New Epidemic of Cutaneous Leishmainasis in Children in 2005 in Tikrit City

Ashoor R. Sarhat*

Wisam S. Najem *

Sarab K. Abed alrahman*

Rafal K. Farhan**

Abstract

This study is carried out to determine the epidemiology of cutaneous leishmaniasis in Iraqi children below sixteen years old in Tikrit during December-2005. From 489 patients attended Tikrit teaching hospital, 83 (17%) of them were having cutaneous leishmainasis. Fifty one of them were males (61.4%), and thirty two (38.6%) were females. Total number of lesions were 114, and the dry lesions constitute 78 (68.4 %) of them while, 36 (31.6%) of them were wet. 52.6% of the lesions were in the face, 26.4% of the lesions were in the lower limb, 2.6% of the lesions were in the abdomen, chest, and upper arm, and only 0.8% were in the scalp. Three cases had combined visceral and cutaneous leishmaniasis. A new epidemic of cutaneous leishmainasis had occurred in Iraq at end of 2005 and affects almost all ages and preferentially children and adolescents. Dry lesions were more .common than wet lesions

.**Keywords**: New epidemic of cutaneous leishmainasis, cutaneous leishmainasis in Iraq

Introduction

Leishmaniasis is endemic in 88 countries, and there are an estimated 12 million cases worldwide, and there are about 1.5 million new cases of cutaneous leishmaniasis (CL) each year of which over 90% occur in Afghanistan, Algeria, Iran, Iraq, Saudi Arabia, Syria, Brazil and Peru [1, 2]. In Iraq, Two species are present in Iraq: *L tropica*, agent of anthroponotic CL, *L. major*, and agent of zoonotic CL. Both ACL and ZCL occur in Iraq. ACL is mainly suburban [3, 4]. In Iraq, number of CL cases reported (incidence rate per 100,000): in 2001: is 625 cases and in 2000 is: 955 cases [4]. While in the following years the incidence increased [5]. Clinical infection in endemic areas occurs mainly in children [6, 7]. CL burden in Iraq, number of cases reported (incidence rate per 100,000): in 2001: is

* **Tikrit College of Medicine**

Salah - Al- Deen Health Directorate **

625 cases and in 2000 is: 955 cases [8]. While in the following years the (incidence rate per 100,000 increased [9]. The outbreaks of CL caused by L. tropica in Afghan refugees, and cutaneous disease caused by L. major in American forces in Iraq are examples of the large number of cases of leishmaniasis that can result when naïve human populations intrude into regions where transmission is endemic [10]. Because there is no recent data available about epidemiology and to determine the epidemiology of CL in its new epidemic in Iraqi children below age of 16 years old in Tikrit city.

Patients and Methods

A cross sectional study of all cases of CL during December 2005, 489 patients attending the departments of dermatology and pediatric in Tikrit teaching hospital in Tikrit city, 83 patients of them were having CL included in the study examined and interviewed by face to face interview using a standard questionnaire. Diagnosis of the cases was done by history, clinical examination, and .direct smear for Leishman-bodies detection

Results

About 17% of the patients attending the department of pediatric and dermatology in one month were have CL. Fifty one of them were males (61.4%), and thirty two (38.6%) were females. Totally there were 114 CL lesions. Single lesion seen in 57 (68.67%), while multiple lesions occur in 26 (31.32%). Dry lesions constitutes 78 (68.4 %) of the lesions and the wet (ulcerated type) constituted 36 (31.6%) them. 52.6% of the lesions were in the face, 26.4% of them were in the lower limb, 2.6% of them were in the abdomen, chest, and upper arm, and only 0.8% was in the scalp. Only .one case had both visceral and CL

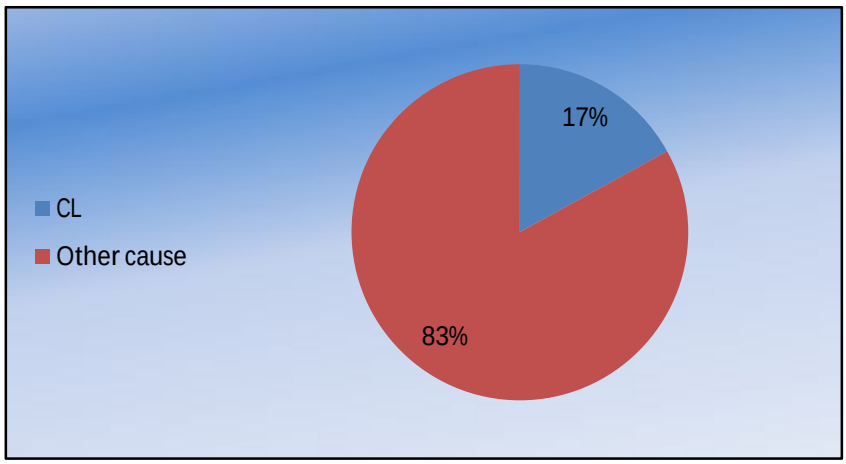

Figure (1): Percentages of CL cases among total cases.

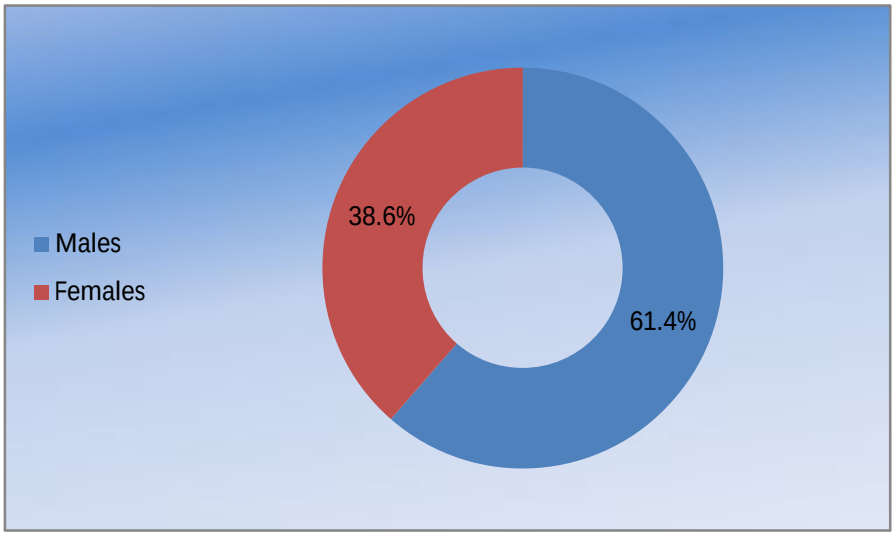

Figure (2): Percentages of CL cases according to the sex distribution.

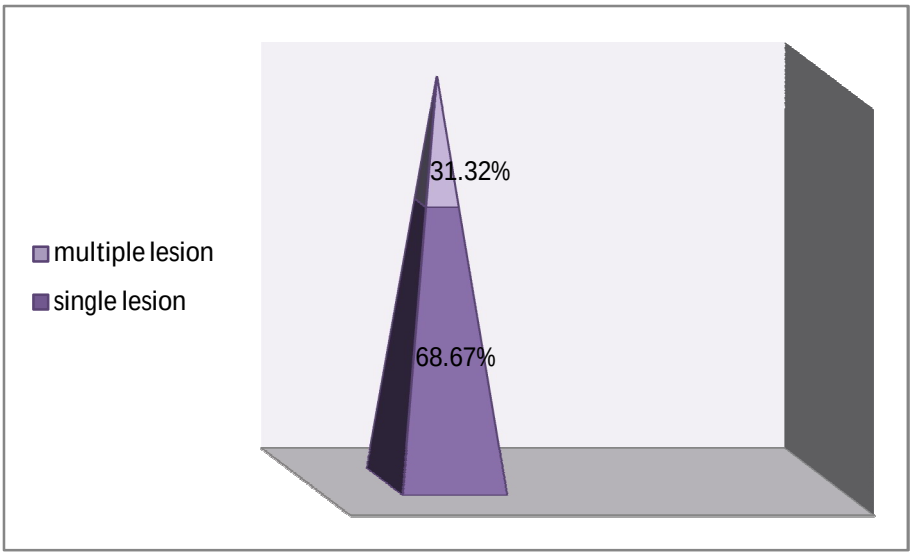

Figure (3): Distribution of patients according to the number of the lesions.

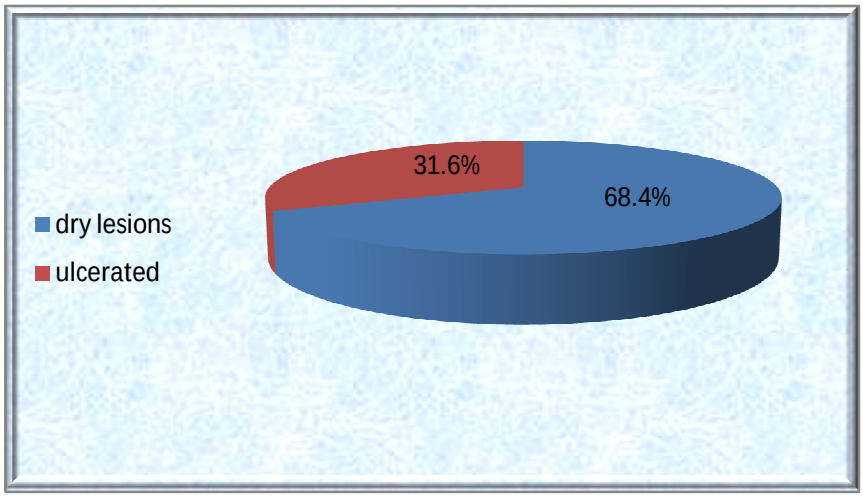

Figure (4): Distribution of patients according to the type of the lesions.

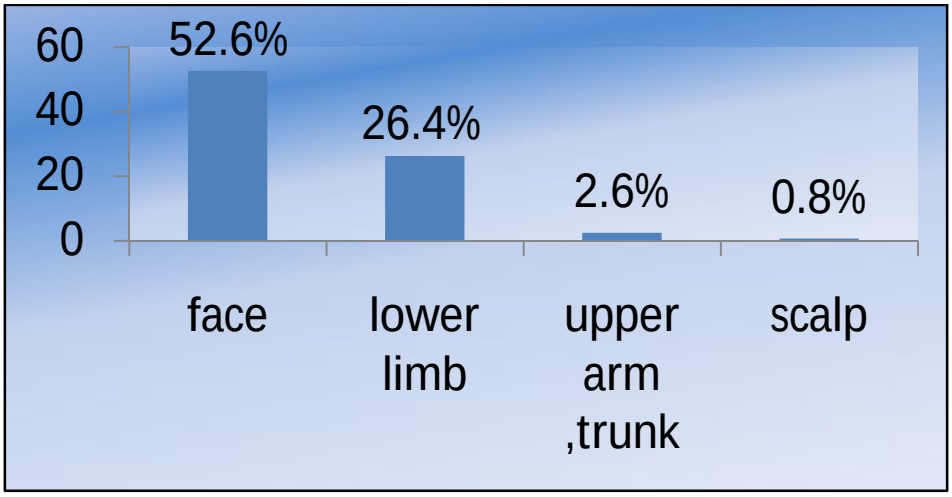

Figure (5): Distribution of patients according to the site of lesions.

Discussion

A new epidemic of CL was faced in Iraq in the last few months of 2005. This can be explained by many factors, movements of population which bring non-immune people to endemic areas and infected people to non-endemic areas where the vector is widespread. Either internal migration or movements of refugees can contribute to the propagation of an epidemic of CL. Among possible reasons of population movement; military operations: unplanned massive population movements following the bloody internal violence, destruction of infrastructure in all fields, especially in health and environmental sector exposed many people to CL infection[8]. Over the past two decade an increased number of cases have been reported from a number of long-standing endemic focuses, and large numbers of cases have been recognized in some new focuses.

The emergence of the leishmaniasis in new focuses is the result of (6) movement of a susceptible population into existing endemic areas, usually because of agricultural or industrial development or timber harvesting; (7) increase in vector and/or reservoir populations as a result of agriculture development projects; (8) increase in anthroponotic transmission owing to rapid urbanization in some focuses; and (9) increase in sandfly density resulting from a reduction in malaria vector control programs[6]. In this study, 17% of the patients attending pediatric and dermatology department in one month were have CL. Fifty one of them were males (61.4%), and thirty two (38.6%) were females. Males are more commonly infected than females, most likely because of their increased exposure to sandflies. Visceral leishmaniasis (VL), in particular, has been shown to be twice as common in males as in females [11]. This goes in accordance with Kamal-Aldin AM who found that the 57% of patients were male, while 43% were female [12]. In this study, the most common lesions were the dry 68.4 % and 31.6% of lesions were wet, and this is disagree with Kamal-Aldin AM who found that the dry lesions were 36.5% and 63.5% of lesions were wet [12].

The sites most commonly affected were the face, arms and legs while the ear, nose, lip and
The sore, however, never occurs on palms or soles [13, 14]. The dry form .eyelids are rarely affected of the disease tends to locate on the face, whereas in the wet type, the arm and legs are equally affected which could be, attributed to the habits of sandfly vector [15]. Although this form is often self-healing, it can create serious disability and permanent scars [16]. In this study, the most affected sites were in the face, 52.6% of the lesions, followed by the lower limbs 26.4% of the lesions. Only 2.6% of the lesions were in the abdomen, chest, and upper arm. This is differ from what seen by Kamal-Aldin AM, that the upper limbs affected in 57%, and the face 25%, and 15% for the lower limbs and 2% for the scalp. The sores are limited to exposed surfaces of the body, which are mostly .exposed to the bite of a sandfly. CL produces skin lesions mainly on the face, arms, and legs [12]

In this study, the single lesion seen in 57 (68.67%), while multiple lesions occur in 26 (31.32%) and this differ from what seen by Kamal-Aldin AM, that 58% of patients had multiple lesions, and 42% of them had single lesion [12]. Single sore is the most commonly encountered, while two, three and even four sores are also common, but cases with larger number are certain larger [17]. Many studies reported that the multiplicity of lesions is common [18]. Rahim and Tatar reported that 60% of cases had between one and four lesion [19]. Lesion does not necessarily occur at exactly the same time and ever a marked difference in the time of their appearance is observed [20]. Multiple lesions are most likely due to multiple infective bites not necessarily all at the same time or metastasis spread [18]. Multiplicity of lesion is more with L. major since many more infective sand flies are found in the natural foci of this species [19]. Three cases who carry the combined presentation of CL, and VL. Combined CL and VL in a patient with normal immune system can be explained by that, leishmaniae species that primarily cause cutaneous disease and rarely cause visceral disease or by primarily viscerotropic leishmania that primarily cause visceral disease which may also cause skin lesions or by mixed infections by two different species of leishmaniae, one of them is dermatotropic, and the other one is viscerotropic [19].

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