



Urogenital Ectoparasites

Presented by

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Sarcoptes scabiei **(Itch mite)**

❖ **Geographical distribution:** Prevalent in crowded areas with poor hygienic living conditions as in slums and jails.

❖ **Mode of infection**

➤ **Direct skin-to-skin contact.**

➤ **Contact with patient's clothes & bedding.**



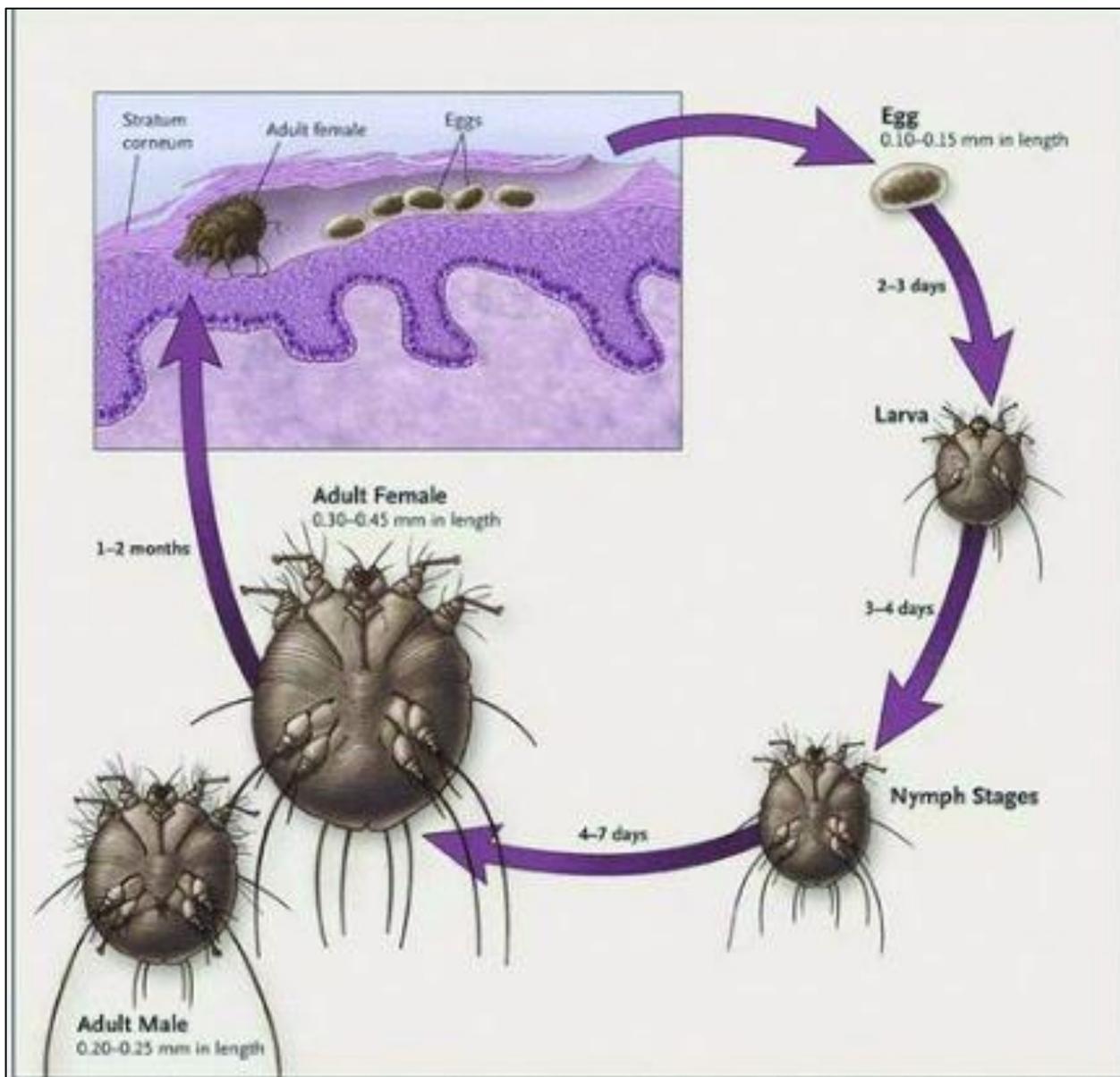
➤ **Sexual intercourse.**



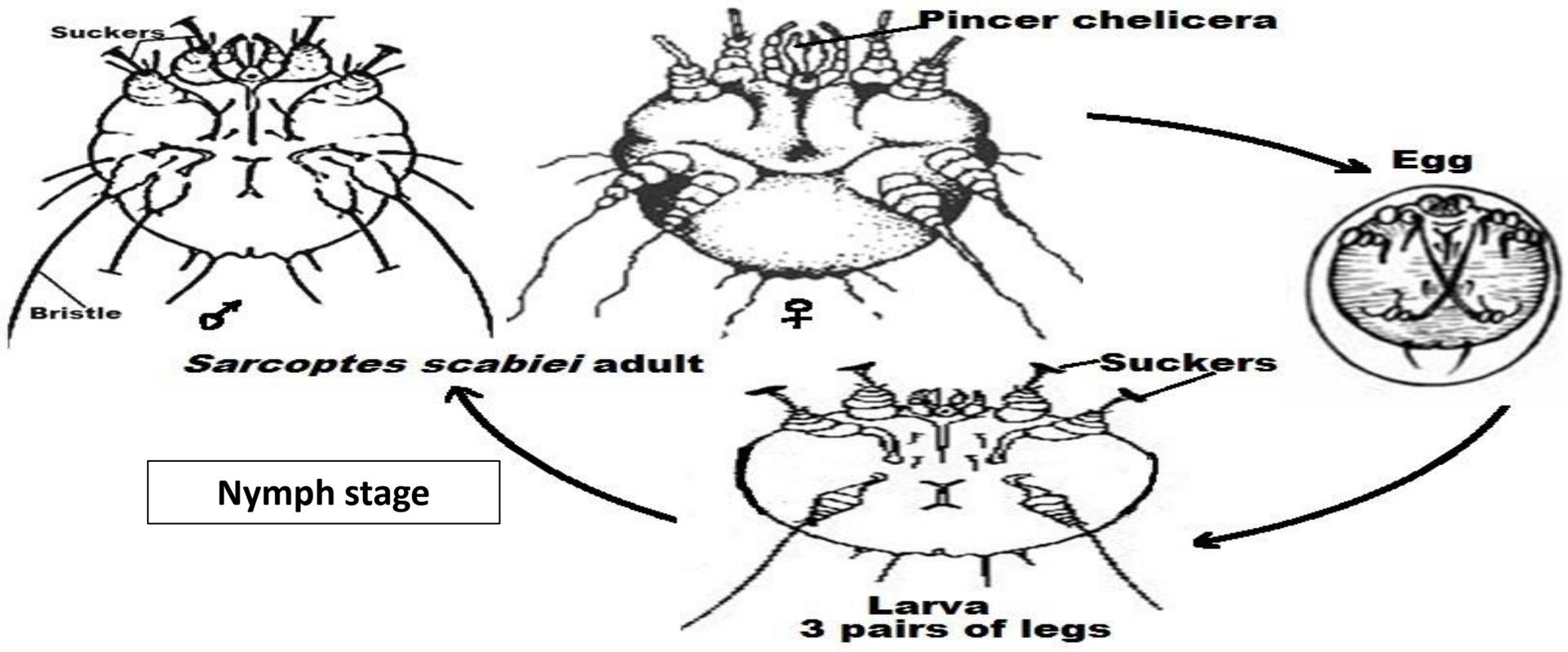
Habits of *Sarcoptes*

- *Sarcoptes scabiei* is a skin parasite.
- It is a **permanent ectoparasit** of human and animals.
- Lives in the **superficial layer** of the skin **in tunnels.**
- Active mainly **at night.**

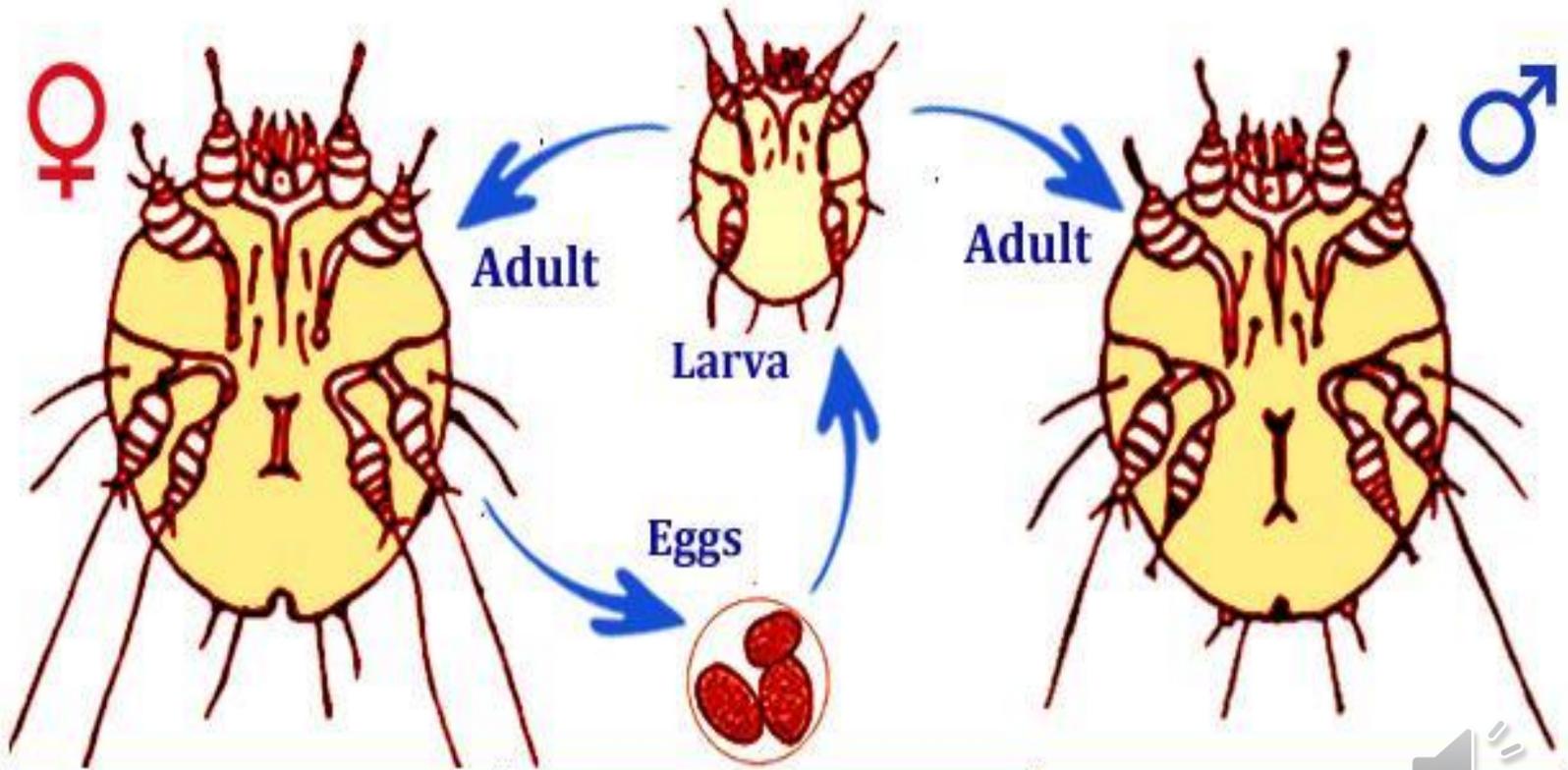




Incomplete metamorphosis



Sarcoptes scabiei



Pathogenesis



Disease: Scabies

□ **An allergic reaction** of the host's body to mite proteins (from mite gut or faeces deposited under the skin).



Clinical pictures



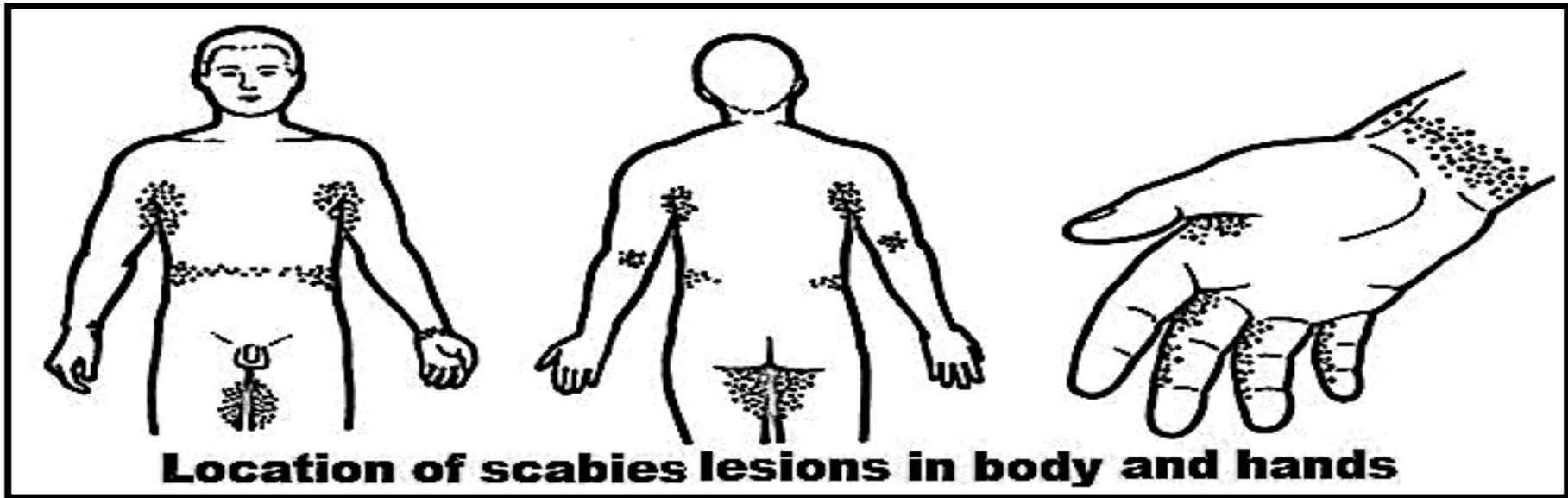
1- Typical scabies

Severe itching that tends to be worse at **night** as warmth stimulates the activity of mites.

Skin lesions:
Superficial **grayish black** **tortuous tunnels** and skin rash in the form of small red papules and blisters.

•**Sites:** usually seen in the interdigital spaces, wrist, elbow, axilla, breast, groin and genitalia.

•**Secondary bacterial infection** may occur → pustular lesions & bleeding.



Typical scabies



2. Crusted scabies (Norwegian scabies)



It is common among elderly and immuno- suppressed people such as AIDS, organ transplant and cancer patients. It is an aggressive form of scabies and presented by skin rash, surface ulcers and erosions get dirty-yellow and covered with dark thick crusts.



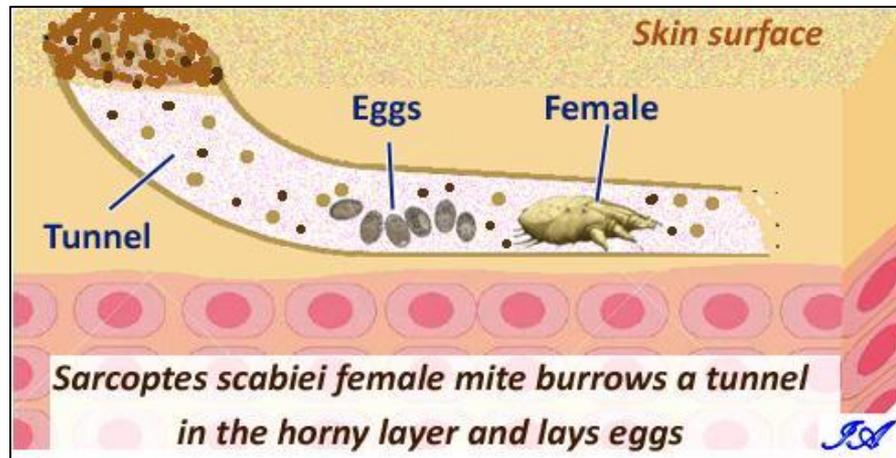
Laboratory diagnosis



1. Clinical picture.

- 2 Scrapings of epidermis with a scalpel blade and microscopic identification of the mite, larvae and eggs. To help in locating burrows, one or two drops of ink can be applied to the suspected areas and then wiped off with alcohol after 10 min. The ink
- is retained in the burrows.

3. Dermoscopy for direct detection of the parasite.



Treatment

➤ **Hot soapy bath** using a brush to open the tunnels before the application of scabicide drugs.

➤ **Scabicide drugs:-**

❑ **Permethrin cream.**

❑ **Ivermectin:** Oral single dose for crusted scabies as the thick crust prevents the absorption of local treatment and patients who do not respond to local treatment

❑ Other drugs as lindane (1% lotion or cream), **benzyl benzoate** emulsion (25%) and 5% **sulfur ointment.**

➤ **Antihistaminic** to relief itching.

➤ **Antibiotics** for secondary bacterial infection.

➤ **Treatment of family members** and all close contacts.

✂ **N.B.** Treatment should be repeated after one week to expose new larvae that come out of eggs to scabicide drugs.



Phthirus pubis **(Pubic louse or crab louse)**



❖ **Geographical distribution:** Cosmopolitan and associated with poor personal hygiene.

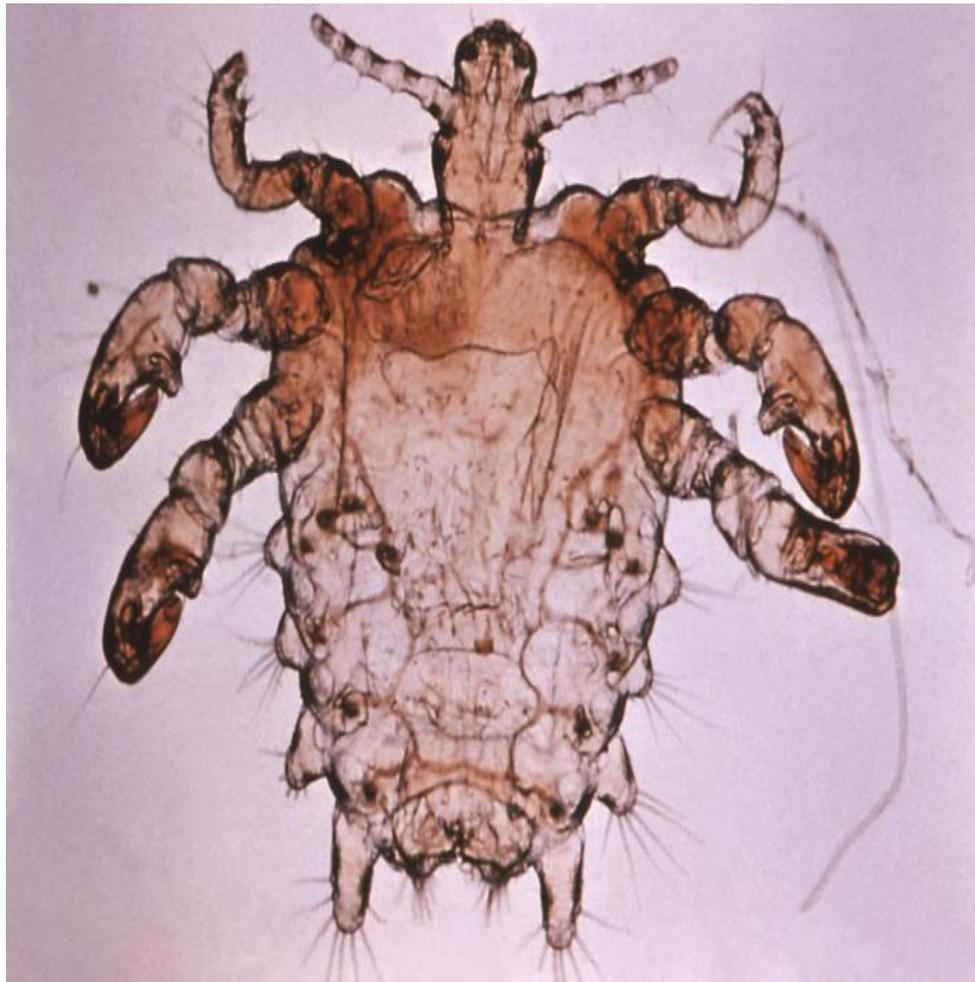
❖ **Mode of transmission:** Sexual contact, infested bed linens and sharing towels.

❖ **Lice habits:**

- Lice are permanent ectoparasites.
- The eggs are attached to hair of the pubic region, axilla, beard, moustache, eye lashes and eye brows.
- They leave the host if the temperature rises (fever) or falls (death).
- Adults and nymphs are blood suckers.
- **Season: Winter (crowding).**



Morphological characters



Phthirus pubis



Clinical pictures



- Intense irritation and itching of the affected areas (pubic area is common).
- A bluish coloured sore may develop in the involved areas.
- Inflammation of the eye lid (blepharitis) due to infestation of the eye lashes by the crab lice.

Treatment

- Shaving of pubic and axillary hairs.
- Insecticides as 1% **lindane ointment** rubbed against the skin.
- Infestation of eye lashes or eye brows treated either by mechanical removal of *Phthirus pubis* using a blunt forceps or treatment with ophthalmic ointment as **yellow oxide of mercury**.





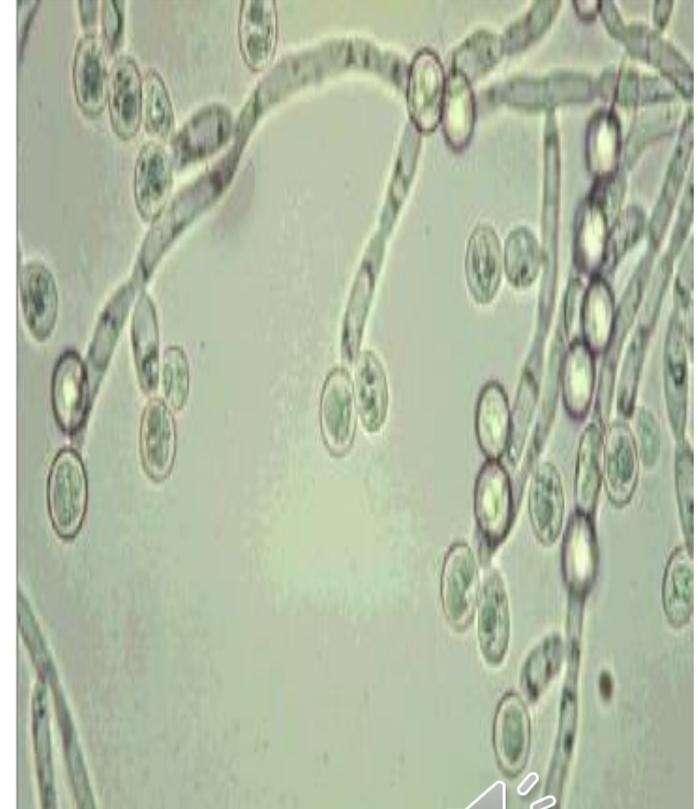
Candidiasis



Urogenital Candidiasis



- ***Candida albicans*** is the most important species of candida.
- ***Candida albicans*** is an oval gram-positive budding yeast that produces pseudohyphae.
- It is one of the **normal flora** of the mucous membranes of the **upper respiratory, GIT & female genital tracts**.
- It predominates with lowering immunity causing the infection, so it is one of **the opportunistic fungi**.



Predisposing factors to *Candida* infections



- 1- Diseases such as AIDS & diabetes mellitus.**
- 2- Drugs: prolonged treatment with broad-spectrum antibiotics & corticosteroids.**
- 3- General debility.**
- 4- Indwelling urinary catheters.**
- 5- Pregnancy**
- 6- Aging**
- 7- Urinary tract obstruction**



Urogenital Candidiasis



**1-Renal
candidiasis**

**2-Bladder
candidiasis**

**3-Vulvovaginal
candidiasis
in female**

**4-Candidal
balanitis
in male**



Renal candidiasis



- Spreads either by ascending route or hematogenous spread.
- Candida may cause an obstructive fungal mass with symptoms as renal colic.

Diagnosis

Ultrasound & Intravenous urography.

Treatment

- Fluconazole (orally).
- Amphotericin B (IV).
- Percutaneous nephrostomy if urinary obstruction occurs.



Bladder candidiasis



Symptoms

Dysuria, frequency of micturation; often confused with a bacterial infection.

Treatment

- Antifungal drugs as Fluconazole (orally) & Amphotericin B (IV)
- If catheter is inserted, it should be removed.

Complications

- Candiduria may persist after treatment due to fungal resistances.
- Prostatitis & orchitis.

Diagnosis

- Urine can be cultured on MacConkey and blood agar, corn meal agar, or Sabouraud dextrose (SD) agar.

Vulvovaginal candidiasis



Symptoms

- Itching, dysuria, dyspareunia & whitish, malodorous thick vaginal discharge.
- Vulvar and vaginal erythema, edema & fissures.

Diagnosis

- Microscopic examination of discharge
- Culture.

Treatment

Locally: Azole.

Orally: Fluconazole or ketoconazole .

Vaginal tablets: Fluconazole or ketoconazole



Candidal balanitis in male



- Inflammation of the glans penis.
- Sexually transmitted.

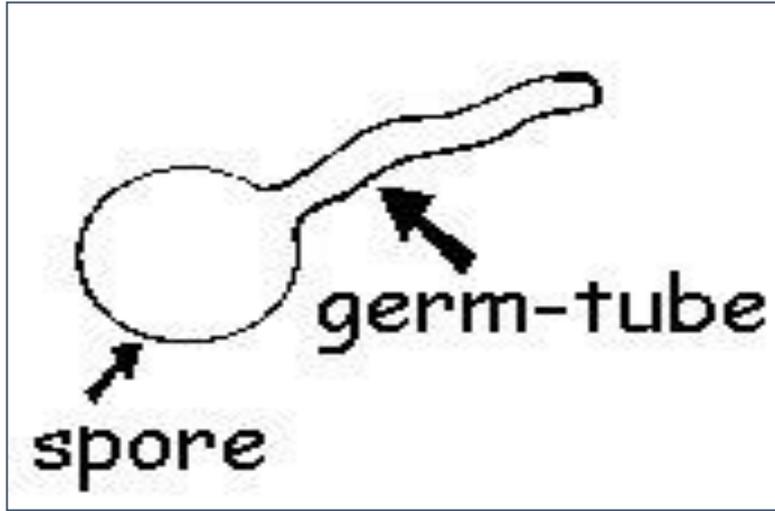
Symptoms

- Itching, swelling, and redness of the glans penis.

Diagnosis

- Diagnosis is based mostly on clinical appearance.
- Confirmed by microscopic examination / or culture.

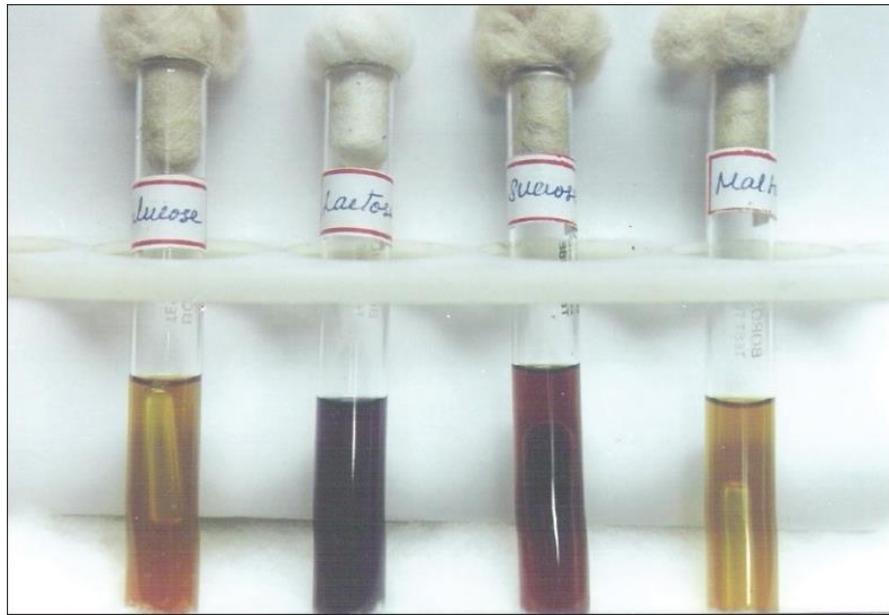




Germ tube test: germ tube is formed when cultured colonies is incubated with human serum at 37 C for 30 min.

Terminal Chlamydospore & pseudohyphae on corn meal agar

**Ferment
??????**



**Biochemical
reaction of
Candida**

