



EUROPEAN
ACADEMY OF
DERMATOLOGY &
VENEREOLGY

Information Leaflet
for Patients

Cutaneous Leishmaniasis



The aim of this leaflet

- Cutaneous leishmaniasis is a parasitic infection of the skin transmitted by a sandfly bite
- It is more frequent in some regions of the world
- Spontaneous healing may cause a lifelong scar
- Pentavalent antimony drugs are the main type or course of treatment
- Using permethrin impregnated bed nets is the most effective method of protection against sandfly bites

Cutaneous Leishmaniasis

What causes leishmaniasis (CL)?

CL is a vector born parasitic skin infection. It is caused by a group of *leishmania* parasites as different clinical forms. It is also known as Aleppo boil, oriental sore, espundia, chiclero ulcer etc. in different geographic regions.

How do you get CL?

Transmission of *leishmaniasis* disease occurs by the bite of a sand fly infected by *leishmania* parasites (**Figure 1**). Sand flies are active on summer nights.

It is not transmitted by human to human contact.

According to the type of *leishmania* parasites three main clinical forms of leishmaniasis can develop; **visceral leishmaniasis** which can affect internal organs and which can cause death, if not treated, or **cutaneous/mucocutaneous leishmaniasis** as Old World form or New World form which causes disfigurations on skin or mucous membranes.

Does the incidence of CL vary by geographic regions?

Yes, it is more prevalent in the Central Asia, in the Middle East, in the Mediterranean basin including some European countries (Old World CL) and in Central and South America (New World CL) (**Figure 2**).

However, it can be seen as world-wide due to the returning travellers and in refugees from the endemic countries.

What are the symptoms of CL?

It begins as a tiny pimple at the site of the sand fly bite on bare skin (such as face, neck, hands, forearms, feet or lower legs) after an incubation



Figure 1. A sand fly sucking blood from the skin

(*Phlebotomus papatasi*; content provider: CDC/Frank Collins, <http://commons.wikimedia.org/wiki/>, Access date: 23.01.2010).

Figure 2. Prevalent (endemic) geographic regions for CL (painted with pink)

(<https://www.ircis.org/media/upload/arxius/Documentacion/Leishmaniasis/CLINICAL%20FORM/CL.pdf>, WHO 2019, Access date: 10.05.2021).

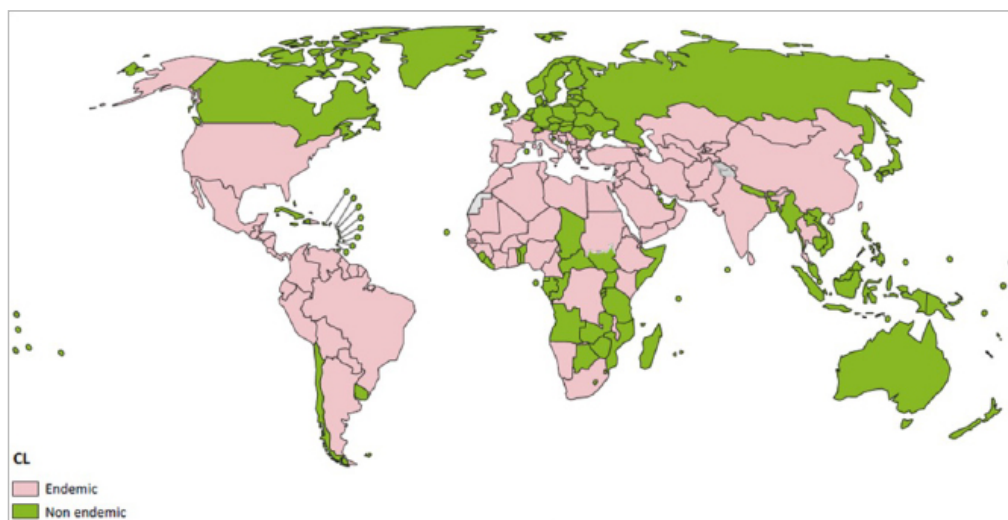




Figure 3. Natural course of Old World CL.

period ranging between 1 to 6 months (**Figure 3A**). This painless reddish skin swelling gradually develops into a lump and then ulcerates in a period of between 1 to 6 months (**Figure 3B**). This ulcer is usually covered by a firmly adherent crust and eventually heals, usually spontaneously, leaving a lifelong disfiguring scar (**Figure 3C**).

CL also may cause some unusual clinical manifestations which can imitate many other skin diseases. (**Figure 4**)

How is CL diagnosed?

The clinical symptoms may be distinctive enough to allow for a diagnosis especially in the endemic

regions. However, a laboratory confirmation is often needed.

Laboratory confirmation is done by the demonstration of *leishmania* parasites in lesions by scraping test, histopathology, culture or PCR. (**Figure 5**)

What happens if CL is allowed to heal by itself?

Small lesions may heal by itself in a period ranging between 6-12 months, usually leaving a negligible scar.

Some lesions (especially located on nose, eyelids, lips or auricles) may cause deeper scars or even dysfunctions if they are not treated in time.

Is there a protective immunity against CL?

Yes, healing of CL lesion by itself or by treatment can provide a lifelong protective immunity against re-infections of the disease.

What is the treatment for CL?

There is no single optimal treatment for all forms of CL.

World Health Organisation recommends pentavalent antimony compounds as the first line treatment.

Meglumine antimoniate and sodium stibogluconate are the pentavalent antimony drugs which can be use systemically (as intramuscularly or intravenously) or intralesionally (as

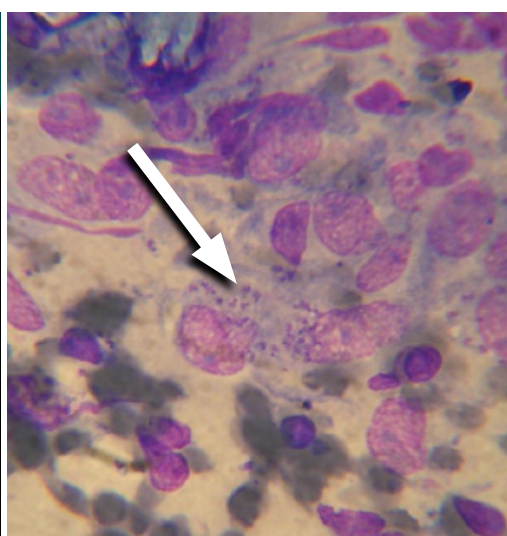


Figure 4. Mucocutaneous leishmaniasis involving face (erysipeloid) and mucosal membranes (Ethiopia).

Figure 5. Leishmania amastigotes (arrow) seen at microscope after skin scraping (stain: Giemsa)

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Figure 6. Intralésional treatment of CL.



Figure 7. Use of bed nets is the most effective method of preventing CL.

direct injection into the lesion) (**Figure 6**).

Since antimony drugs may have toxic effects on bone marrow, heart, liver and kidney they must be used by close monitoring.

Amphotericin B, pentamidine and Miltefosine are other options for CL treatment.

Is there a vaccine for CL?

There is no vaccine currently used for CL

How to protect yourself from CL?

Permethrin impregnated bed nets and appropriate repellents can be used for protection from sand fly bites in endemic regions (**Figure 7**).

Appropriate clothing should be worn (such as long-sleeved shirt and long pants) and outdoor activities should be avoided at night in summer in endemic regions for CL.

Further help and information

If you suspect that you have CL, then see your family doctor or a dermatology clinic.

While every effort has been made to ensure that the information given in this leaflet is accurate, not every treatment will be suitable or effective for every person. Your own clinician will be able to advise in greater detail.