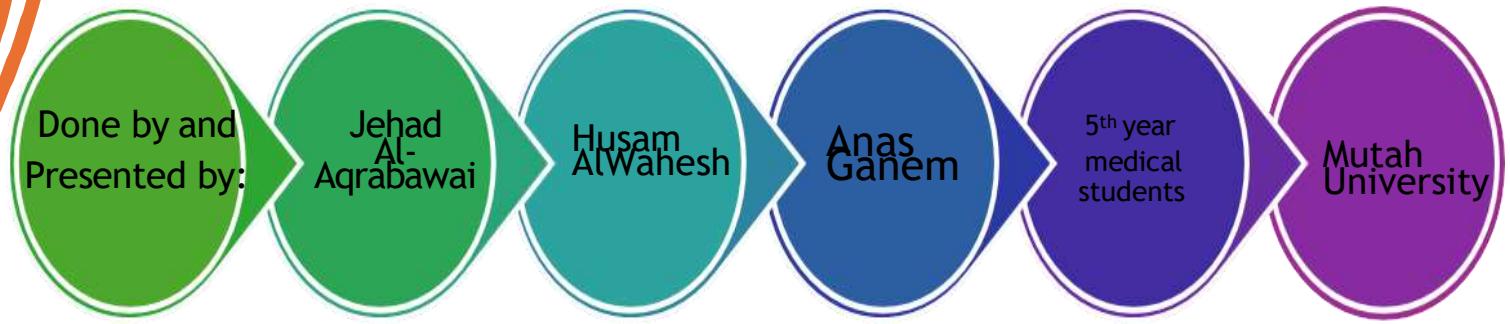
Skin infestations



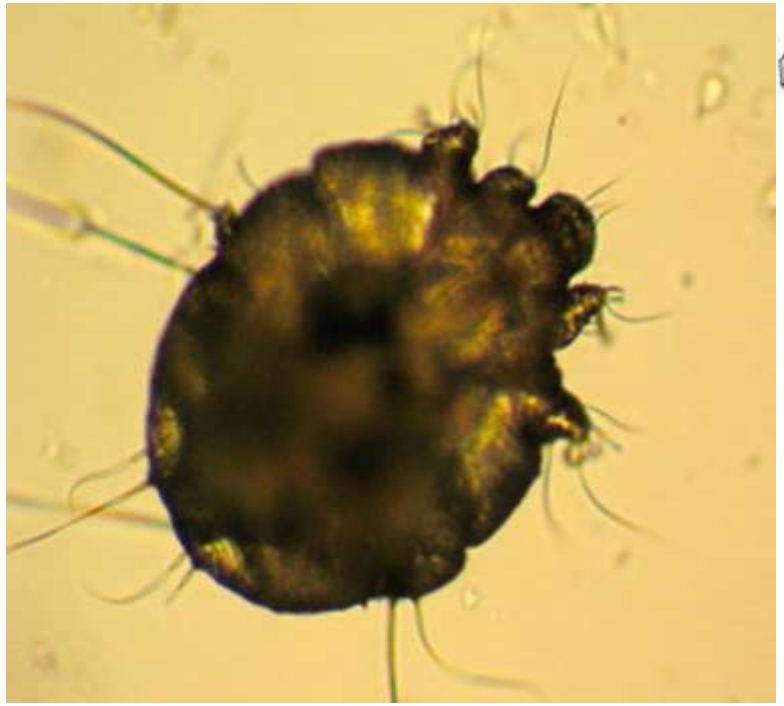
Supervised by:
Dr.Khitam Al-refu

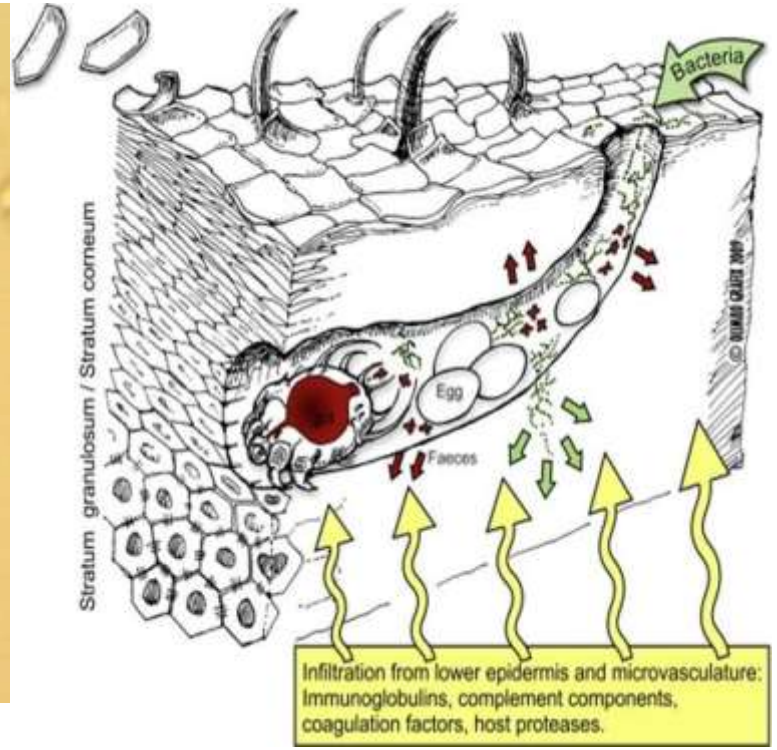
Professor of Dermatology
Mu'tah University & Al-karak hospital

Scabies

Scabies Overview

Scabies is a highly itchy rash caused by a parasitic mite, *Sarcoptes scabiei var. hominis*, that burrows into the skin surface.





- burrow ;

Slightly elevated, grayish, tortuous line in the skin ended by papule

- **Risk Factors:**
  - **Poverty and overcrowding**
  - **Institutional care** (e.g., rest homes, hospitals, prisons)
  - **Refugee camps**
  - **Immunocompromised individuals** (e.g., those with immune deficiencies)
  - **Low identification and treatment rates**

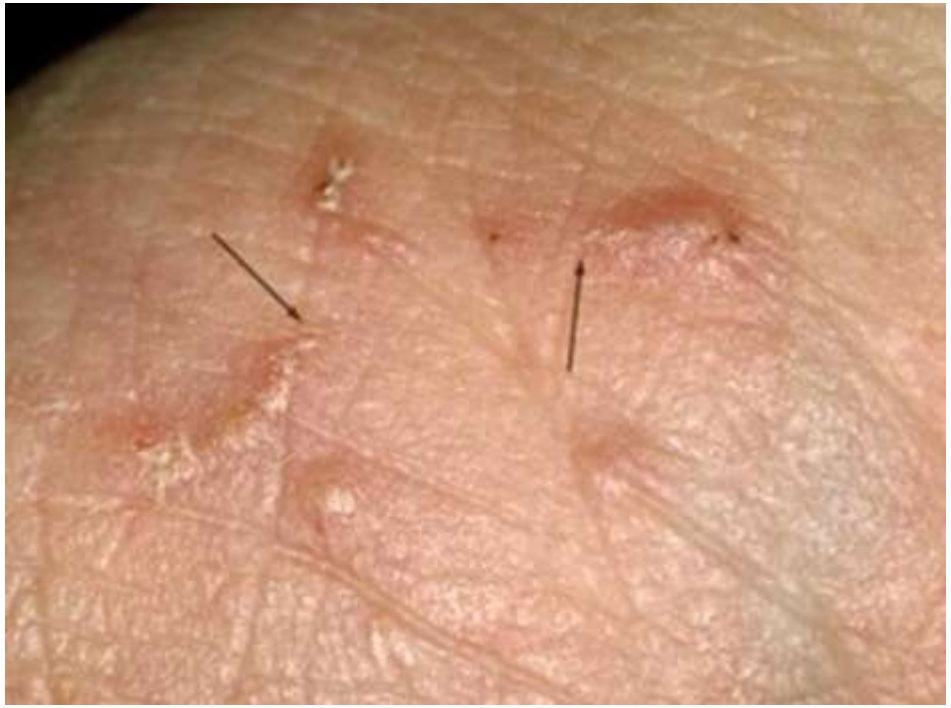
Transmission

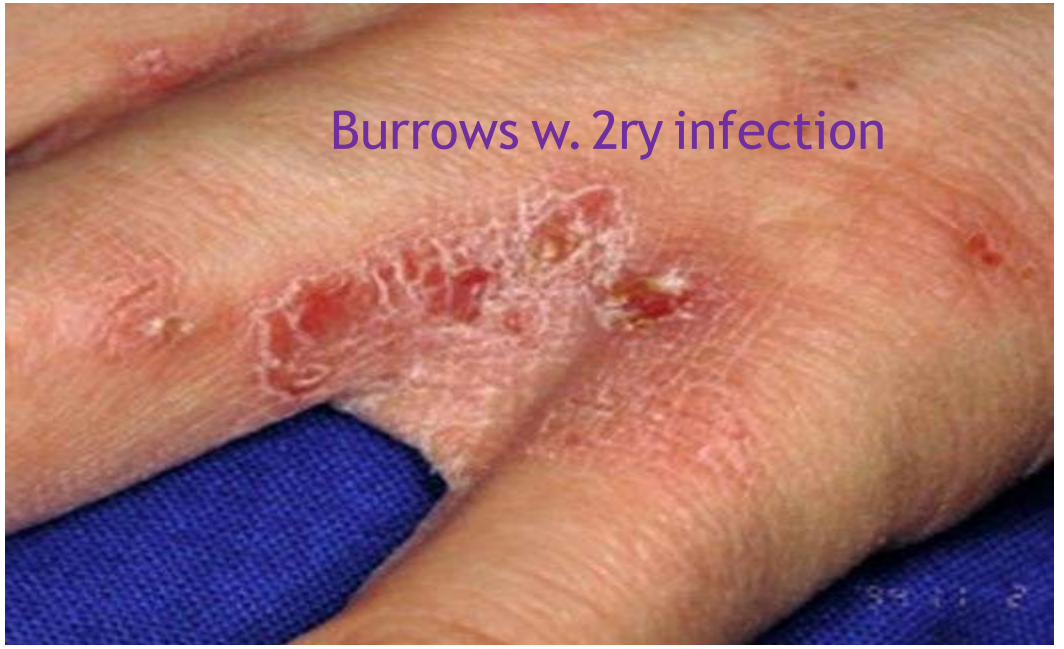
- **Primary Mode:** Skin-to-skin contact with an infested person.
  - **Sexual transmission** is also possible.
  - **Environmental Transmission**: Scabies can occasionally be transmitted via contaminated bedding or furnishings.

Is it highly contagious disease ??? **No**

Burrows

- **Appearance**: Grey, irregular tracks, measuring **0.5-1.5 cm** in length.
  - Found in areas like:
    - Web spaces between fingers
    - Palms, wrists, elbows
    - Armpits, nipples, buttocks, groin
    - Penis, insteps, heels
    - Face , back and scalp in infants immunocompromised patient but not in adult ,why ??

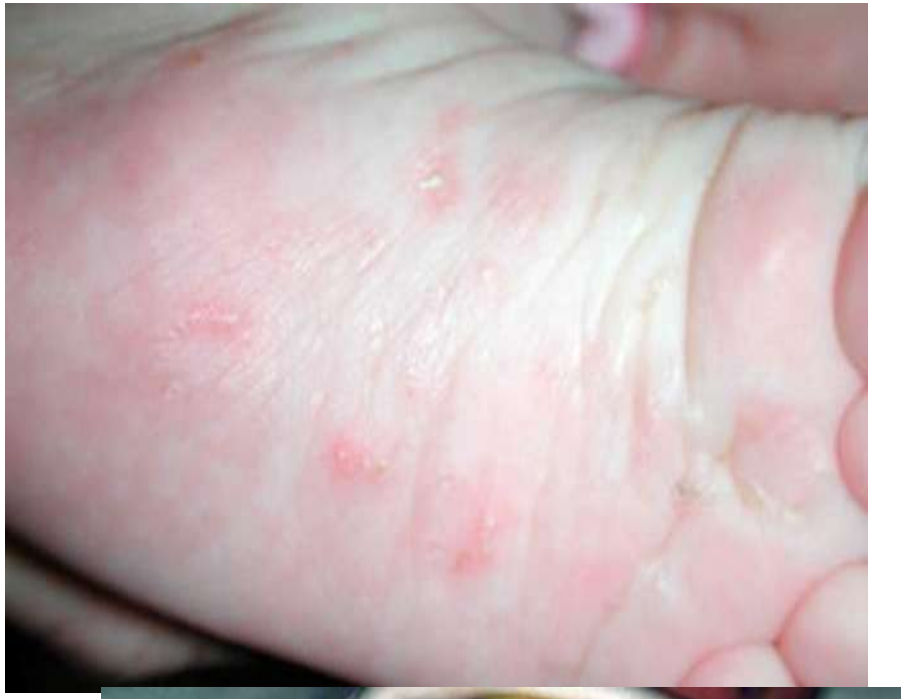


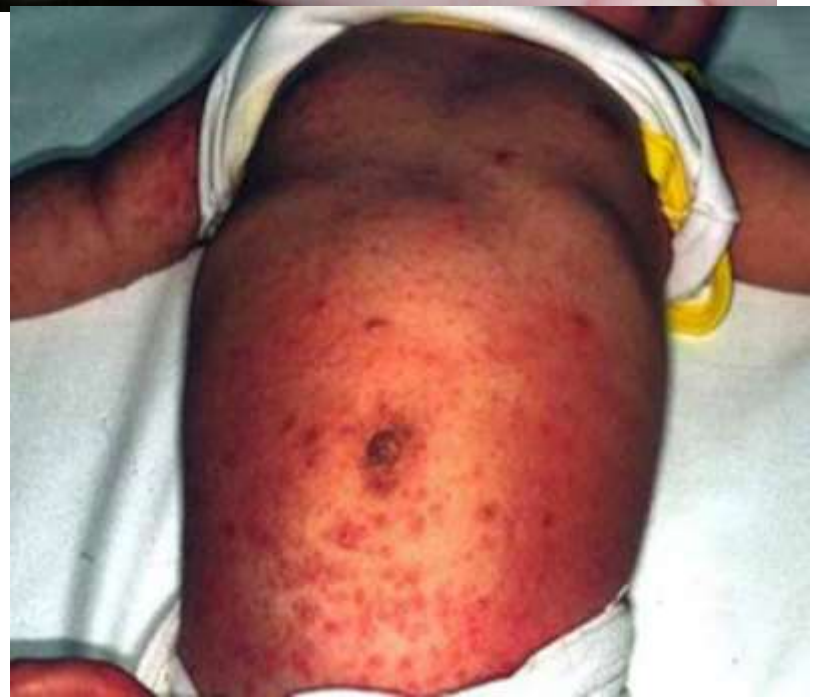


Scabies Rash

The **rash** is a hypersensitivity reaction that develops several weeks after initial infestation. It can have a **varied appearance**:

- **Erythematous papules** on the trunk and limbs, often follicular.
- **Diffuse dermatitis**
- **Urticated erythema** (raised, red, itchy areas).
- **Rare face and scalp involvement** (more common in infants or immunocompromised individuals).
- **Vesicles** on palms and soles.
- **Acropustulosis** (sterile pustules) in **infants** on palms and soles.





Clinical Features of Scabies

Itch

1. **First Episode**: Itching typically begins **4-6 weeks** after the initial infestation.

2. **Subsequent Episodes:** Itching can occur within **hours** of reinfestation.

3. **Night time**: Itch is usually **more severe at night**, often disturbing sleep.
4. **Areas Affected**: Typically the **trunk** and **limbs**, while the **scalp** is generally spared.

- **Complications of Scabies**

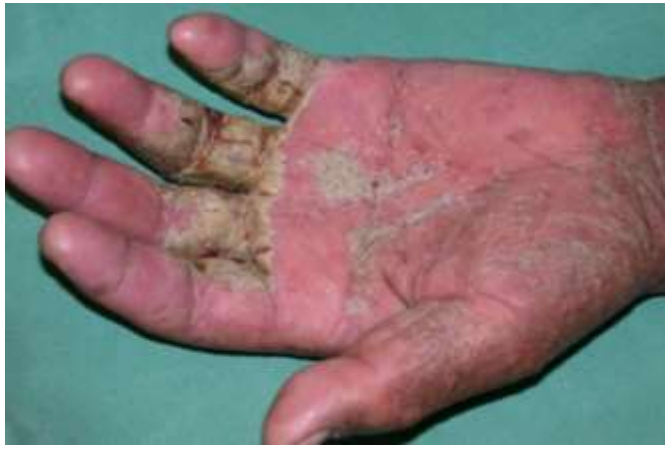
Secondary Infection

Cause: Secondary bacterial infections arise from scratching the itchy skin, which can break the skin barrier and allow bacteria to enter.

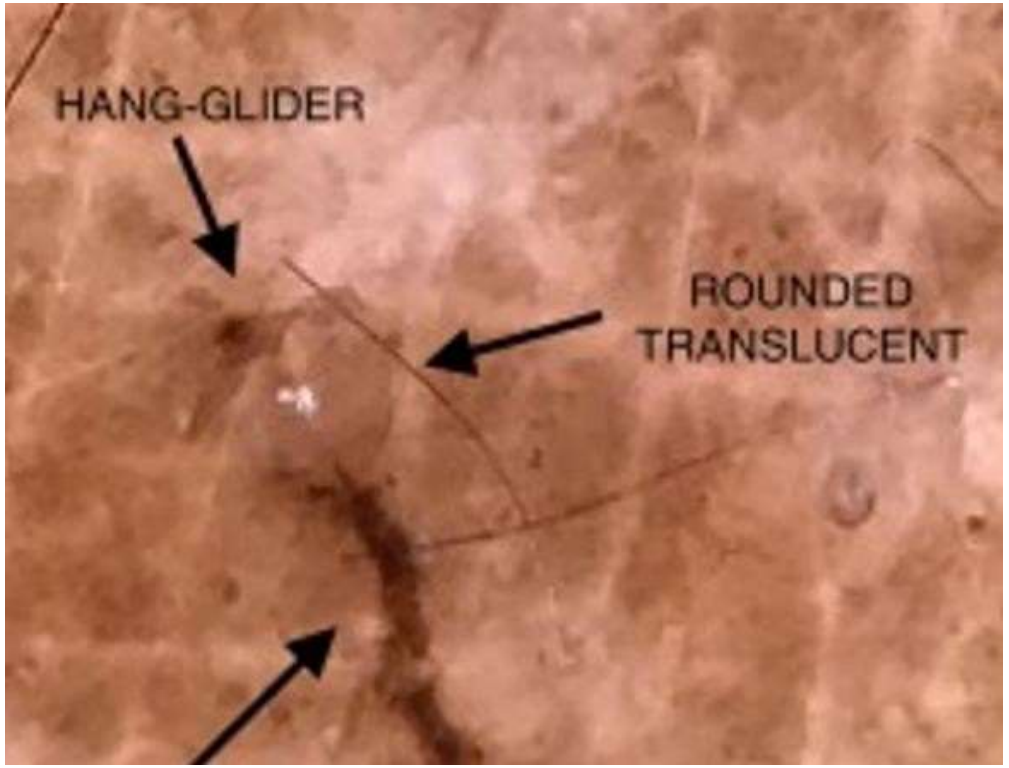
Crusted Scabies (Previously known as **Norwegian Scabies**)

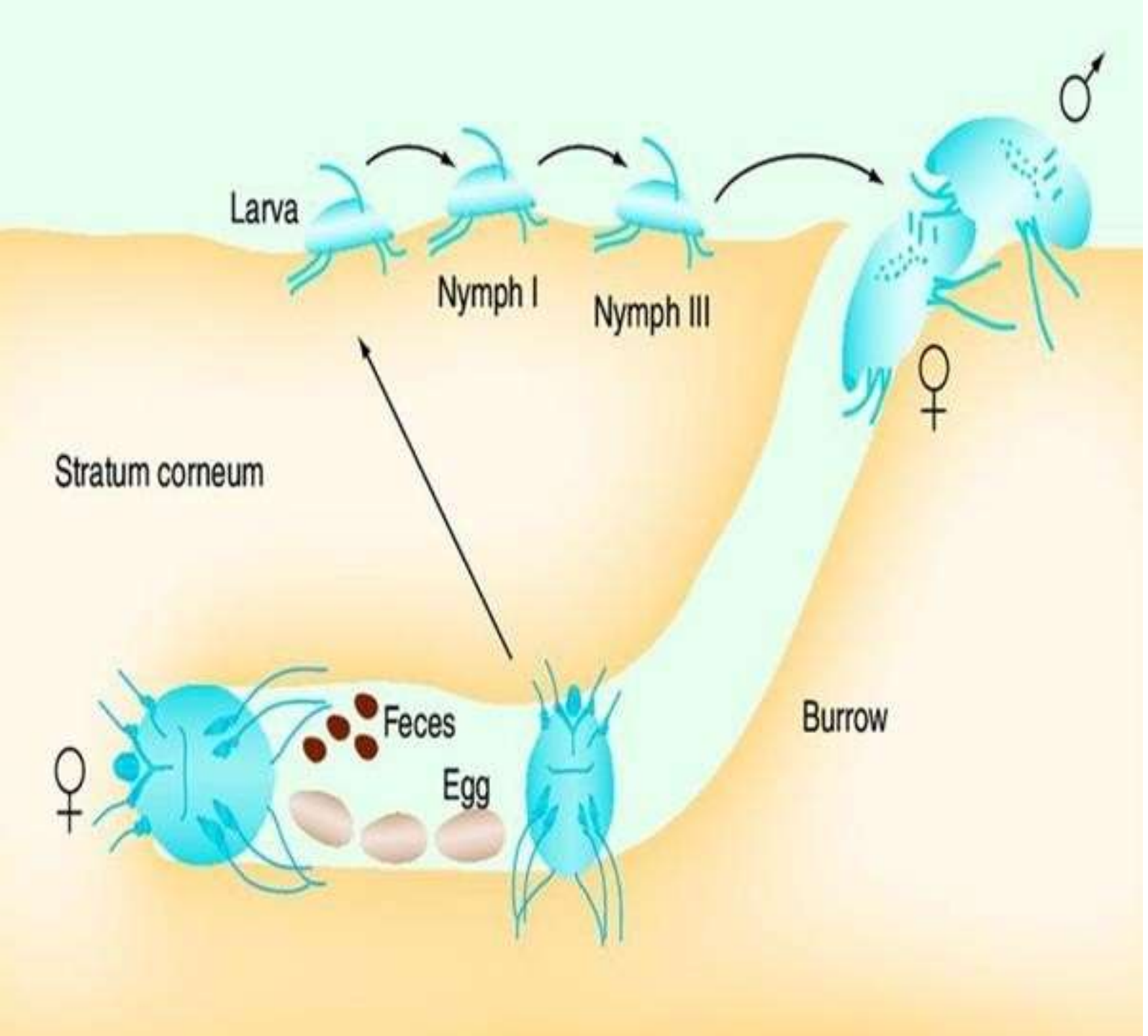
1. **Description**: A severe, highly contagious form of scabies characterized by large numbers of mites (thousands or millions) living in the outer layers of the skin.
2. **Clinical Presentation**:
    1. Generalized **scaly rash**, often misdiagnosed as **psoriasis** or **eczema.**

    Itch may be **absent or minimal**, which is atypical compared to classic scabies..
3. **Risk Factors**:
    1. Very **old age**
    2. **Malnutrition**
    3. **Immune deficiency**
    4. **Intellectual deficits** or **neurological disease**
    5. Specific **inherited immune defects** in otherwise healthy individuals



- **Diagnosis of Scabies**
- **Clinical Suspicion:** The diagnosis is often suspected in a patient with:
  - Itchy
  - rash.
  - Burrows
- **Confirmation:**
  - **Dermatoscopy**: The mite at the end of a burrow has a characteristic **hang-glider** appearance.
  - **Microscopic Examination:** Examination of burrow contents can reveal:
    - Mites
    - Eggs
    - Mite feces (scybala)





- **Microscopic Examination:** Dermatoscopy or microscopic analysis of burrow contents may reveal mites, eggs, or mite feces (scybala).

Scabies Treatment (Summary)

1.Topical Treatment:

1. **Benzyl Benzoate (25%)**: Three applications ,12 hour apart and repeated once after one week, used for adult (not used for children and pregnant women)
2. **Permethrin Cream (5%)**: 2q for 10 days
3. **Crotamiton Cream**: 1q for 10 days
4. **Oral Medication (Ivermectin) --crusted scabies**

Antihistamines for itching.
Mild topical steroids (e.g., hydrocortisone) for inflammation.
Antibiotics if secondary infections like impetigo occur.

Treat All Contacts; to prevent reinfestation.

Follow-Up:

With proper treatment, **scabies** typically resolves, but **itching** may continue for a month.

- What is the incubation period for re-infection with this disease after treatment ?

8-10 days

Pediculosis

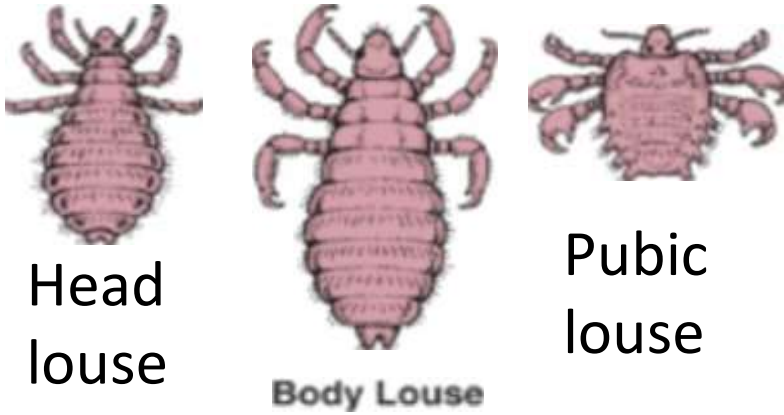
Husam AlWahesh

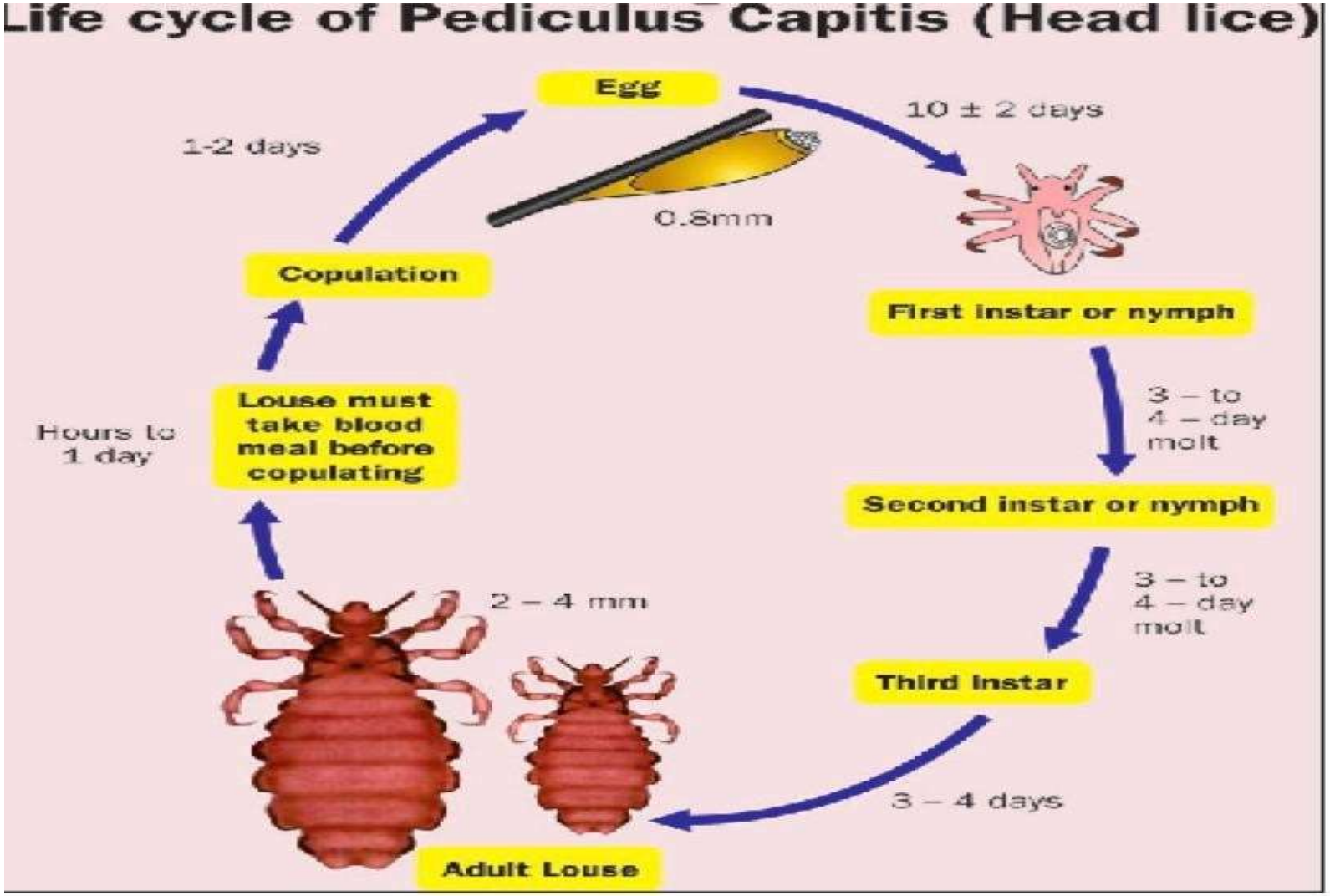
PedJcu/osJs

4 Pediculosis is an infestation of the hairy parts of the body or clothing with the eggs, larvae or adults of lice. The crawling stages of this insect feed on human blood, which can result in severe itching

Type of transmission: from person to person during direct contact

- The three species of louse that infest humans are:
  1. Pediculus humanus var. capitis - The head louse
  2. Pediculus humanus var. humanus - The body louse.
  3. Phthirus pubis - The pubic louse.
  - Head lice, the most common infestation in humans, are colloquially known as cooties and their eggs are called nits.
  - Pubic lice are smaller with a short body resembling a crab.





1. Nymph: Eggs (brown in color containing the louse).
2. Nits: Hatched nymph leaves an empty capsule which is white in color.

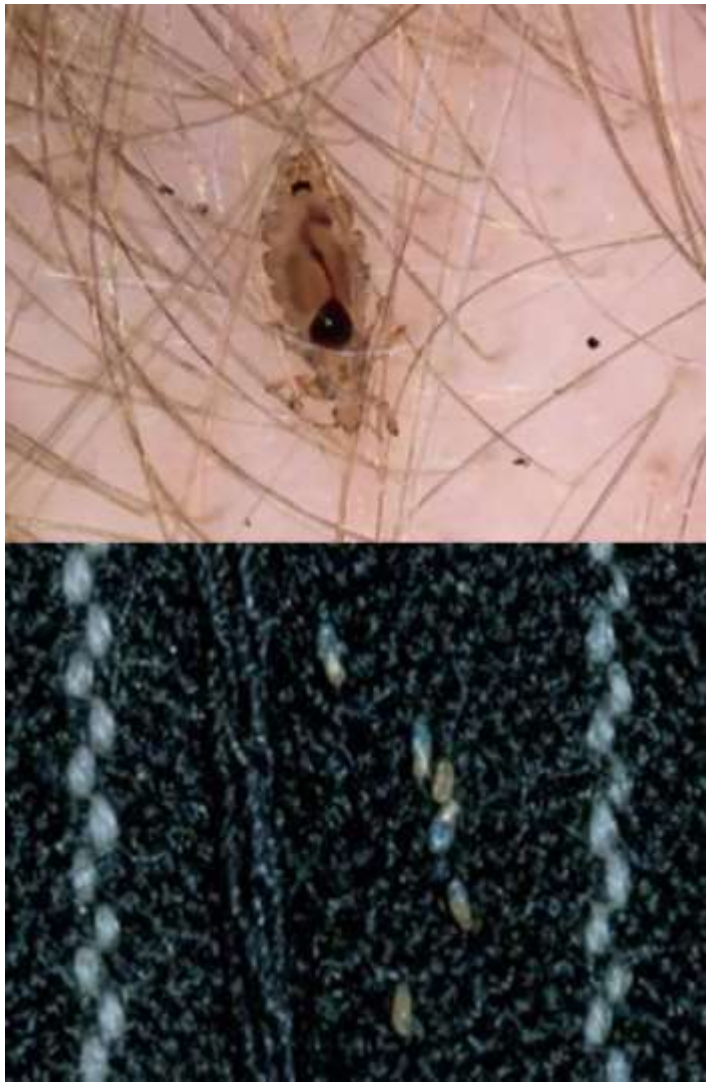
Head lice

- Despite excellent hygiene, head lice (pediculosis capitis) are very prevalent especially in school children in most societies (one study in the Uk found 57% primary school children were infested). The usual organism is Pediculus humanus capitis, but Pthirus pubis is more common in blacks with curly hair.

- Scurrying mature live lice are 3 mm in length and are most easily found on the occiput or behind the ears. Black specks of louse dung, and tiny hemorrhagic papules (bites) are often visible.

- Lice result in irritable crusted papules and sometimes, secondary dermatitis, impetiginisation and lymphadenopathy.

- **The egg cases ('nits') are flask-shaped** and 1 mm in length. They are found firmly attached to hair shafts. Empty egg cases are easier to see because they are white and further away from the scalp than grey nits containing live eggs.



Pubic lice

- Pubic lice or **crabs** are easily transmitted sexually. The pubic hair is most common site but lice can spread to other hairy parts of the body including armpit, beard, chest hair and thigh hair. Eyelashes can also be affected. Infestation presents as itching, but blood specks on underclothes and live lice moving in the pubic hair are occasionally noted.

Body lice

- Body lice tend to infest people in extreme states of poverty or personal neglect. The eggs of body lice are laid and glued to cloth fibres instead of hair, and the lice feed off the skin. Regular hot washing of clothes and bathing has lead to a decrease in incidence of body lice but during wartime and in some undeveloped countries the condition can still occur.
- Body lice in the past have been responsible for spreading diseases such as typhus. However because of the decline in numbers of people infested with body lice this is no longer a significant problem.
- **Similar insecticides used in the treatment of head lice are used in the treatment of body lice. Hot washing of clothes and bathing should be emphasized**

Pediculosis (Summary)

- **Head lice (Pediculus humanus var. capitis)**
  - Head lice infestations are frequently found in school settings or institutions.
  - Most common area for head lice: Occipital area.
  - Head lice is the most common cause of itching in children.
- **Body lice (Pediculus humanus var. humanus)**
  - Body lice infestation can be found in people living in crowded, unsanitary conditions where clothing is infrequently changed or laundered.
  - Body lice tend to infest people in extreme states of poverty or personal neglect.
  - The eggs of body lice are laid and glued to cloth fibers instead of hair, and the lice feed off the skin.
- **Pubic (Crab) lice (Phthirus pubis)**
  - Crab lice infestations can be found among sexually active individuals (sexually transmitted)
  - most commonly affect the pubic hair, but lice can spread to other hairy parts of the body
  - Infestation presents as itching, but blood specks on underclothes and live lice moving in the pubic hair are occasionally noted.

Pediculosis

Treatment (Head lice):

- Application of insecticide foam, shampoo or liquid, repeated in one week.
- Wet hair with vinegar to loosen nits.
- Vigorous and repeated combing using a fine-toothed comb.
- Regular scalp inspections.
- Hot wash towels, sheets, pillowcases, clothing, brushes.
- Isolate stuffed toys and other non-washable fomites for one week.

Topical insecticides are neurotoxic and are not effective against young nits. They include

1. Gamma benzene hexachloride: neurotoxic, increasing levels of resistance
2. Pyrethroids: safe, may irritate
3. Permethrin: if necessary, extend time of application to overnight treatment under a shower cap
4. Malathion: flammable.

Pediculosis

- Treatment (Body lice):
  - Similar insecticides used in the treatment of head lice are used in the treatment of body lice. Hot washing of clothes and bathing should be emphasized
- Treatment (Pubic lice):
  - An insecticide such as Prioderm Cream Shampoo (maldison 1%) should be applied to all hairy parts of the body apart from the eyelids and scalp. It is washed off after 5 to 10 minutes and any remaining nits should be removed by using a fine-toothed comb. A repeat application is advisable 7 days later.
  - Lice and nits can be removed from eyelashes by using a pair of fine forceps.

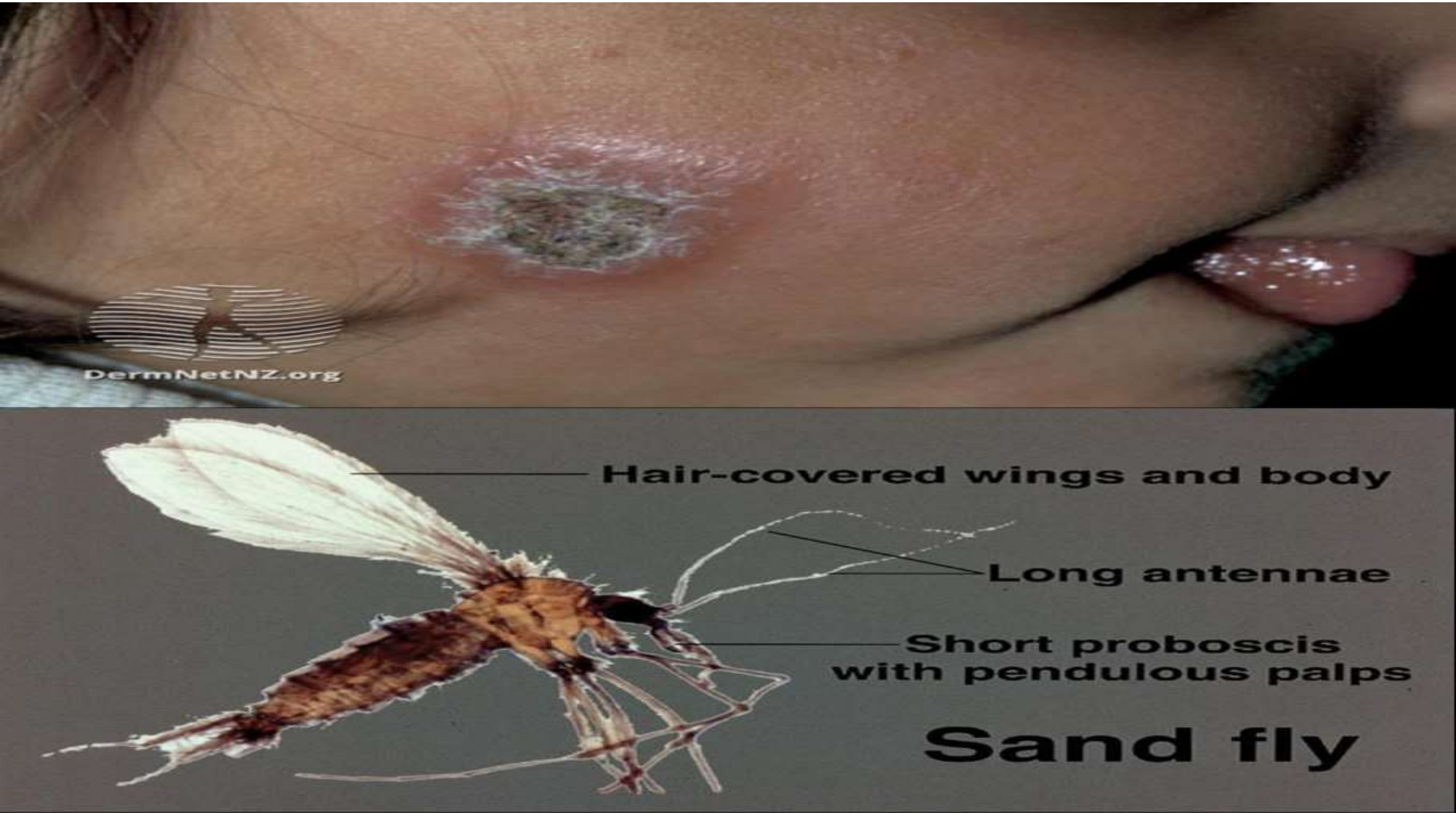
    Alternatively, petroleum jelly, such as Vaseline can be smeared on the eyelashes twice a day for at least 3 weeks.
  - Underwear and bed linen should be washed thoroughly in hot water to prevent recurrences. Sexual partners need to be treated even if they deny itching and do not appear to be infected.

Cutaneous leishmania

Anas Ganem

What is leishmaniasis?

- **Leishmaniasis is a parasitic disease transmitted by sandflies infected with the protozoa *Leishmania*.**
- Leishmaniasis is endemic in more than 70 countries worldwide and affects an estimated 12 million people.
- There are several clinical forms of leishmaniasis.
- The clinical manifestation of the infection depends on the species of *Leishmania*, which varies with geographical area and the host's immune response.


DermNetNZ.org
Hair-covered wings and body
Long antennae
Short proboscis
with pendulous palps
Sand fly

Classification and causes of leishmaniasis

- There are more than 20 species of Leishmania parasites which can infect humans; transmitted via the bite of **phlebotomine sandflies**. Sandflies are tiny (1.5–3 mm) insects which actively feed on blood at dawn and dusk.
- Sandflies live in wall cracks, animal burrows and leaf litter, in tropical and sub-tropical regions.
- Their bite is asymptomatic and classically found on exposed sites.
- ***The most important distinction is between American and non-American species of Leishmania, as the Viannia subspecies found in the Americas, can result in mucocutaneous leishmaniasis***.

cutaneous leishmaniasis

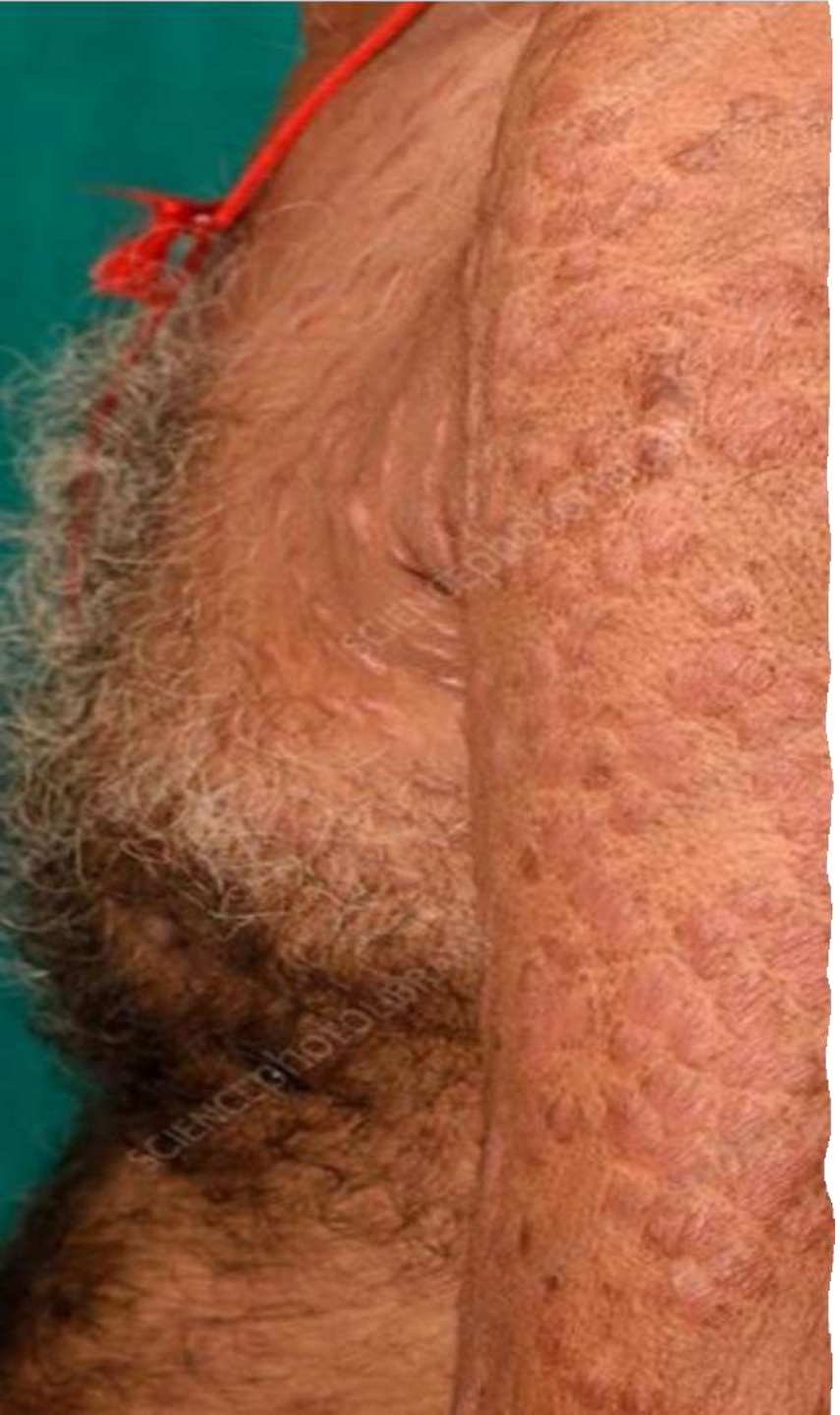
- Cutaneous leishmaniasis typically occurs at the site of inoculation. The presentation and prognosis will vary depending on the species involved.

- -**Non-American (Old World)** cutaneous leishmaniasis:
- Middle East, North Africa, Asia
- *L major, L tropica, L infantum, L donovani*
- Synonyms: oriental sore, **Baghdad boil**, Delhi boil, saldana, Aleppo button, granuloma endemicum.

- -**American (New World)** cutaneous leishmaniasis:
- Central and South America
- *L mexicana, L braziliensis, L amazonensis*
- Synonyms: chiclero ulcer, uta, ulcera de Bauru, forest yaws, pian boi, bejuc

Cutaneous leishmaniasis

- Cutaneous leishmaniasis is **the most common form of leishmaniasis**.
- **Solitary** lesions are typical, but **multiple** lesions occur
- **The initial lesion is a painless small red papule or nodule, which gradually enlarges up to 2 cm in diameter**
- **Central ulceration** is typical.
- **Ulcers can be moist and exude pus or dry with a crusted scar.**
- Sores usually appear on exposed areas of the skin, especially the face and extremities
- The incubation time between an infected sandfly bite and lesion development is typically 2 weeks to 6 months
- Lesions are usually painless, and most resolve spontaneously often leaving residual atrophic scarring. Takes between 2 months to more than a year .
- Sporotrichoid spread with lymphocutaneous nodules may occur
- High risk of dissemination in immunodeficient patients



Diffuse cutaneous leishmaniasis

- Diffuse cutaneous leishmaniasis is a specific disease entity; sometimes the term is incorrectly used to describe disseminated or multiple cutaneous leishmaniasis
- Results from an **anergic response to the infection due to reduced cell-mediated immunity**
- Following the primary cutaneous leishmaniasis lesion, **non-ulcerative nodules and plaques** develop
- Lesions may be numerous and may extend over the **whole body**
- Follows a chronic relapsing or progressive course
- Often difficult to treat

DIAGNOSIS OF LEISHMANIASIS

- Diagnosis of cutaneous leishmaniasis is usually based on the **history and clinical appearance of the lesion. (travel history)**
- The diagnosis can be confirmed by identifying the parasite on **biopsy or split skin smear.**
- **Culture and PCR** may also be used to confirm the diagnosis and identify the species of Leishmania, which is important when there is a risk of **mucocutaneous leishmaniasis**.
- **Serology** is used to confirm the diagnosis in cases of **visceral leishmaniasis.**
- **a full-thickness skin biopsy can reveal the parasite.**
- **Histopathology is also used to establish mucocutaneous leishmaniasis and visceral leishmaniasis. Complete blood counts and liver function tests should also be performed in visceral leishmaniasis.**

Mucocutaneous leishmaniasis

- Mucocutaneous leishmaniasis is a destructive form of leishmaniasis, which is only seen with the American species of *Leishmania* (***Viannia* subspecies).**

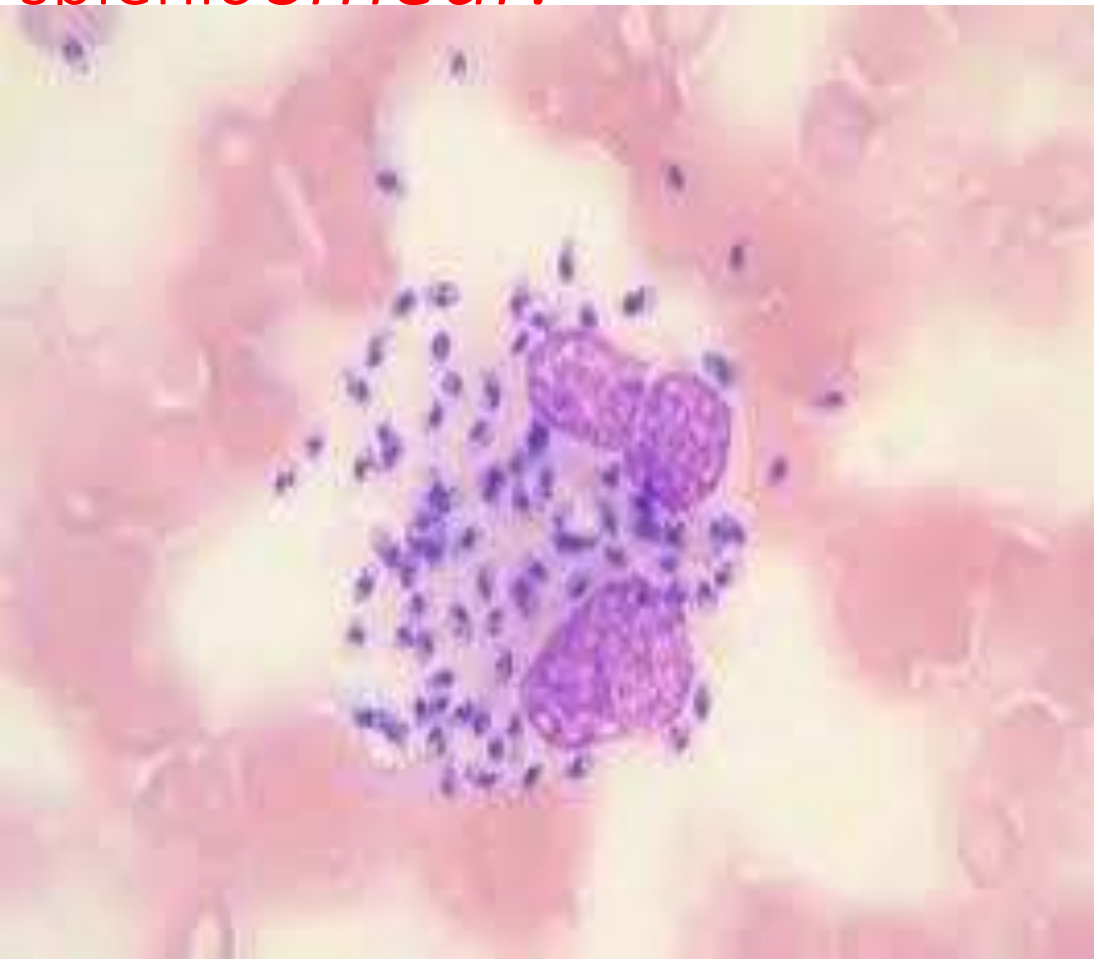
- Visceral leishmaniasis

- Visceral leishmaniasis results from the **involvement of the internal organs and is usually fatal if untreated**. It is also known as **kala-azar or Dumdum fever**

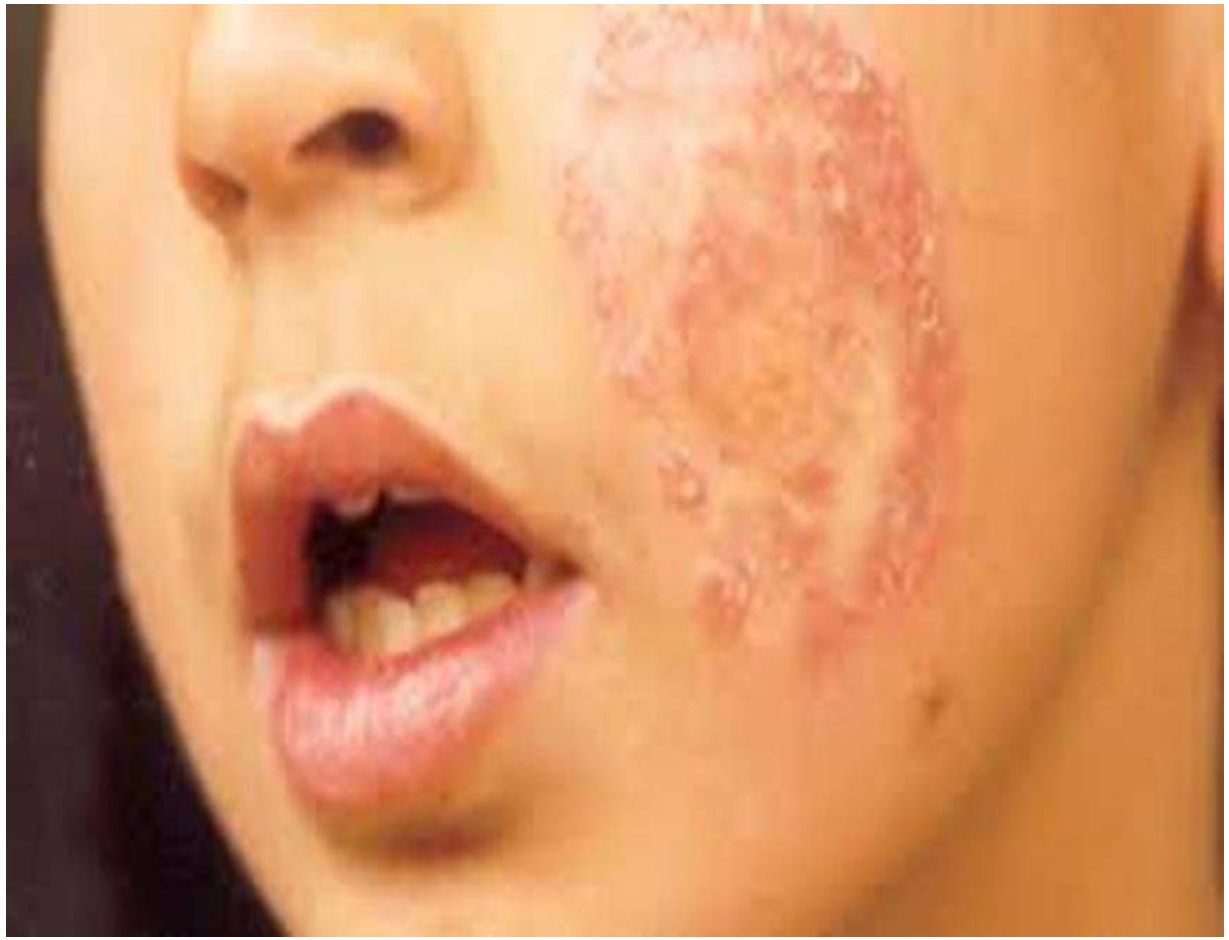
Leishmaniasis recidivans

- **Leishmaniasis recidivans is a rare, cutaneous form of leishmaniasis, occurring in patients with a good cellular immune response. It is also known as lupoid leishmaniasis.**
- **Spontaneous resolution of the primary cutaneous lesion is followed by the development of new lesions around the edge of the primary scar**
- The lesions typically ulcerate then heal,the cycle continues with a chronic recurrent course.

Intracellular and extracellular amastigotes of *Leishmania infantum* in a splenic *smear.*



Leishmaniasis recidivans



What is the differential diagnosis for leishmaniasis?

The variety of clinical manifestations of cutaneous leishmaniasis results in a wide range of differential diagnoses:

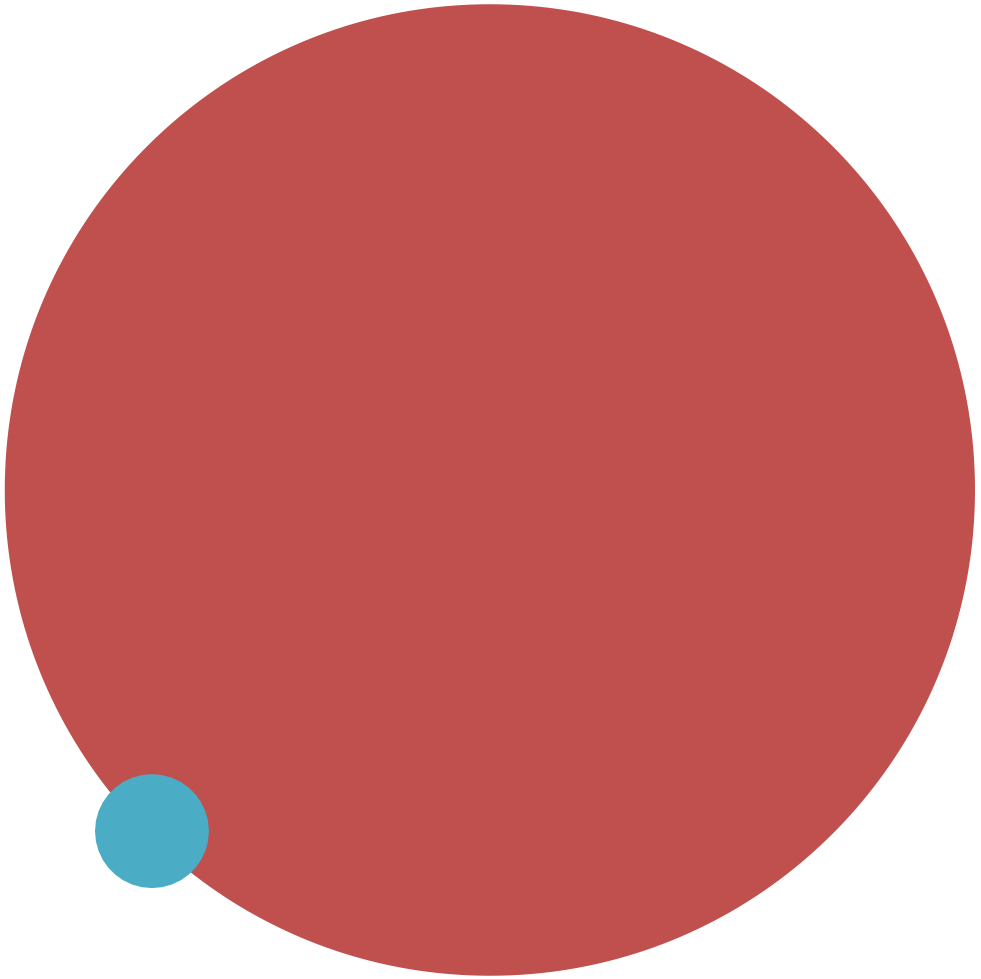
- Insect bites
- Basal cell carcinoma
- Squamous cell carcinoma
- Granuloma annulare
- Atypical mycobacterial infection
- Lupus vulgaris
- Leprosy
- Actinomycosis
- Deep fungal infections
- Sporotrichosis
- Cutaneous anthrax
- Ecthyma gangrenosum.

Treatment ?

- In cutaneous leishmaniasis, treatment options differ depending on whether the lesion/s is considered simple or complex.
- Treatment options for cutaneous leishmaniasis lesions include:
- Self-healing (simple lesions only).

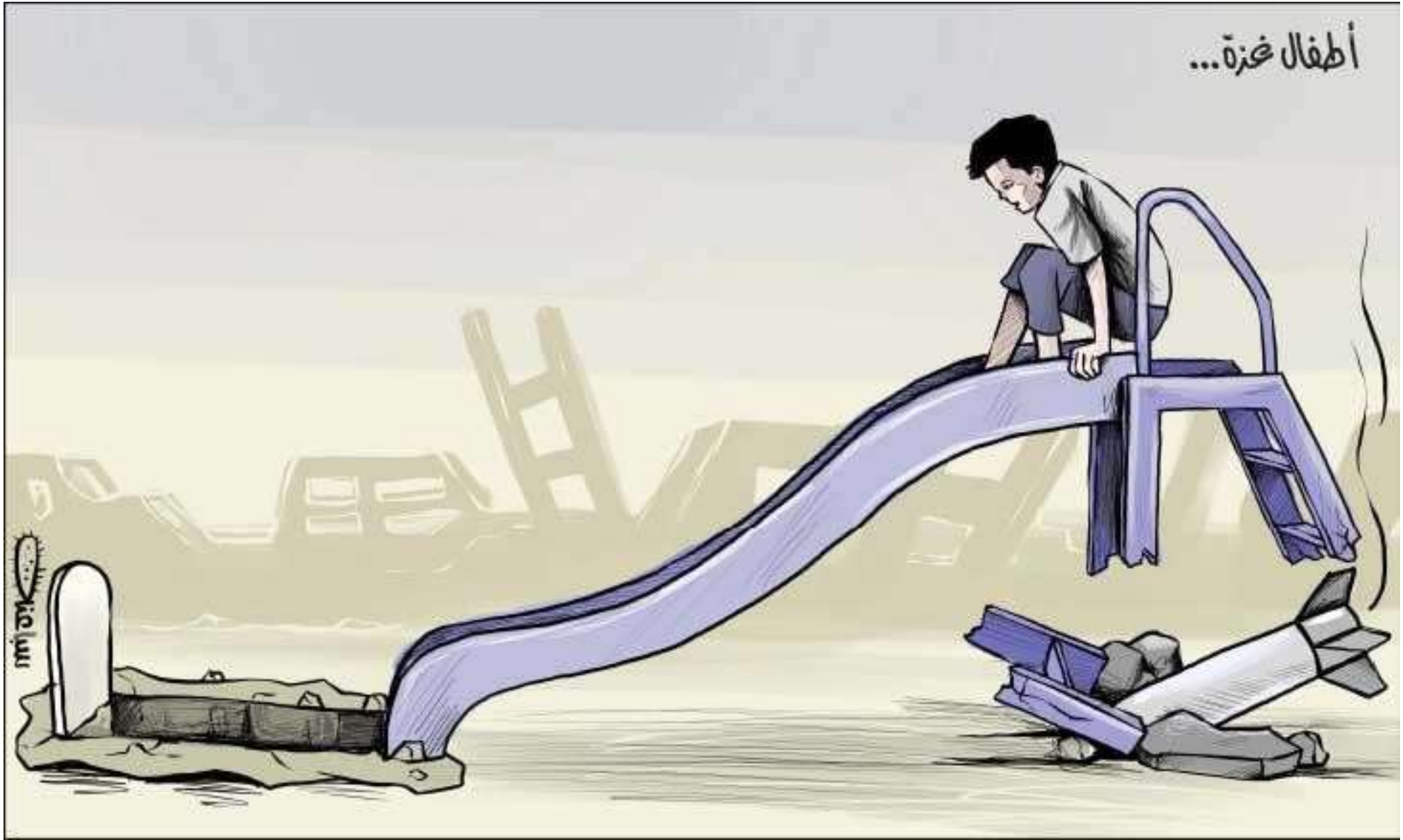
-Systemic antimonials are the mainstay of treatment for complex cutaneous leishmaniasis lesions, mucocutaneous leishmaniasis and visceral leishmaniasis. They cannot be given orally, and the length of treatment may be up to 28 days for mucosal lesions. Treatment requires hospital admission, and there is a risk of side effects, including cardiotoxicity.

- Topical non-antimonial treatments
  - Cryotherapy
  - Heat therapy
  - Photodynamic therapy
  - Imiquimod
  - Topical paromomycin (also known as aminosidine)
- Intralesional antimonials
  - Sodium stibogluconate
  - Meglumine antimoniate



- Non-antimonial systemic therapies
  - Amphotericin B
  - Miltefosine
  - Pentamidine
  - Azole antifungal drugs: itraconazole, fluconazole, ketoconazole
  - Paromomycin
  - Zinc sulfate
  - Allopurinol
- Systemic antimonials (intravenous or intramuscular)
  - Sodium stibogluconate
  - Meglumine antimoniate.

Leishmaniasis Form	Region	Species	Synonyms
Mucocutaneous Leishmaniasis	**American (New World)**	*L. braziliensis*, *L. guyanensis*, *L. panamensis*	Espundia
Diffuse Cutaneous Leishmaniasis	**Non-American (Old World)**	*L. aethiopica*	
	American (New World)	*L. amazonensis*	
Visceral Leishmaniasis	**Non-American (Old World)**	*L. donovani*, *L. infantum*, *L. tropica*	
	American (New World)	*L. chagasi*	
Leishmaniasis Recidivans	**Non-American (Old World)**	*L. tropica*	
	American (New World)	*L. braziliensis*	


أطفال غزة...