Candida Albicans

Candida albicans is a fungus that causes opportunistic oral infections and genital infections in humans. When cultured in standard yeast medium at 20 degrees Celsius, C. albicans grows as yeast cells and can undergo a morphological shift to pseudohyphal growth with mild environmental changes in temperature and pH. At 37 degrees, Candida albicans demonstrates germ tube formation, which is an outgrowth produced by spores during germination. The germ tube differentiates and grows to create hyphae. Evidence of germ tube formation is strongly indicative of Candida albicans. This organism is a normal constituent of oral and gut flora and causes disease when there is overgrowth of the fungus. It can cause esophageal thrush in the immunocompromised and is a very common cause of vaginitis. Infection of the vagina can cause intense, itching, burning, and irritation and a whitish cottage cheese-like discharge. This fungus can also cause diaper rash and has the potential to cause endocarditis, especially in IV drug users.



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Fungi
Fun-guy
Candida albicans is a fungus that causes opportunistic oral and genital infections in humans.

Yeast with Pseudohyphae at 20 Degrees C
Sumo-hyphae at 20 Degrees
When cultured in standard yeast medium at 20 degrees Celsius, C. albicans grows as yeast cells and can undergo a morphological shift to pseudohyphal growth with mild environmental changes in temperature and pH.

Germ Tube Formation at 37 Degrees C
Germinating Tube at 37'C
At 37 degrees, Candida albicans demonstrates germ tube formation, which is an outgrowth produced by spores during germination. The germ tube differentiates and grows to create hyphae. Evidence of germ tube formation is strongly indicative of Candida albicans.

Pruritic Vaginitis
Prairie-dog and Vagina-violet
Infection of the vagina can cause intense itching, burning, and irritation.

White Cottage Cheese Discharge
Cottage Cheese
Infection of the vagina can cause a characteristic whitish cottage cheese-like discharge.

Fiery Red Mucosa
Fiery Flower Pedals
Irritation of the vaginal mucosa often causes a fiery red appearance of the mucosal tissue.

Diabetics
Dyed-beads Pancreas
Diabetes mellitus is characterized by elevated blood sugar levels and can make a patient more susceptible to C. albicans infections as the organisms thrive due to the elevated blood sugar levels and the immune system being partially compromised.

Antibiotic Use
ABX-guy
Prolonged antibiotic use is a risk factor for C. albicans infections as the normal flora is wiped out, allowing C. albicans to overgrow.

Esophageal Thrush in Immunocompromised
Sarcophagus Trash with Band-AIDS
Overgrowth of C. albicans in the esophagus causes esophageal thrush and only occurs in patients in immunocompromised states. Patients typically present with painful swallowing.

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Diaper Rash

Diaper with Rash Examined by Dermatologist

Diaper rash is a rash in the diaper area and can be caused by C. albicans.

Endocarditis in IV Drug Users

Donut-heart-card with IV-drug-use

Endocarditis refers to inflammation of the lining of the heart chambers and heart valves. Although rare, C. albicans can cause infective endocarditis when introduced into the bloodstream. This manifestation can be seen in IV drug abusers.

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