



# **CUTANEOUS LEISHMENIASIS**

## **BAGHDAD BOIL**

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# Introduction

- Leishmaniasis is a vector-borne disease caused by protozoa of the genus *Leishmania* and is endemic in many areas of the tropics, subtropics, and Mediterranean region (including IRAQ).
- In IRAQ called Baghdad boil. Endemic in IRAQ mainly in central part where high population density.

# Cut. Leishmaniasis In Iraq (2020)

- In Iraq, L. major zoonotic cutaneous leishmaniasis cases appear **between December and March**. In most cases lesions are located on the limbs.
- In case of outbreaks, lesions are large and multiple.
- Phlebotomus papatasi is the **vector**.
- Rodent act as reservoirs of disease.
- zoonotic cutaneous leishmaniasis human cases, found mostly in northern Iraq (Mosul province).

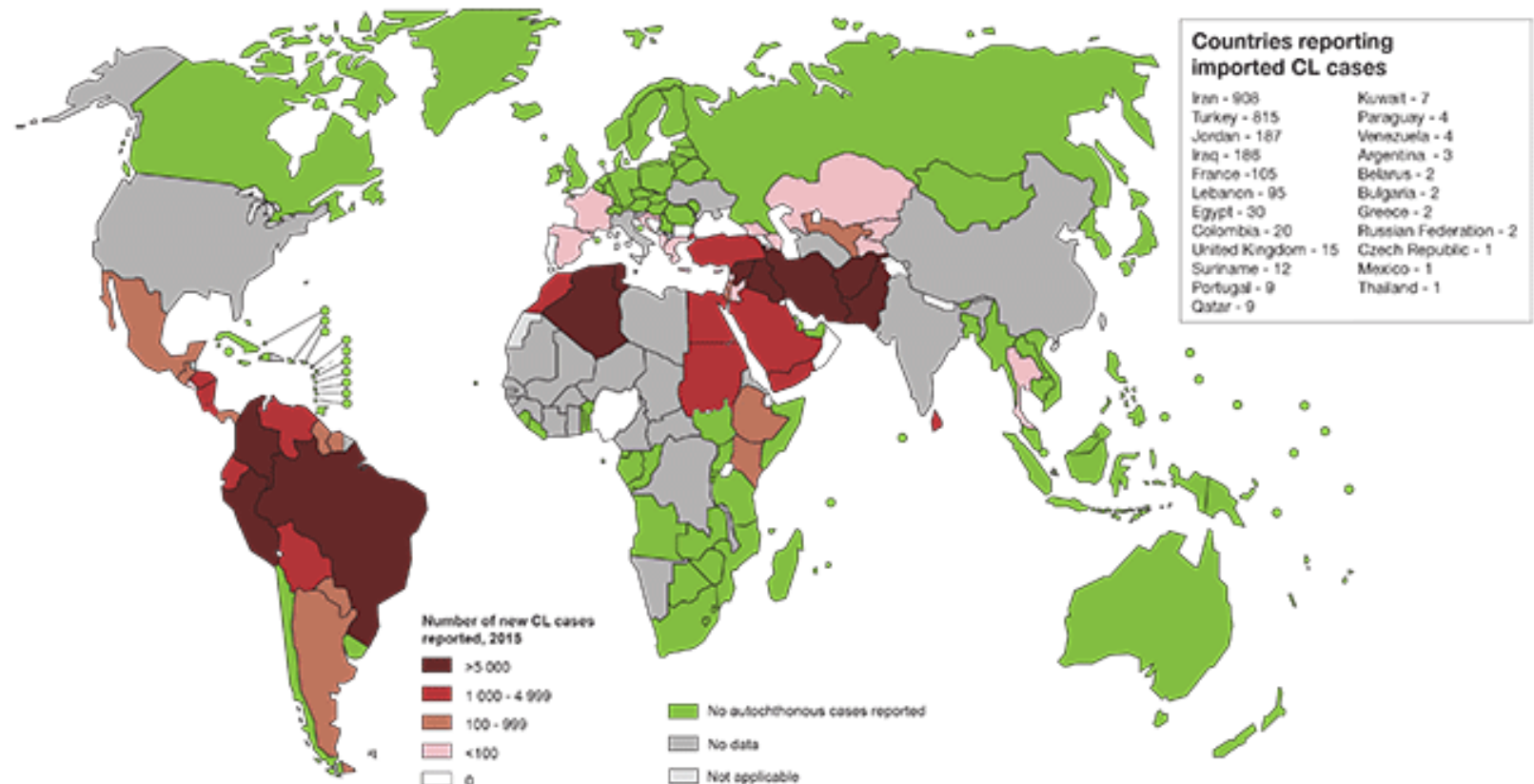
(WHO, 2020).

# Introduction

- Incubation period : longer than visceral:  
2months – 5years
- Reservoir: humans, rodents, domestic dogs
- male>female, specially on extremities;
- Jobs: farmers, animal house keeper,

# WHO, 2015

## Status of endemicity of cutaneous leishmaniasis worldwide, 2015



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Data Source: World Health Organization  
Map Production: Control of Neglected  
Tropical Diseases (NTD)  
World Health Organization



# Types of Leishmaniasis

- **In cutaneous forms**, skin ulcers usually form on exposed areas, such as the face, arms and legs. These usually heal within a few months, leaving scars.
- **Diffuse cutaneous leishmaniasis** produces disseminated and chronic skin lesions resembling those of lepromatous leprosy. It is difficult to treat.
- **In mucocutaneous forms**, the lesions can partially or totally destroy the mucous membranes of the nose, mouth and throat cavities and surrounding tissues.
- **Visceral Leishmaniasis; affecting organs.**

# Types of Cutaneous Leishmeniasis

- Some Leishmania species are closely linked to humans and are therefore found in cities (**Leishmina tropica**) some others are more traditionally associated with animal species and therefore considered zoonosis (**Leishmina major**).

# Pathology

- Leishmania parasite invades human macrophages (after the sand-fly bites human skin) and replicates intracellular. A raised, red lesion develops at the site of the bite (often weeks or sometimes years afterwards). The lesion then ulcerates and may become secondarily infected with bacteria. In many species (for example, *L. major*) the lesion often spontaneously heals with atrophic scarring

# Clinical Picture

- Clinical presentations, depending on the infecting species and the immune status of the patient, range from self-healing skin sores to devastating cutaneous and mucocutaneous ulcers and the lethal visceral form.
- Single or multiple skin lesion affecting the exposed part (tip of nose, cheeks, forehead, upper limb, lastly lower), any boil which delayed in healing for 1 month in endemic area considered it cut. Leish.

# Clinical Picture



- The skin lesion wet or dry with variable size and number.
- The size of leish. Depend on the host factor; strong host immunity factor will lead to small lesion and will heal spontaneously and rapidly.



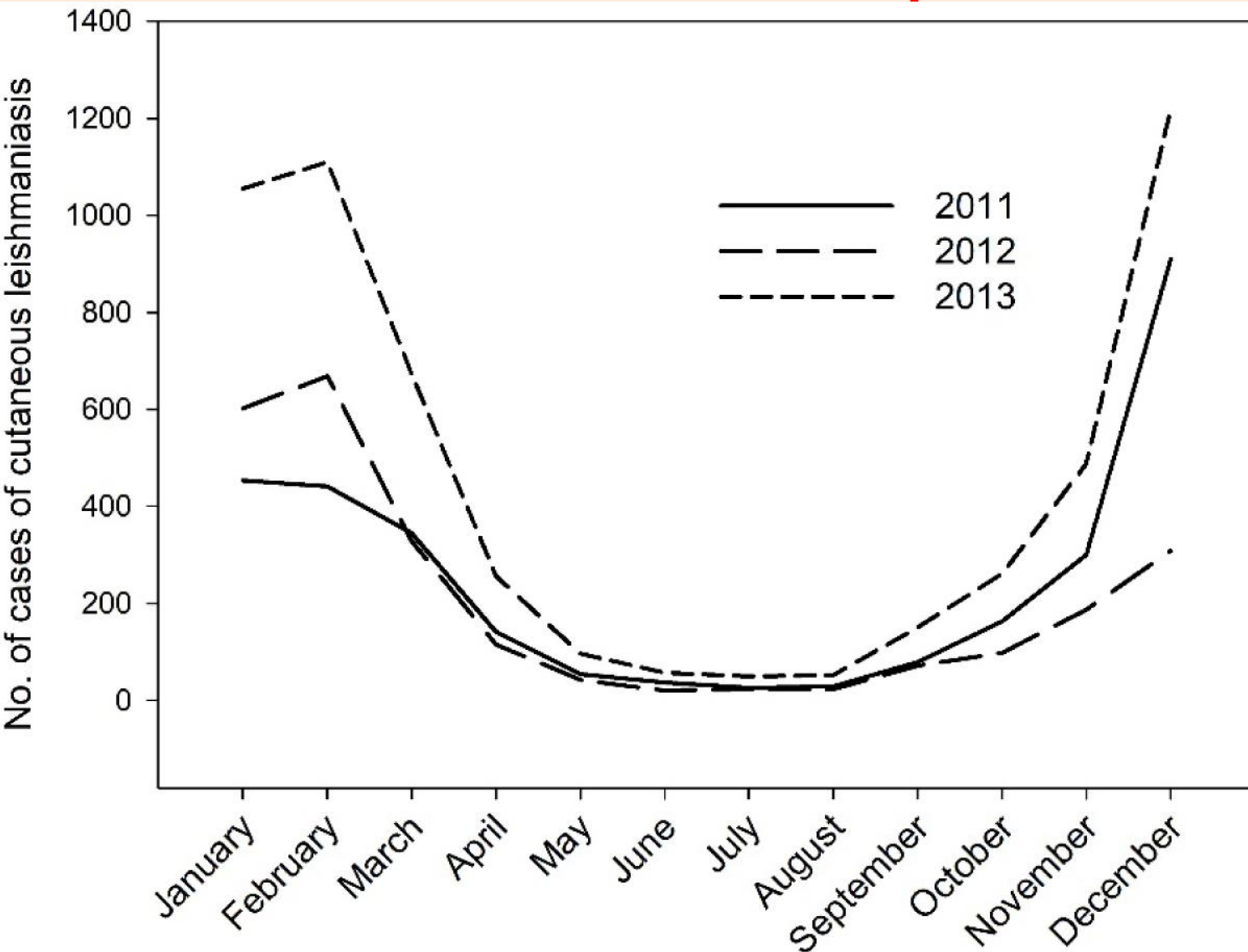
# Factors influencing the spread

- Population movements, overcrowding, lack of safe water and hygiene, and poor access to health services are common factors that can cause the spread of these diseases.

# Table 1: Frequency of CL cases by age and sex, 2013

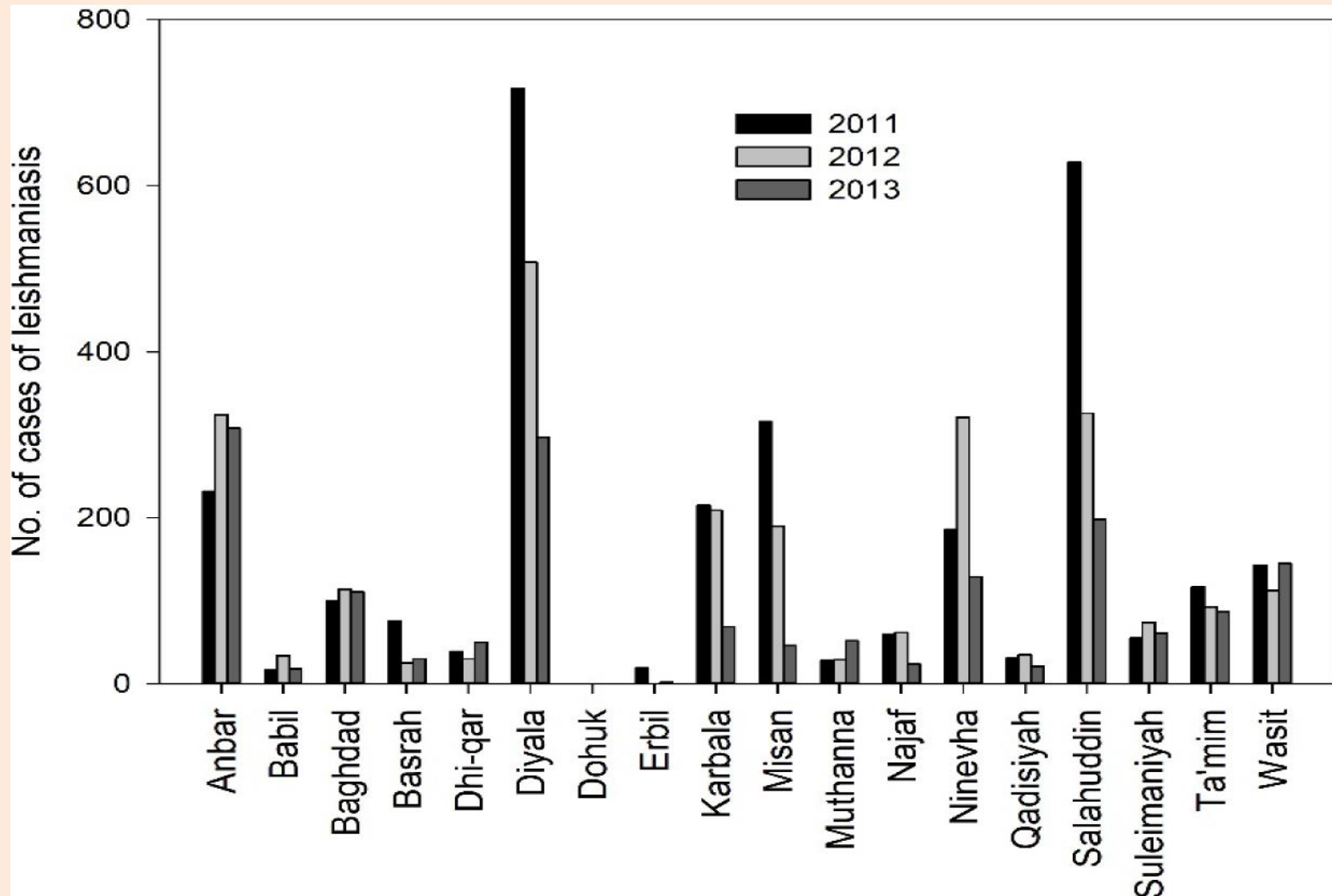
	2011		2012		2013		Total	
	n	%	n	%	n	%	number	%
Male	1741	58.5	1469	59.1	941	57.1	4151	58.4
Female	1237	41.5	1017	40.9	707	42.9	2961	41.6
<1 y	168	5.6	234	9.4	194	11.8	596	8.4
1–4 y	839	28.2	286	11.5	267	16.2	1392	19.6
5–14 y	905	30.4	607	24.4	367	22.3	1879	26.4
15–45 y	819	27.5	917	36.9	596	36.2	2332	32.8
≥45 y	247	8.3	442	17.8	224	13.6	913	12.8
<1 y, male	109	3.7	108	4.3	107	6.5	324	4.6
<1 y, female	59	2.0	126	5.1	87	5.3	272	3.8
1–4 y, male	459	15.4	145	5.8	148	9.0	752	10.6
1–4 y, female	380	12.8	141	5.7	119	7.2	640	9.0
5–14 y, male	507	17.0	327	13.2	204	12.4	1038	14.6
5–14 y, female	398	13.4	280	11.3	163	9.9	841	11.8
15–45 y, male	481	16.2	578	23.3	356	21.6	1415	19.9
15–45 y, female	338	11.4	339	13.7	240	14.6	917	12.9
≥45 y, male	145	4.9	311	12.5	126	7.6	582	8.2
≥45 y, female	102	3.4	131	5.7	98	5.9	331	4.7

**Figure 1: Line chart Disease pattern over the year 2011-2013 for all Iraq Provinces**



• Source: The distribution of cutaneous leishmaniasis in Iraq: demographic and climate aspects

**Figure 2: Bar chart showing disease distribution according to provinces**

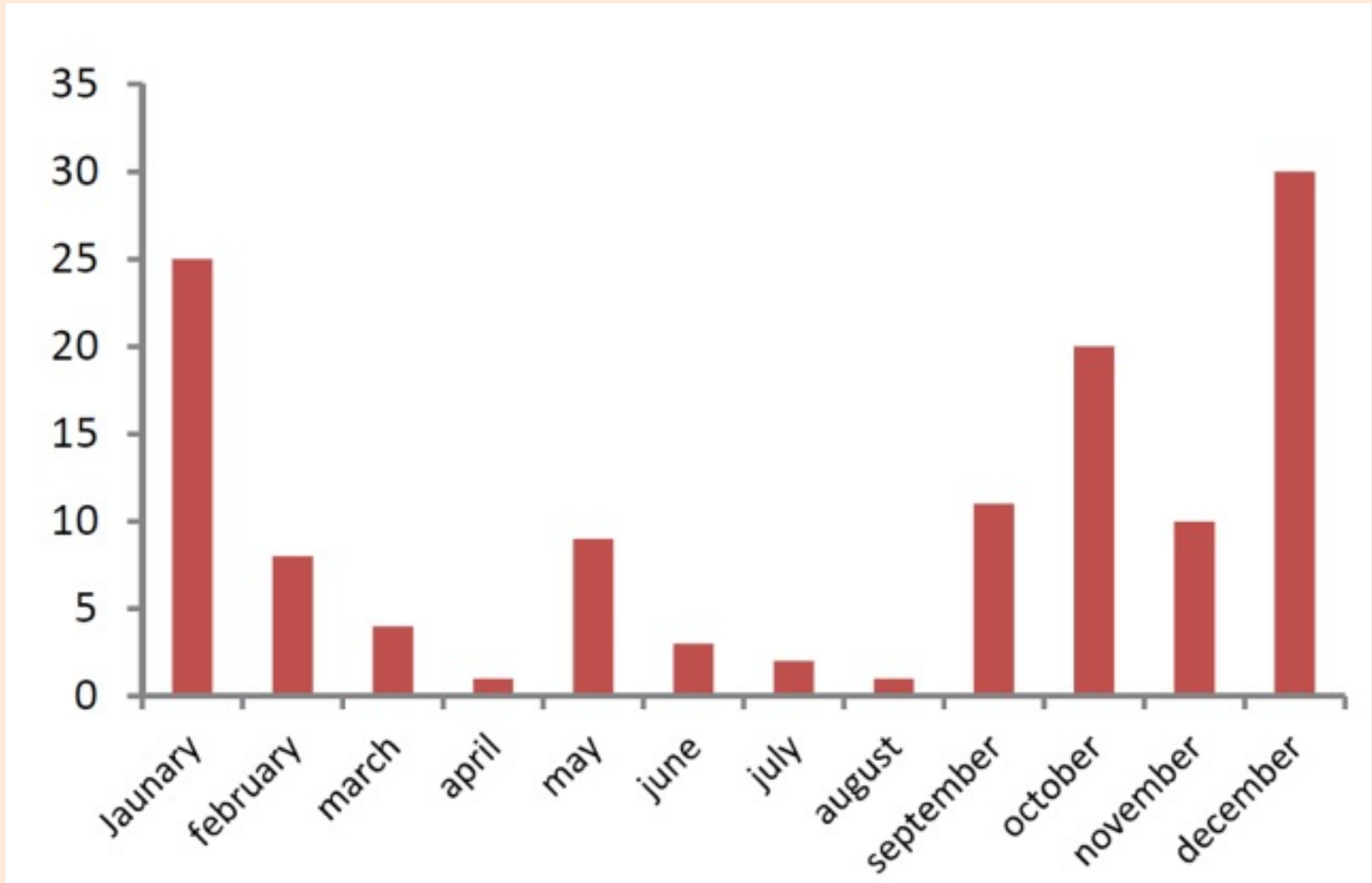


## Table 2: Another study in Erbil, 2018 case by age and sex

Table 1  
Sociodemographic data of the study sample

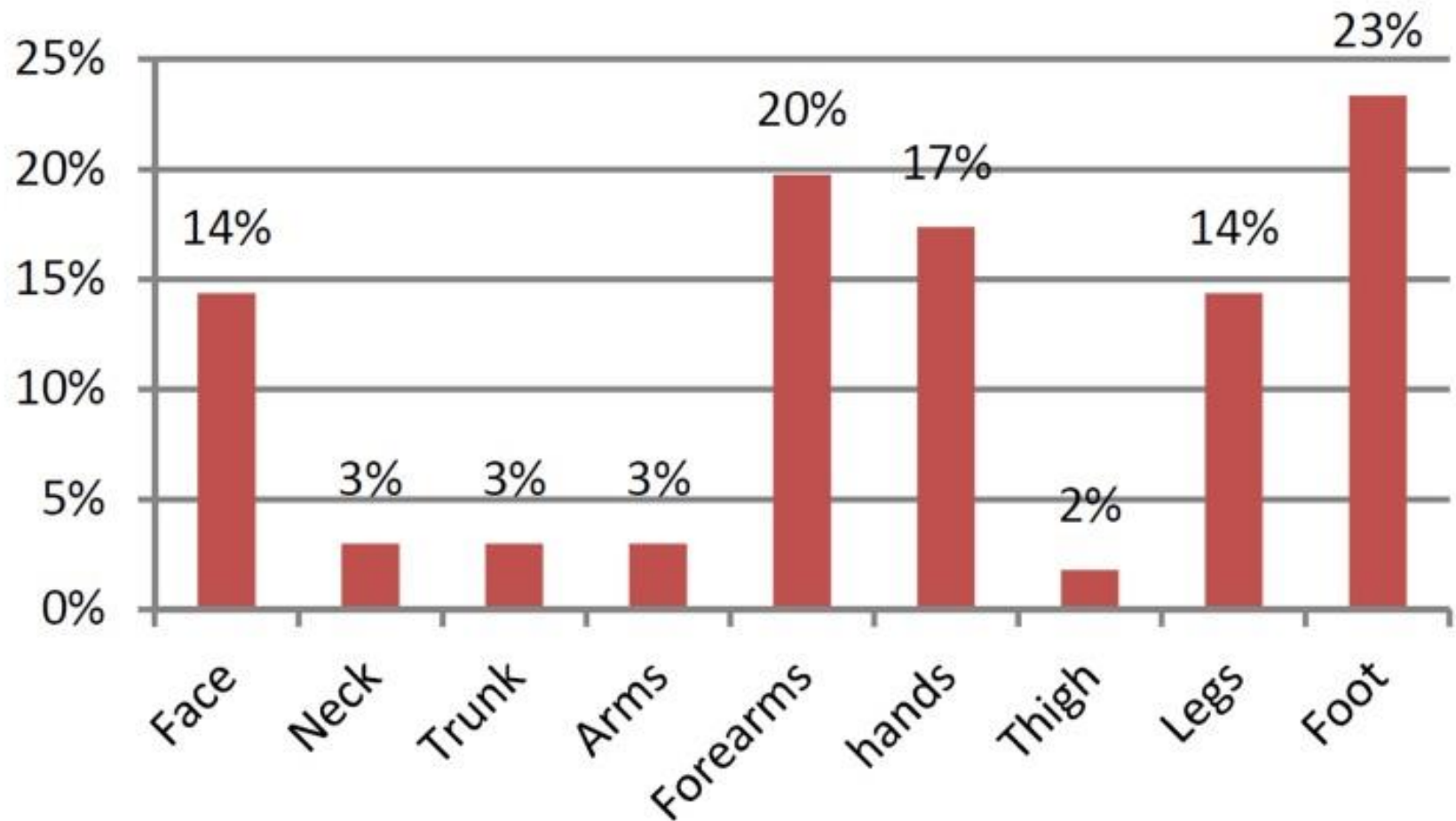
Parameters	No	Percent %
Sex		
Male	93	75
Female	31	25
Age		
up to 14 years	19	15.3
15-34 years	46	37.1
35-54 years	53	42.7
55 and More	6	4.8

**Figure 3: Bar chart showing seasonal variation of the disease, study in Erbil, 2018**



Dindar Sharif Qurtas, 2018

## Figure 4: Study in Erbil, 2018



Dindar Sharif Qurtas, 2018

## Table 3: Distribution and Frequency of CL in Some Iraqi Provinces, 2018

Province	Number	Male	Female
Wasit	85 (14.5%)	34 (5.8%)	51 (8.7%)
Baghdad	65 (11.1%)	35 (6%)	30 (5.1%)
Basrah	67 (11.5%)	36 (6.2%)	31 (5.3%)
Diyala	63 (10.8%)	33 (5.7%)	30 (5.1%)
Thi-qar	76 (13.1%)	39 (6.7%)	37 (6.4%)
Diwaniya	88 (15.1%)	45 (7.7%)	43 (7.4%)
Najaf	79 (13.6%)	43 (7.4%)	36 (6.2%)
Salah-Adin	60 (10.3%)	30 (5.1%)	30 (5.1%)
Total	583 (100%)	295 (50.6%)	288 (49.4%)

• Magda A. Ali etal, 2018

# Diagnosis

- Tissue specimens—such as from skin sores (for cutaneous leishmaniasis) can be examined for the parasite under a microscope, in special cultures.
- Needle aspiration from edge of cutaneous lesion may demonstrate the parasite.
- ELISA, complement fixation, indirect haemagglutination test.
- PCR (polymerase Chain reaction) and DNA sequences.

# Treatment of cut. Leish.

- Before considering treatment, the first step is to make sure the diagnosis is correct.
- The skin sores of cutaneous leishmaniasis usually heal on their own, even without treatment.
- mouth, or throat (mucosal leishmaniasis).  
Mucosal leishmaniasis might not be noticed until years after the original sores healed. The best way to prevent mucosal leishmaniasis is to ensure adequate treatment of the cutaneous infection.

# Treatment of cut. Leish.

- Local lesion (small no.)
- infrared therapy for many sections, passage of electrical therapy around the lesion, 7% hypertonic NaCl, Intra leish. Metronidazole, and Intra leish. Zinc sulfad.

# Prevention and control

- Early treatment of human cases.
- Terminate the reservoir(stray dogs, jackels, foxes, rodents)
- Use of DDT or malathion to eradicate the sand fly
- Fine mesh net
- Use of chemical repellent
- Vaccination for (cut. Leish.).

# Prevention and control

- No vaccines or drugs to prevent infection are available. The best way for travelers to prevent infection is to protect themselves from sand fly bites. To decrease the risk of being bitten, follow these preventive measures:
- Avoid outdoor activities, especially from dusk to dawn, when sand flies generally are the most active

# Prevention and control

outdoors :

- Minimize the amount of exposed (uncovered) skin. To the extent that is tolerable in the climate, wear long-sleeved shirts, long pants, and socks; and tuck your shirt into your pants.
- Apply insect repellent to exposed skin and under the ends of sleeves and pant legs.

# Prevention and control

indoors:

- Stay in well-screened or air-conditioned areas.
- Keep in mind that sand flies are much smaller than mosquitoes and therefore can get through smaller holes.
- Spray living/sleeping areas with an insecticide to kill insects.
- use a bed net



THANK  
YOU