

Epidemiological Survey of Cutaneous Leishmaniasis In AL-Hawija District, Kirkuk Province, Iraq

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Abstract

The present study confirmed the presence of 507 cases of cutaneous leishmaniasis in AL-Hawija district during the period of 1 / November /2021 to 30 / October /2022 . The highest infection rate (29.5%) were recorded in January and the lowest rate (0.39%) in August . highest incidence of the disease being in The age group (1-10) years. The infected single sore (42.01%) were more frequent than with multiple sore (0.1%) .The clinical features of the lesions were dry (71.9%) as compared to wet (28%) .

Keywords: Epidemiology ,cutaneous leishmaniasis , AL-Hawija ,Iraq.

1. Introduction

cutaneous Leishmaniasis is a vector-borne disease in tropical and subtropical regions that occurs by parasitic transmission through a bite of infected sandfly of the genus *Lutzomyia* in the New world and *Phlebotomus* in the Old world (Akhoundi et al. 2016) . Human cutaneous leishmaniasis display a wide clinical spectrum ranging from self healing primary oriental sore lesion to severe mucocutaneous chancroid ulcer lesions to diffuse lesions (Iddawela, et al. 2018) . In Iraq cutaneous leishmaniasis (Baghdad boil) is widely distributed in an area of central part of the country with most cases being caused by *Leishmania tropica* (urban dry cutaneous leishmaniasis) or *L. major* (rural wet cutaneous leishmaniasis) (Aziz et al .,2016) . In the present epidemiological surveys ,a new foci of endemicity of cutaneous leishmaniasis in AL-Hawija district , Kirkuk province ,Iraq was confirmed .

2. Methods

Dermal scraping specimens were collected by

slitting the border of skin lesion from people with suspected cutaneous leishmaniasis ,who had admitted to general hospital and health centers in AL-Hawija district ,kirkuk province from November 2021 to October 2022 . The specimens were used for microscopic smear examination The tissue aspirate was smeared on to glass slide , fixed with methanol and stained with Giemsa as described previously (Hassan et al .,2020) .

3. Results

In this investigation 507 patients with cutaneous lesions were enrolled ,269 were males and 238 females . the age distribution of cutaneous lesions (Table 1) showed the highest peak incidence of the disease in both males and females was in the age group (1-10) years. The duration of lesion was six months with the highest frequency presented in January (28.9%) followed by February (25.6%) , December (16.1%) and November (10.8%) as shown in Table 2 .

Table 1: Age and sex distribution of 507 cases of cutaneous leishmaniasis recorded in AL-Hawija district during 2021-2022

Age (year)	male	infection	female	infection	total	Infection
Less than one	11	2.16	15	2.95	26	5.12
1-10	148	29.19	133	26.23	281	55.42
11-20	58	11.43	42	8.28	100	19.72
21-30	29	5.71	38	7.49	67	13.21
31-40	12	2.36	6	1.18	18	3.55
More than 40	11	2.16	4	0.78	15	2.95
total	269	53.01	238	46.91	507	100

Table 2: Duration of the cutaneous leishmaniasis in AL-Hawija district between 2021-2022

Year	Months	Number of patients	% infection
2021	November	55	10.8 %
	December	82	16.1 %
2022	January	147	28.9%
	February	130	25.6 %
	March	36	7.1%
	April	27	5.3%
	May	6	1.1%
	June	5	0.98%
	July	4	0.78%
	August	2	0.39%
	September	4	0.78%
	October	9	1.7%
	total	507	100%

Site of lesions	Number of patients	% infection
The face	210	41.5%
Upper extremity	194	38.2%
Lower extremity	103	20.3%
Total	507	100

Number of lesion	Number of patients	% infection
Single lesion	213	42.01%
2 lesion	107	21.1%
3 lesion	95	18.7%
4 lesion	34	6.7%
5 lesion	19	3.7%
6 lesion	15	2.9%
8 lesion	8	1.5%
9 lesion	11	2.1%
10 lesion	3	0.5%
11 lesion	1	0.1%
15 lesion	1	0.1%
Total	507	100

The lesion were located primarily on the face (41.5%) ,upper extremity (38.2%) or lower extremity (20.3%) as indicated in Table 3 . Three hundred sixty five patients (71.9%) presented with dry lesion and one hundred forty two patients (28%) with wet lesion .

As indicated in table 4 , two hundred thirteen patients (42%) presented with single lesion and seventy six patients (14.9%) presented with multiple lesion (4-8) .It is interting to note .that one patient was with is lesions

4. Discussion

The rural and urban forms of cutaneous leishmaniasis in Iraq is endemic and there has been an increase in the number of cases during the last twenty years in the middle and southern regions of the country (Qasim Abdulla et al.,2018) . As aresult of gulf war , the increased human mobility and long distance travel many document the emergence of new cutaneous leishmaniasis foci in geographic locale including northern Iraq where the disease was not endemic (Joseph Conrad.,2021) . All patients enrolled this investigation had characteristic sign and symptoms of cutaneous leishmaniasis ,from small erythematous papules to nodules and ulcerative lesion . The persent approach is very useful for diagnosing cutaneous leishmaniasis and can provide abetter understanding of the epidemiology of not only the clinical form of the disease but additionally the disease causing species .

5. Conclusions

Cutaneous leishmaniasis is a common epidemiological disease that raises concern in the governorates of Iraq due to its increase in recent years and is considered widespread in Hawija

district.

Reference

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