



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.

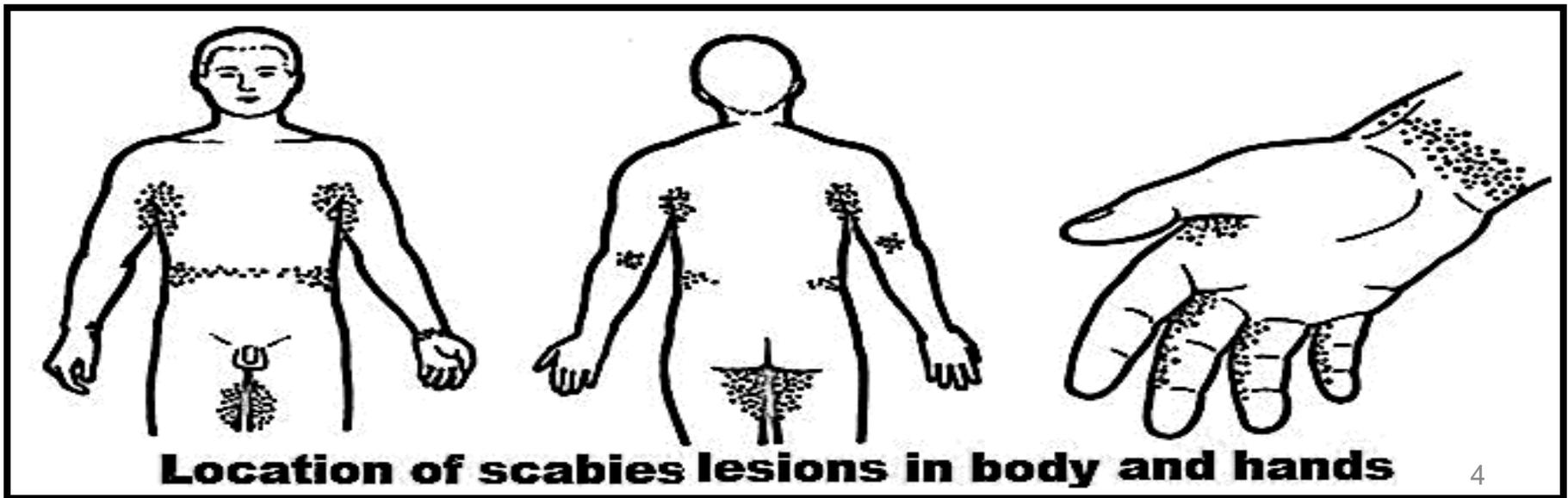
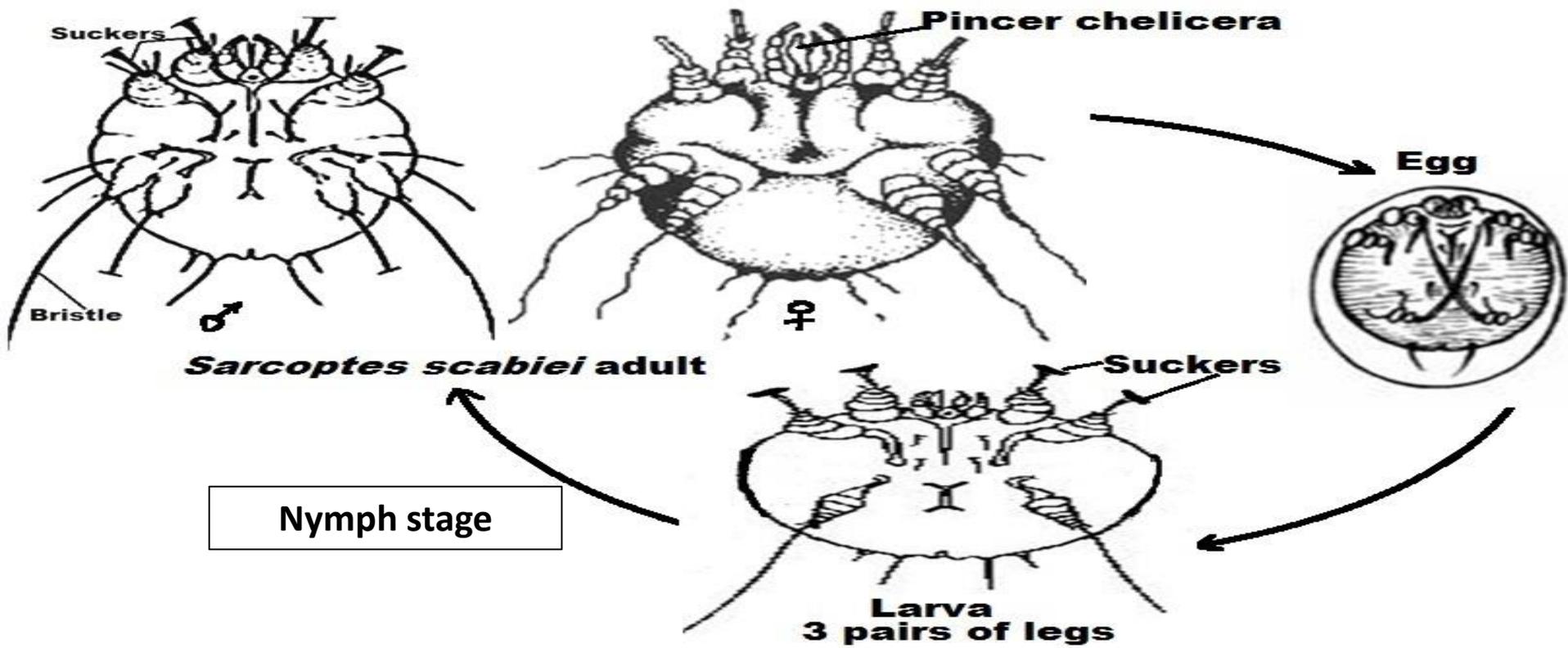
❖ **Mode of infection**

- **Direct skin-to-skin contact.**
- **Contact with patient's clothes & bedding.**
- **Sexual intercourse.**

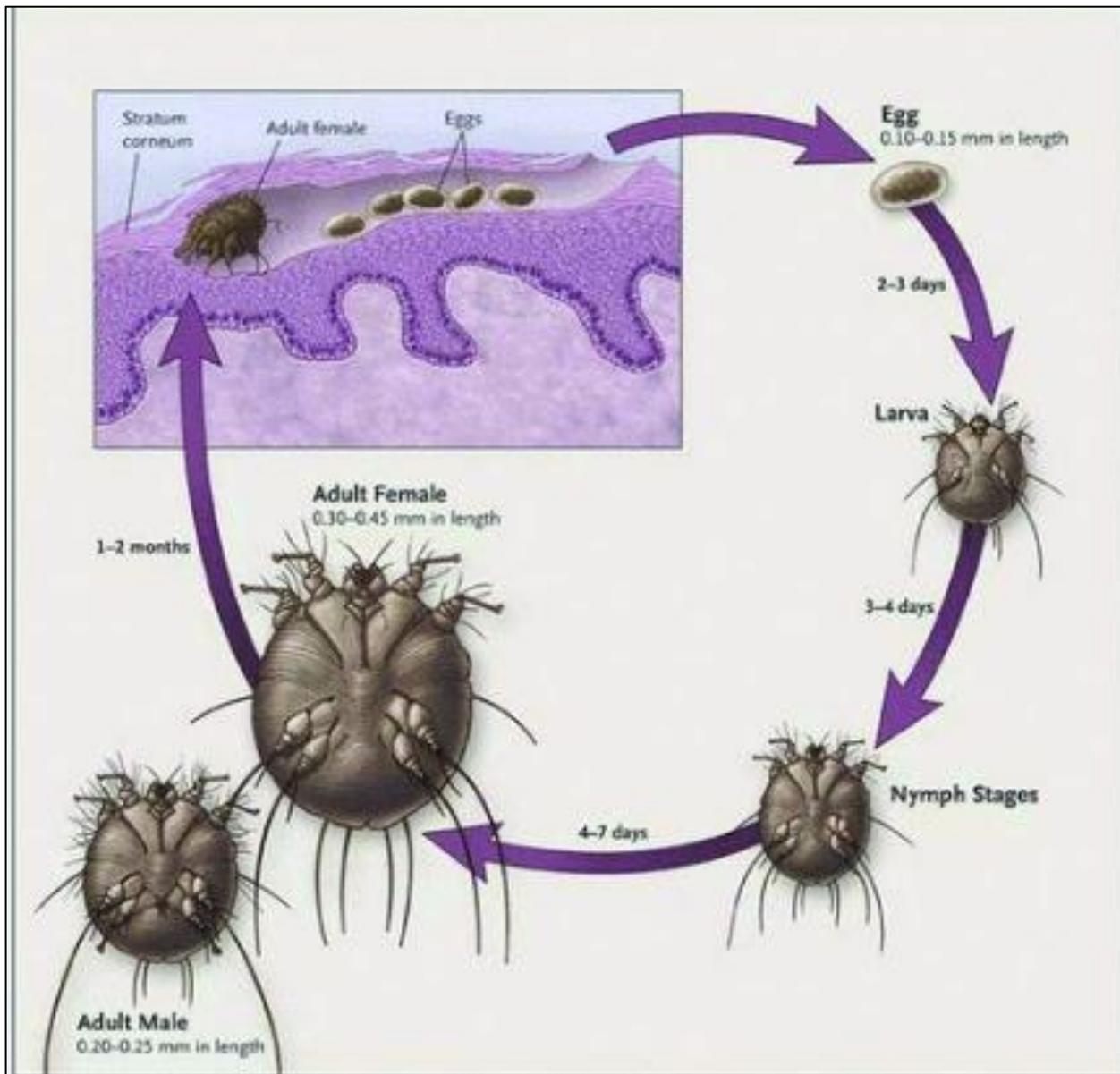


Habits of *Sarcoptes*

- *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.**



Location of scabies lesions in body and hands



Pathogenesis



Disease: Scabies

- ❑ **An allergic reaction** of the host's body to mite proteins (from mite gut or faeces deposited under the skin).
- ❑ The allergic reaction is both of delayed (**cell mediated**) and immediate (**antibody-mediated**) types and involves **IgE**.

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



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

- Opening the tunnel by a needle under magnifying lens to detect the parasite.
- Scraping the base of the tunnel after putting few ink drops and then wiping off with alcohol after 10 min. Boiling the sample in 10 % sodium hydroxide then examining under the microscope.
- Dermoscopy for direct detection of the parasite.



Norwegian scabies



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 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)



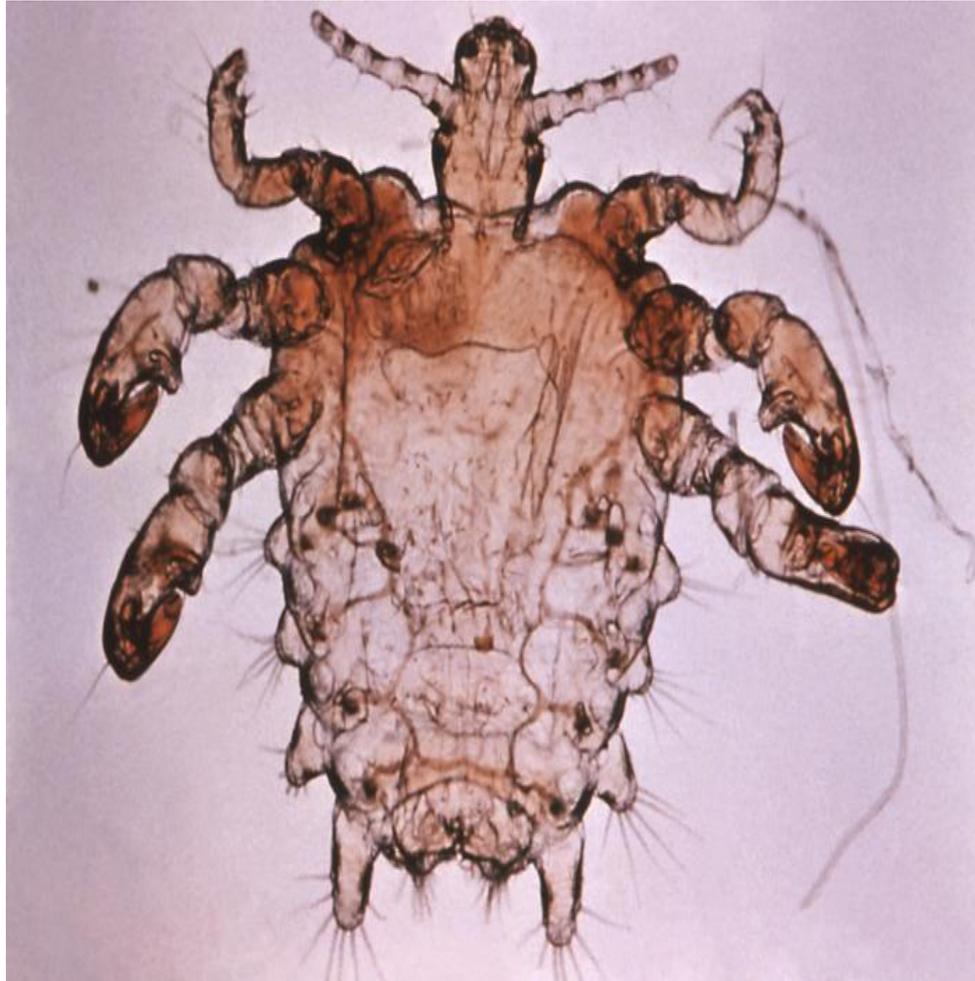
❖ **Geographical distribution:** Cosmopolitan and associated with poor personal hygiene.

❖ **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

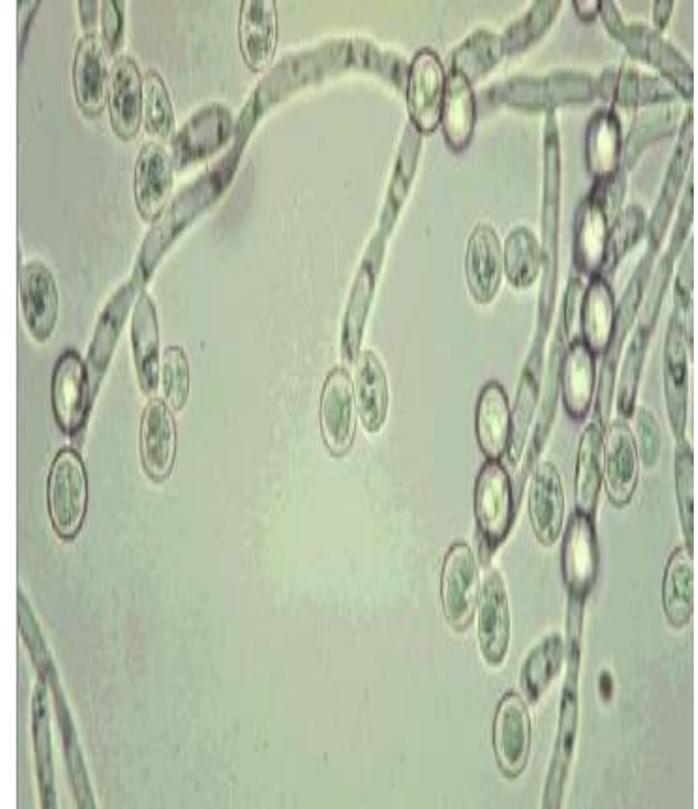
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Urogenital Candidiasis



- *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 a fungus ball or 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 using 10% potassium hydroxide (KOH) preparation.
- Culture.

Treatment

Locally: Azole.

Orally: Fluconazole or ketoconazole .

Vaginal tablets: Fluconazole or ketoconazole

Candidal balanitis in male



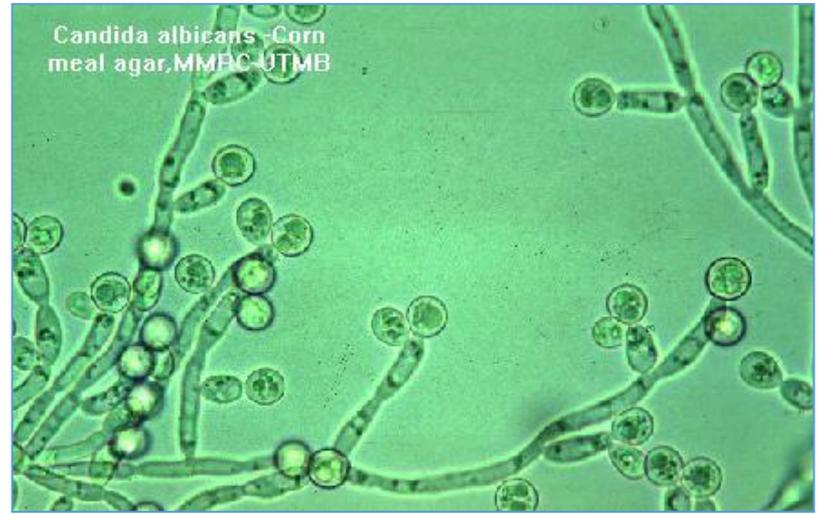
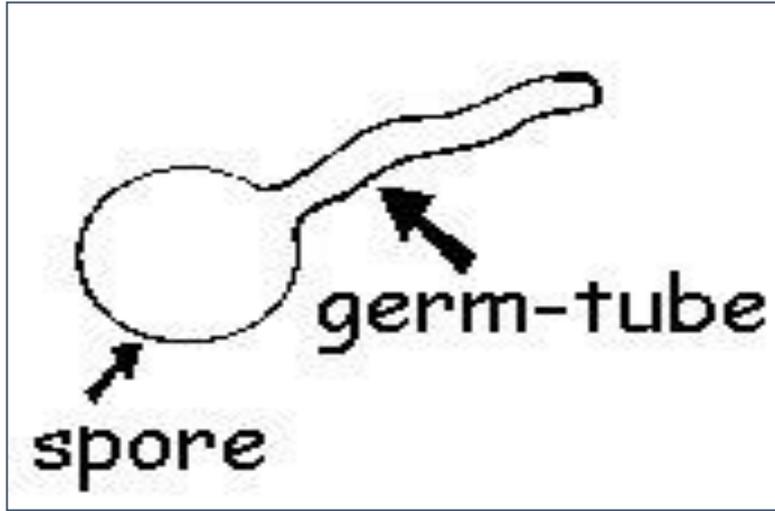
- Inflammation of the glans penis.
- Sexually transmitted.

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***

