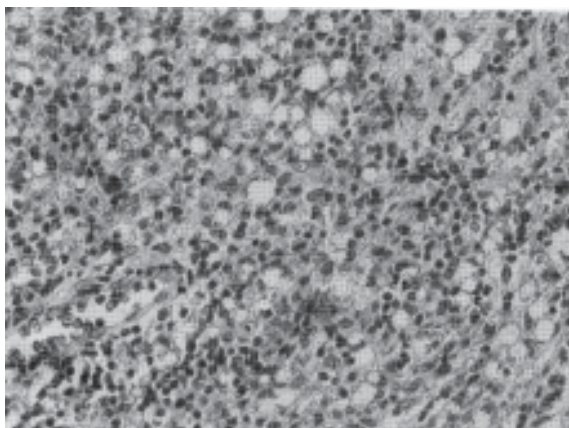


Figure 4, Histological picture showing massive infiltration by histiocytes and mononuclear leukocytes (H&E x 400).

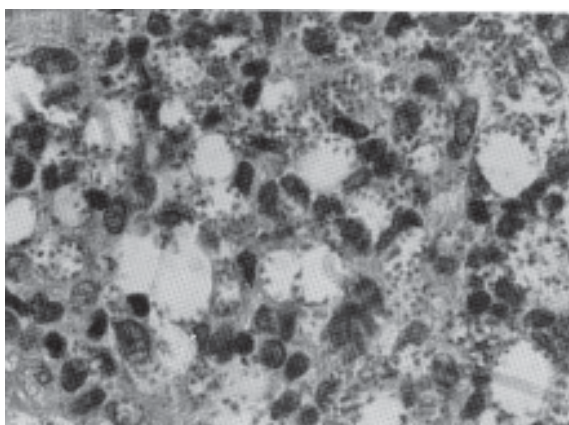


Figure 5, Histological picture of a higher magnification showing the Leishman-Donovan bodies (H&E x 1500).

### Discussion

The site of inoculation of the sandfly [Fig. 6] determines the location of the primary lesion of cutaneous leishmaniasis,<sup>2</sup> thus, the lesion occurred in exposed areas of the body.<sup>3</sup>

In this study, the perioral involvement accounted for only 16.5% of all cases of cutaneous leishmaniasis that had been recorded. Involvement of the lips (upper and lower) alone accounted for 83.3% of the lesions. These percentages were slightly higher than those reported by Sitheeque *et al.*<sup>4</sup> where 62.8% of the cases were on the lips and perioral sites.

Results of this study support those of Al-Taqi and Behbehani<sup>5</sup> where the majority of cases showed



Figure 6. Photograph showing sandfly.

lesions on the limbs. Occurrence of lesions on various sites of the body in different communities could be due to customs and habits, e.g. sleeping in the open and the type of dress being worn in hot countries which allow exposure of certain parts of the body not ordinarily accessible to sandfly. In the present study, the high incidence in males may be attributed to local cultural and social reasons since males are more exposed to various activities. This findings was also previously reported by Sitheeque *et al.*<sup>4</sup>

In this study, the high incidence (48.3%) was observed during the first decade of age which may be due to the existence of acquired immunity among the older age-groups. Most of the lesions involved the skin surface of the upper and lower lips but no specific mucosa! lesions were reported. Previous studies conducted in Sudan<sup>6-8</sup> showed that mucocutaneous leishmaniasis affected the lips and the nasal mucous membrane. Whereas in this study, majority of the patients exhibited only one lesion which is likely due to the manifestation of acquired immunity enabling host resistance to subsequent infection even before resolution of the primary ones.<sup>9,10</sup>

Clinically, "oriental sore", when it occurs on the lips or the adjoining area, may closely resembles a chancre, tertiary syphilitic gumma, squamous cell carcinoma or even keratoacanthoma. However, characteristic distinction can be achieved by performing specific diagnostic test and histopathological examination of leishmaniasis. The test reveals a granulomatous reaction with numerous specific demonstration of the organisms

in giemsa stained smears obtained from the border of the suspected lesion which usually confirms the diagnosis. Other diagnostic techniques, however, such as immunofluorescence, are also available.

### Conclusion

In conclusion, this study supports the prevalence and incidence of cutaneous leishmaniasis since there is a paucity of such information in the literature concerning involvement of lips and perioral tissues. The study also revealed the distribution of this particular type of cutaneous leishmaniasis in the Asir highland of the southwest region of the Kingdom of Saudi Arabia.

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