

# Parasitic skin diseases (Pediculosis, Leishmaniasis, Scabies)

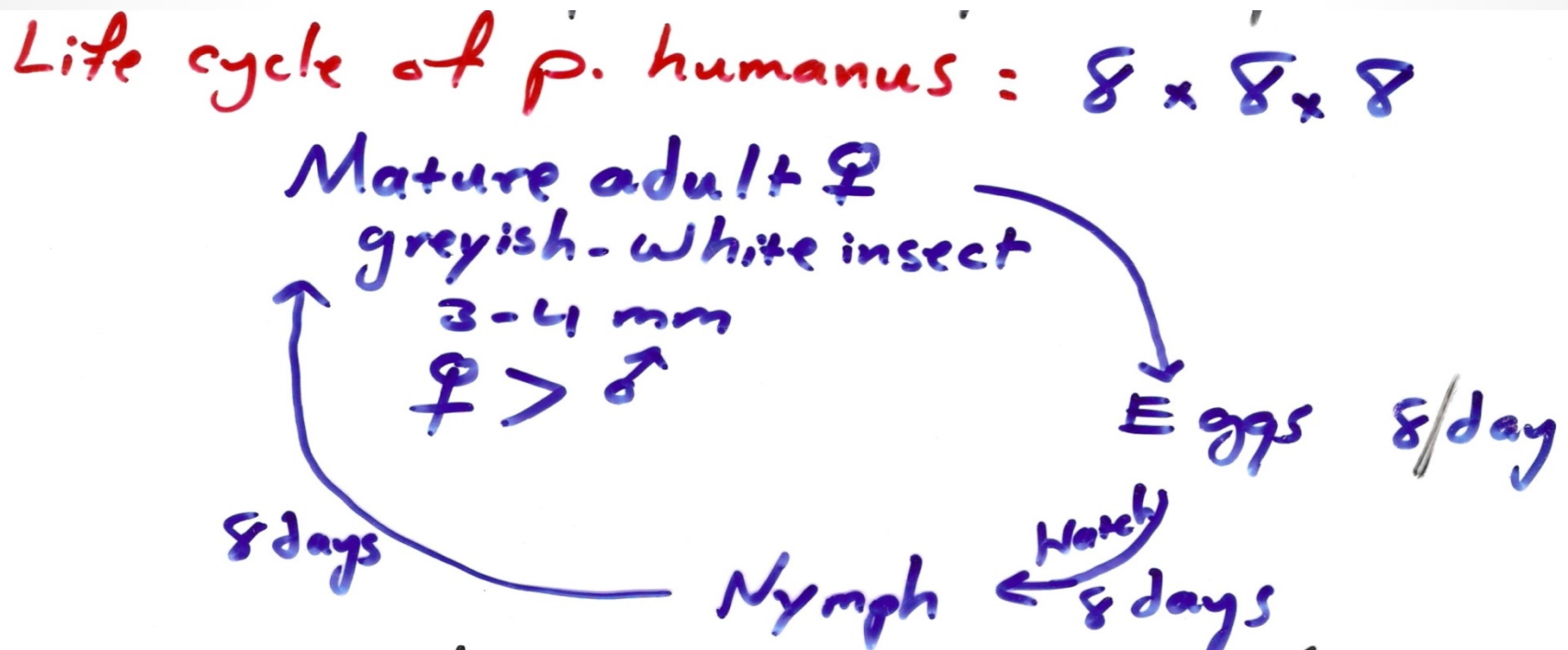
## Pediculosis

Pediculosis humanus capitis (head louse)

Pediculosis humanus corporis (body louse)

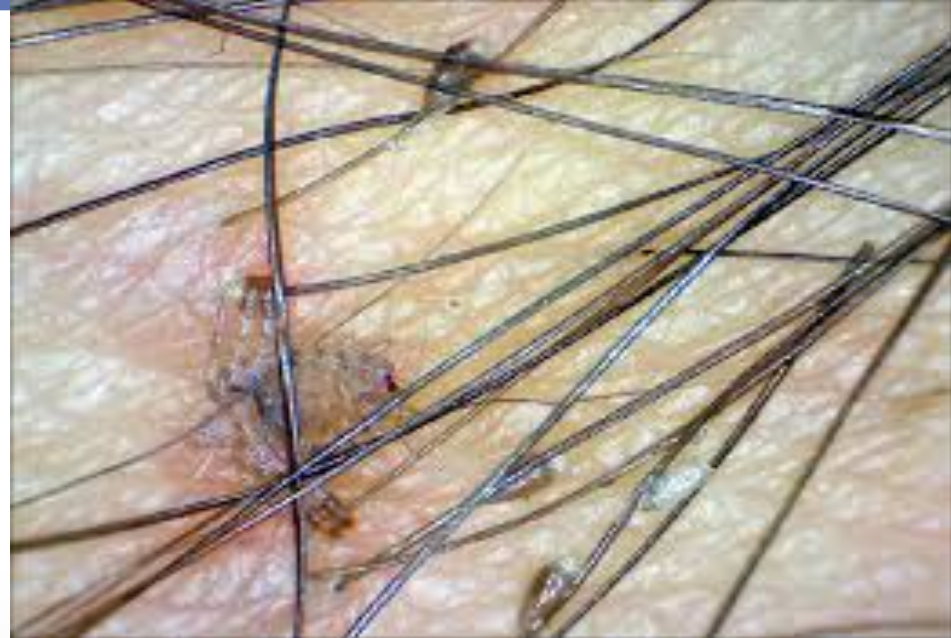
Pediculosis ( Phthirus ) pubis (pubic louse)

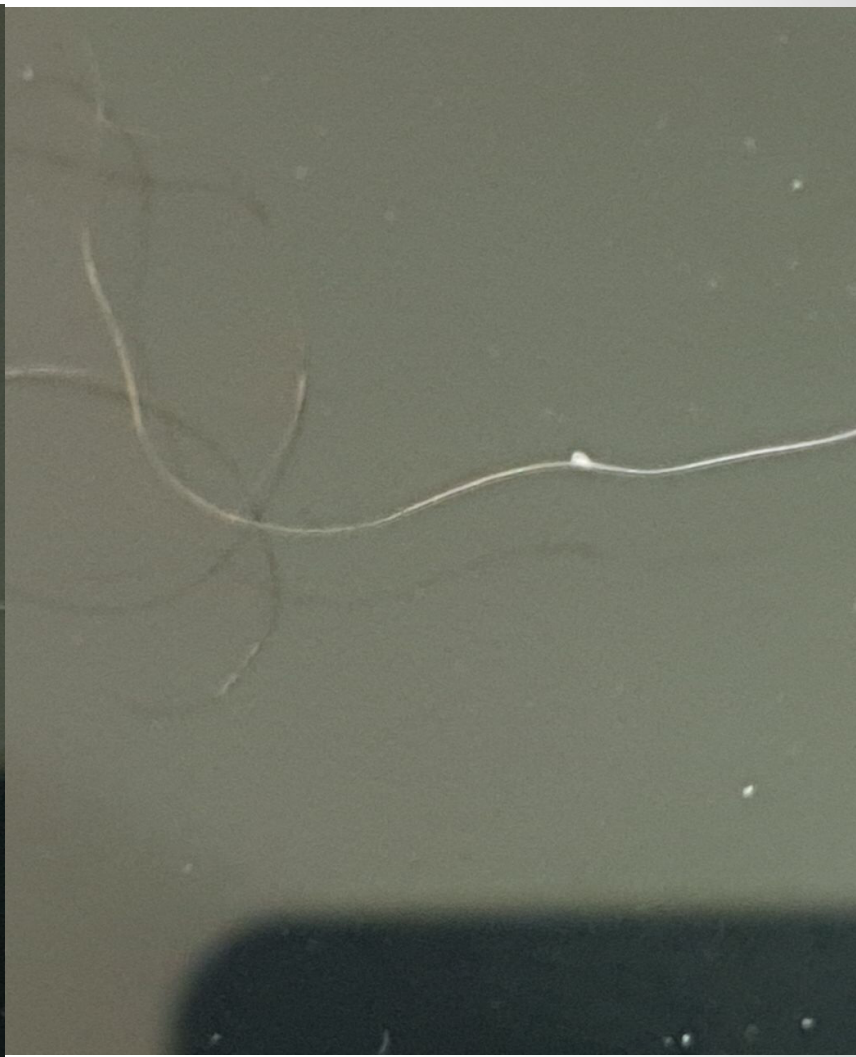
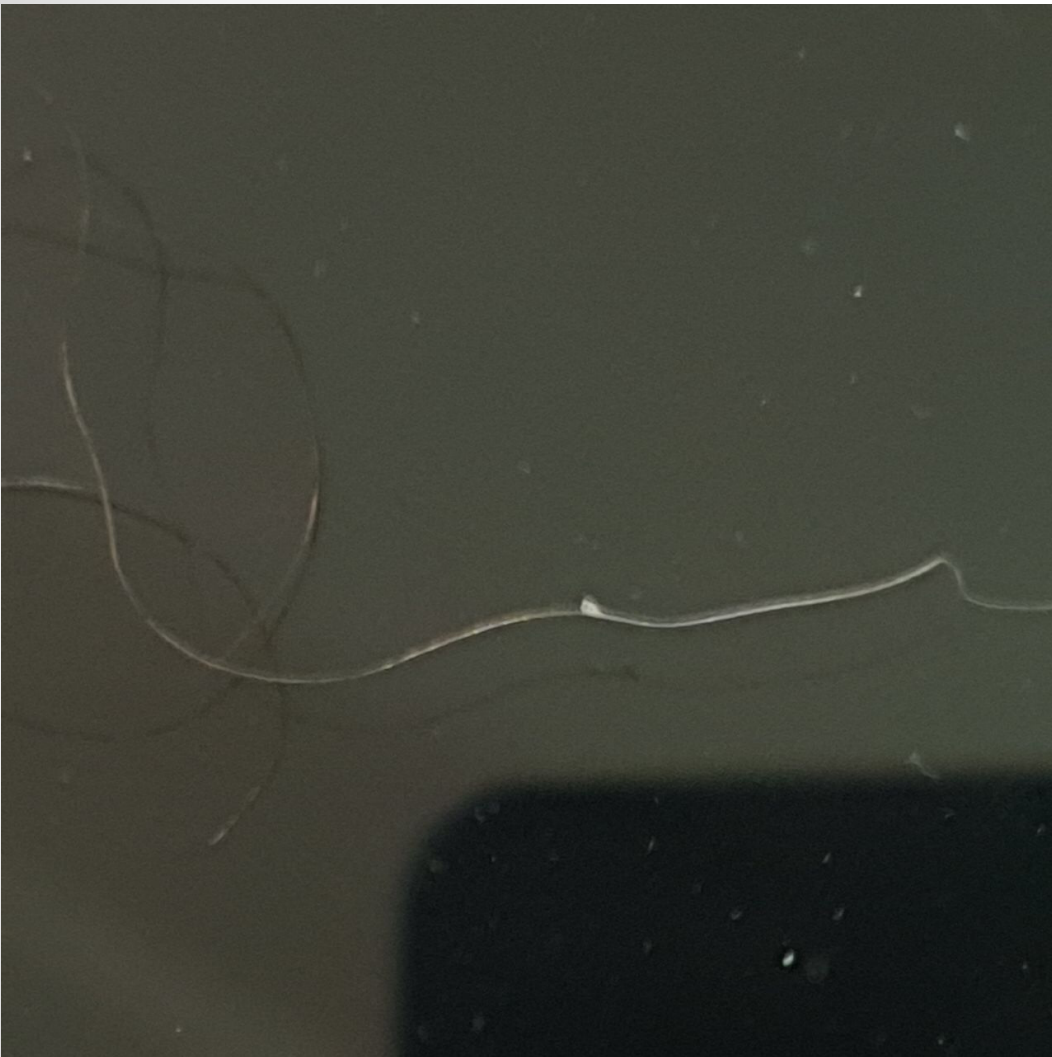
Life cycle of P. humanus: 8\*8\*8



\*Eggs are oval, lidded by capsules, firmly cemented to the hair and may be confused with hair casts.

Nits	Casts-Scales
Are Firmly attached to the hair & difficult to be slipped off	<b>They Can be slipped off easily</b>
Regular shape, sit at 45 degree angle	<b>Irregular &amp; encircle the hair</b>
Click sign is +ve	<b>No Click sign</b>
Wood's light exam : white shinny	<b>Not shinny and not viable</b>
On light microscope: viable embryo	<b>No embryo</b>







Pediculosis affects both gender but more common in females  
No age is immuned but more common in primary school children  
( Epidemic )

**Sites:** Occipital and post-auricular regions.

No. of parasites:

Not exceed 10 insects in 60% of case

exceeding 100 insects in only 2-5%

rarely more than 1000 insects in low IQ and handicapped patients.

**Mode of transmission:**

Direct contact :

1- school classes

2- small rooms

3- during winter increase

Or : by sharing hats, caps, brushes and combs.



# Clinical features:

1-Pruritus and itching:

Severity : mild to severe

Sites : sides of the neck and occipital region.

2-Secondary infection : exudation, crustation, foul smelling.

**\*We should suspect any impetigo on the scalps as Pediculosis until proved otherwise.**

3-Cervical lymphadenopathy



## Diagnosis:

- 1-Clinical
- 2-Hand lens
- 3-Wood's lamp
- 4-Light microscope



## Treatment:

- 1-Lindane (gamma benzene hexachloride)
- 2-Benzyl benzoate 25%
- 3-Malathion 0.5%
- 4-Pyrethrin (freederm) shampoo
- 5-Permethrin (shampoo, lotion)
- 6-Kerosene (simple way)



## 2-Pediculosis humanus corporis ( The largest )

\* Now it is rare

\* occurs in dirty persons.

\*The eggs are laid mainly on the clothing in contact with the skin, most of them inside the seams.

### **Clinical features:**

1-Generalized itching , scratching marks.

2-Pin-pointed macules and papules on the trunk, sometimes small wheals are developed.

### **Treatment:**

1- washing and cleaning

2- the clothes and bedding must be thoroughly disinfected

## 3-Pediculosis pubis (pubic louse) or Phthriasis pubis

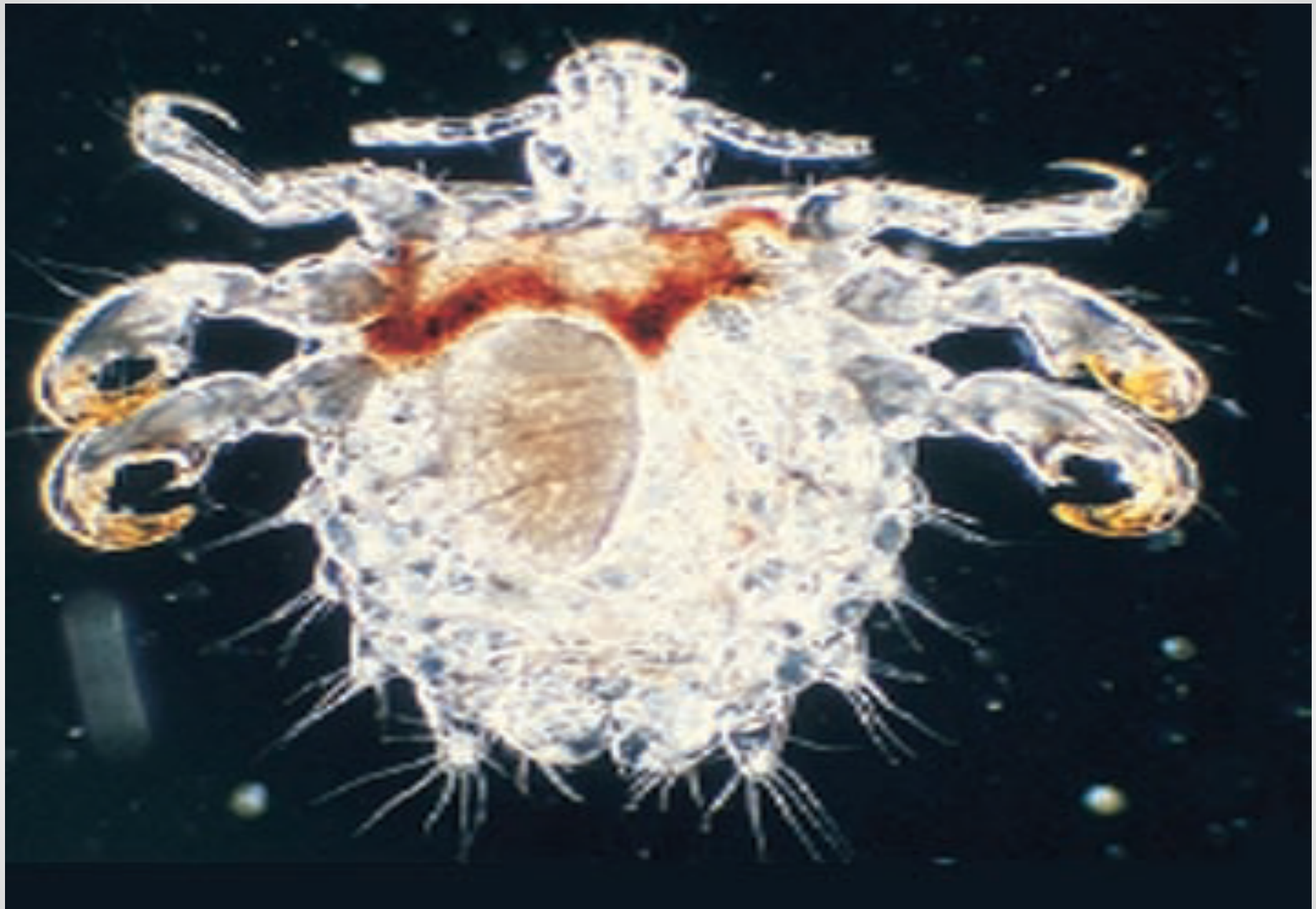
### **Epidemiology :**

- now it is very common due to prostitution
- May be associated with other STDs.

**Mode of transmission:** STDs, but sometimes non STDs.

### **Target areas:**

- 1-Pubic hair
- 2-Hair of abdomen & chest
- 3-Axilla
- 4-Eyelashes (very important site in children)



## Clinical features:

- 1-Severe itching in pubic area, lower abdomen, upper thigh and sometimes axilla.
- 2-Excoriation marks, secondary infection, lymphadenopathy.
- 3-Louse are seen and firmly attached to the hair shaft or to the body skin
- 4-Sometimes we may see bleeding spots on the inner clothes which may be misdiagnosed as urethral bleeding.

## Diagnosis:

Usually clinical and when we see adult organism by naked eye attached to the hair shaft and can be removed by forceps and put it on a paper.

## Treatment:

- 1-Shaving the pubic hair
- 2- Antilice agents such as permethrin  
lorexane ( gamma benzene hexachlorid)

## 4-Pediculosis of the eyelashes

**Mode of transmission :** Children : from the mother  
adult : from the partner

### **Clinical features:**

- 1-Itching
- 2-Louse can be seen
- 3-There may be pruritic papule



\* Sometimes May be misdiagnosed as seborrhoeic dermatitis



**Treatment:**

By applying petrolatum (vasalene) on the eyelid : this will prevent O<sub>2</sub> from the microorganism leading to death then can be removed easily.

# Cutaneous Leishmaniasis

## ( Baghdad boil )

Caused by Leish. tropica

reservoir : Domestic or wild animals, cats, dogs and sometimes human.

**Transmission:** by female Sandfly (Phlebotomus).

**Incubation period:** few weeks to few months.

**Prognosis:** depends on:

1-Type of M.O

2-Immunity of the host

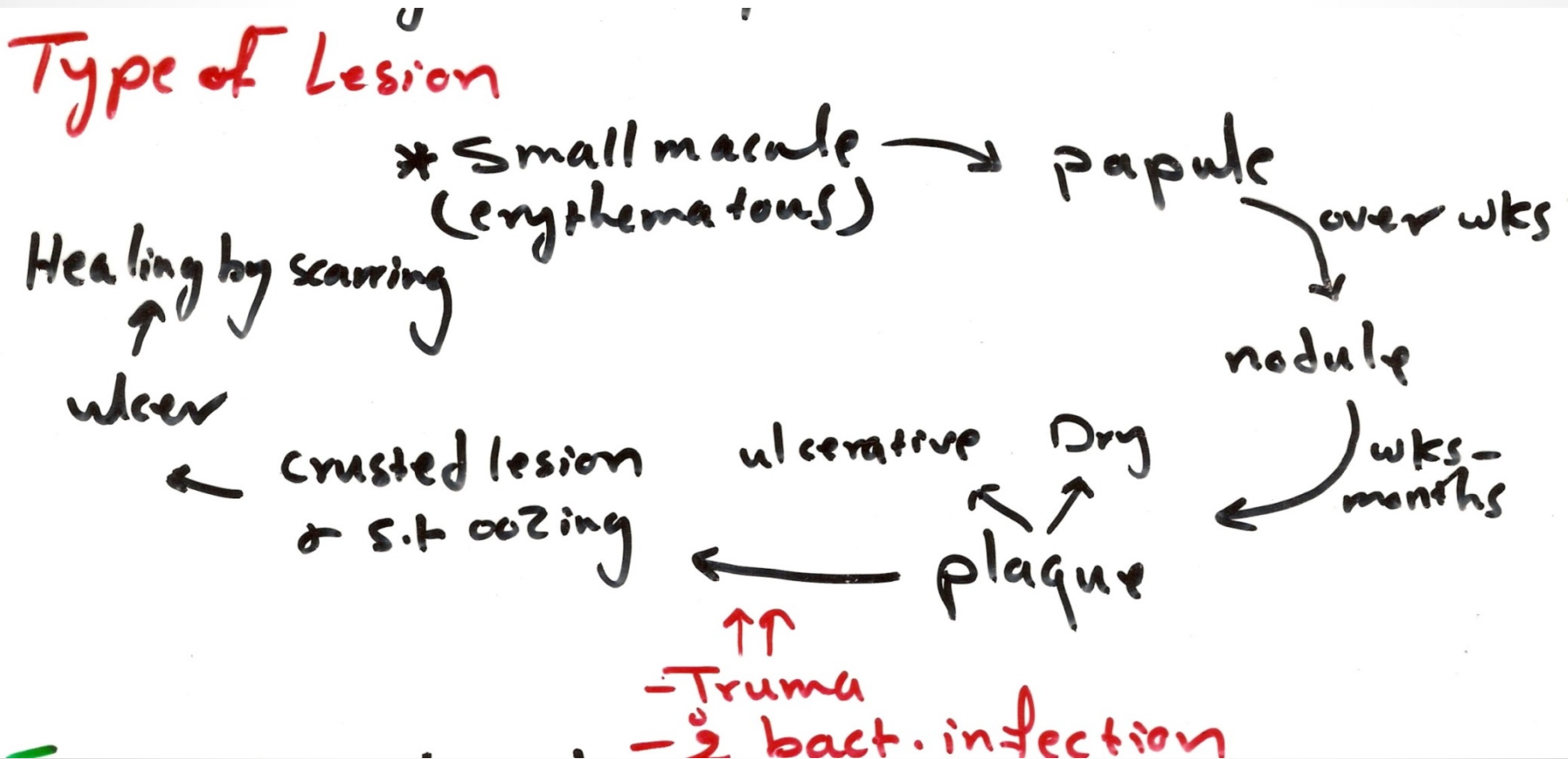
3-Dose of inoculum.



## Clinical features:

Sites : exposed areas face, scalp, extremities.

Type of lesion:







## **Immunity:**

It is long-lasting but the recurrence may occur in:

- 1-Elderly.
- 2-Immunocompromised patients (D.M., Hodgkin disease).
- 3-New strains of the parasite.
- 4-Very early treatment of the lesion.

## **Diagnosis:**

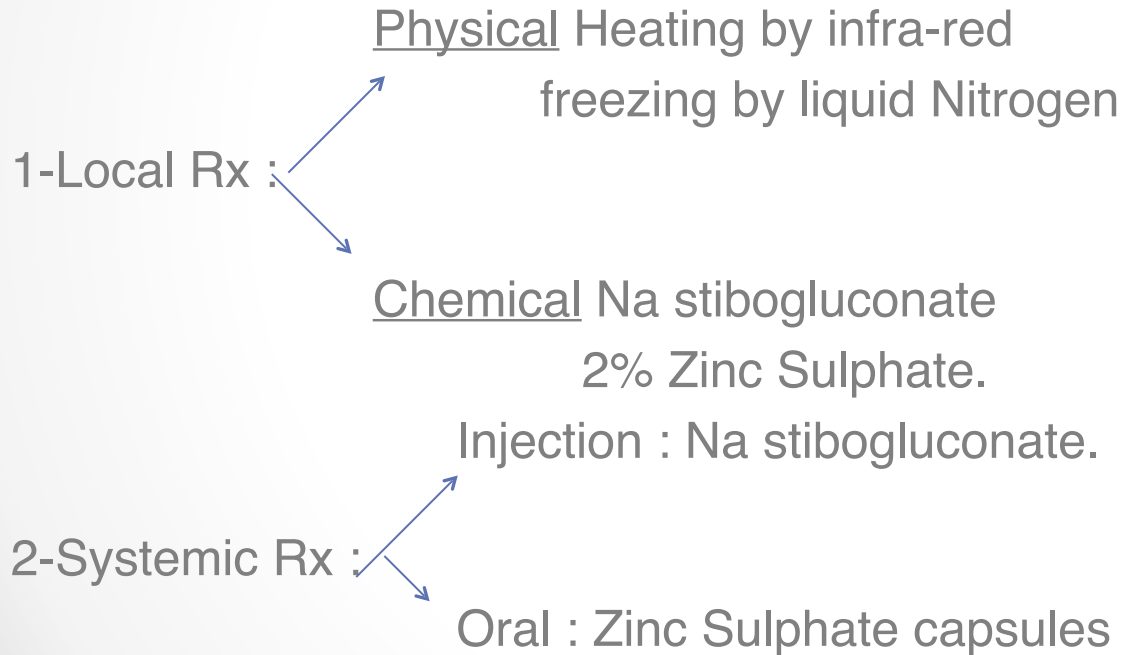
- 1-Clinical.
- 2-Smear of the lesion and staining with Wright's, Giemsa or Leishman's Stain.
- 3-Culture in NNN medium.
- 4-demonstration of leishmanial DNA by PCR
- 5-Leishmanian test is +ve once THE STAGE OF CRUSTING is reached and  
-ve in the diffuse form.

## Treatment:

Aims of treatment:

- 1-To prevent scarring.
- 2-To decrease patient suffering.
- 3-To decrease the duration of illness.

## Types of treatment:



\* Treatment depend on :

- 1-No. of the lesions.
- 2-Age of the patient.
- 3-Types of lesion.
- 4-Immunity of the host.
- 5-Sites.

\*Local treatment: usually indicated for single lesions because of its advantages:

- 1-High concentration of drug at local site.
- 2-Few side effects.
- 3-Low cost.
- 4-Few numbers of treatment sessions.

\* systemic Rx Usually I.v or I.m injection of 10-20 mg/kg daily for 15-30 days (pentostam).

\*Systemic treatment is indicated in very large, high no. of lesions , near the eye

# Scabies

Caused by *Sarcoptes scabiei* Var. *hominis*

**Sizes** : Male size is 0.2\*0.15 mm

female size is 0.4\*0.3 mm.

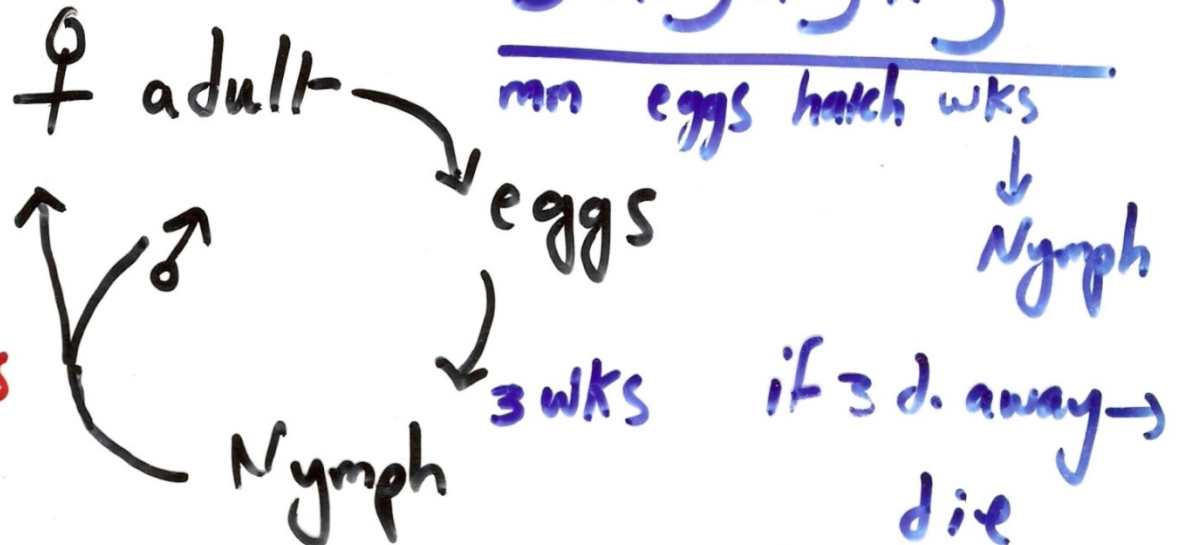
Its shape is hemispherical, whitish spots (size of pin head).

**Incubation period:** 2 weeks to 1 month.

**Life cycle: 3\*3\*3\*3**

\* life cycle :

each individual has 10-12 parasites



**Incidence:** now a day is very common 20%

**Source of infection:** Prisons, hotels, institutes (orphanage) and military personels.

## **Clinical features:**

We have 2 types of lesions:

1-Primary : Burrow

vesicles.

2-Secondary : Papule

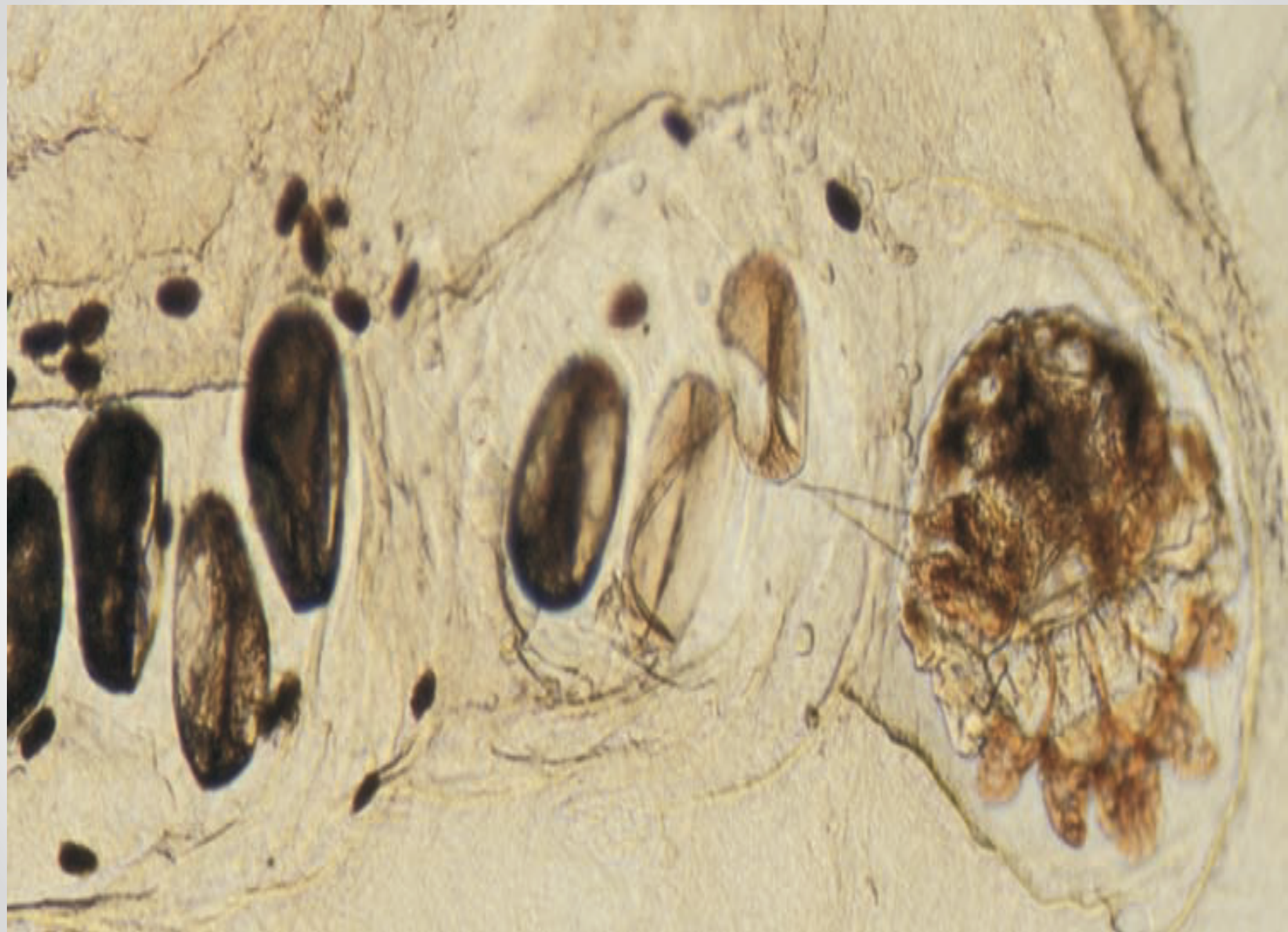
urticaria

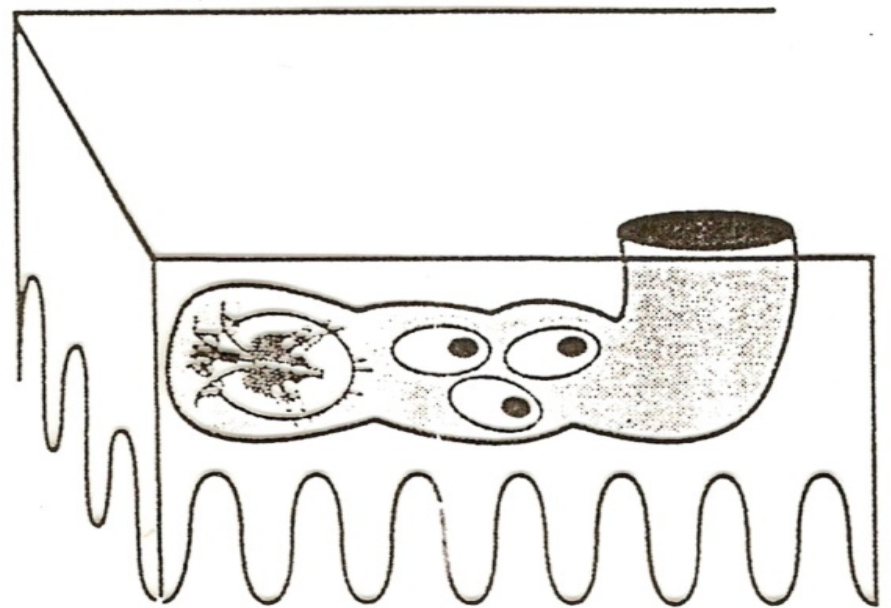
scratching marks

2<sup>nd</sup> bacterial infection.

\*burrow is skin colored or grayish, zigzag or linear lesion, 5-15 mm in size and white spot at the end (Mite).







Scabies



## Sites:

- 1-Sides of fingers.
- 2-Axilla, buttocks and umbilicus.
- 3-Male genitalia.
- 4-Female breast & areola.
- 5-Palms, soles & scalp of infants & children.

The itching is \* nocturnal and \*increased by heating.

With treatment, rash disappears but sometimes patients have post-scabietic allergic nodules(3-4/12) spontaneous disappearance

## Diagnosis:

Usually easy and clinical.

1-Suggestive Dx:

- a-Itching (**generalized, nocturnal and increase with heating**)
- b-Site of the lesion.
- c-Other members in the family

2-Pathognomonic lesions:

a-Buttocks

b-Genitalia

3-Diagnostic signs:

Burrow which is whitish spot at end → extraction of mite by pin

Parasite, egg or scybala — Light microscope (low power)



**Fig. 17.6** The characteristic plantar lesions of scabies in infancy.



# Treatment :

1-Sulphur 2-10%

\* Side effects are ichthyosis and xerosis ( dryness )

2-Benzyl benzoate 25%

\* Side effect is irritant.

3-Lindane (Lorexane)

\* Side effect is neurotoxicity and contra-indicated in children <2 years.

4-Permethrin 2.5% and 5%

\* drug of choice, safe, no side effects and cure rate is 90%.

5-Crotamiton : weak scabicial.

6-Ivermectin tablets.



## Other measures:

- 1-Rx of clothes.
- 2-Rx of other members of the family.
- 3-Supportive measures such as \* anti-histamine  
\* sometimes topical and systemic antibiotics.

\*In general, the side effects of Rx are:

- 1-Irritation.
- 2-Xerosis (dryness).
- 3-Sometimes Ichthyosis (dryness) like lesion.

**Recurrence:** Is due to:

- 1-Improper Rx.
  - 2-Re-infestation from untreated contacts.
  - 3-Remaining in focal area.
  - 4-Some hosts get re-infested rather than other (Individual variation).
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