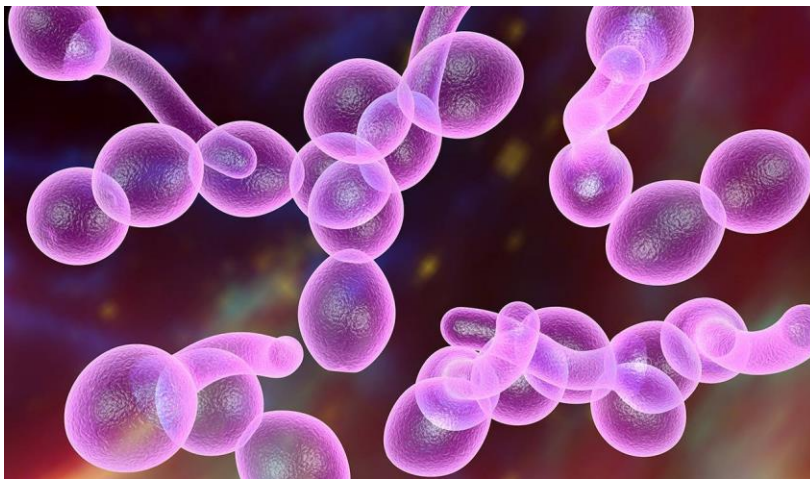


Infection caused by yeasts: 1

Candidiasis: - is a fungal infection caused by yeasts that belong to the genus *Candida*

Species

There are over 20 species of *Candida* yeasts that can cause infection in humans, the most common of which is *Candida albicans*. *Candida* yeasts normally live on the skin and mucous membranes without causing infection; however, overgrowth of these organisms can cause symptoms to develop. Symptoms of candidiasis vary depending on the area of the body that is infected. There is an increasing incidence of infections caused by *C. glabrata* and *C. rugosa*, which could be because they are frequently less susceptible to the currently used azole antifungals. Other medically important *Candida* species include *C. parapsilosis*, *C. tropicalis*, and *C. dubliniensis*



Candida species: general feature: -

- Normal flora
- Yeast like fungi Reproduction by budding
- Culture morphology: white to opaque on SDA
- Only *Candida albican* has germ tube feature.

*** Type candidiasis**

1- Oropharyngeal / Esophageal Candidiasis ("Thrush"):-

Candidiasis that develops in the mouth or throat is called "thrush" or oropharyngeal candidiasis. The most common symptom of oral thrush is white patches or plaques on the tongue and other oral mucous membranes. This infection is uncommon among healthy adults.

Risk of oral Candidiasis:

Candida infections of the mouth and throat are uncommon among adults who are otherwise healthy. Oral thrush occurs most frequently among babies less than one month old, the elderly, and groups of people with weakened immune systems. Other factors associated with oral and esophageal candidiasis include:

- HIV/AIDS
- Cancer treatments
- Organ transplantation
- Diabetes
- Corticosteroid
- Dentures
- Broad-spectrum antibiotic use

Lab. Diagnosis of Oral Candidiasis:

By taking a scraping of the affected areas to examine under a microscope. A culture may also be performed; however, because Candida organisms are normal inhabitants of the human mouth, a positive culture by itself does not make the diagnosis.

2- Genital/vulvovaginal candidiasis (VVC):

Genital/vulvovaginal candidiasis (VVC) is also sometimes called a "yeast infection," and it occurs when there is overgrowth of the normal yeast in the vagina. Candida is always present in and on the body in small amounts. However, when an imbalance occurs, such as when the normal acidity of the vagina changes or when hormonal balance changes, Candida can multiply. When that happens, symptoms of candidiasis may appear.

Symptoms of Genital / Vulvovaginal Candidiasis: -

Women with VVC usually experience genital itching, burning, and sometimes a "cottage cheese-like" vaginal discharge. Men with genital candidiasis may experience an itchy rash on the penis.

Risk of Genital/Vulvovaginal Candidiasis:-

Nearly 75% of all adult women have had at least one "yeast infection" in their lifetime. On rare occasions, men can also get genital candidiasis. VVC occurs more frequently and more severely in people with weakened immune systems. Other conditions that may put a woman at risk for genital candidiasis include:

- Pregnancy
- Diabetes
- Long-term use of broad-spectrum antibiotics
- Use of corticosteroid medications.

Lab. Diagnosis of Genital / Vulvovaginal Candidiasis:-

Usually the diagnosis is made by taking a sample of the vaginal secretions and looking at the sample under a microscope to see if an abnormal number of Candida

organisms are present. A fungal culture may not always be useful because *Candida* species are normal inhabitants of the body.

3- Invasive Candidiasis:

Invasive candidiasis is a fungal infection that can occur when *Candida* yeasts enter the bloodstream. Candidemia (a bloodstream infection with *Candida*), is extremely rare in people without risk factors.

Symptoms of Invasive Candidiasis

The symptoms of invasive candidiasis are not specific. Fever and chills that do not improve after antibiotic therapy are the most common symptoms. If the infection spreads to other organs or parts of the body such as kidneys, liver, bones, muscles, joints, spleen, or eyes, additional symptoms may develop, which vary depending on the site of infection. If the infection does not respond to treatment, the patient's organs may stop working.

Risk of Invasive Candidiasis:

Candidemia (a bloodstream infection with *Candida*), is the fourth most common bloodstream infection among hospitalized patients in the United States. People at high risk for developing candidemia include:

- * Intensive care unit (ICU) patients (ICU)
- * Surgical patients
- * Patients with a central venous catheter
- * People whose immune systems are weakened (such as people with HIV/AIDS)
- * Very low-birth-weight infants

Lab. Diagnosis of Invasive Candidiasis

Invasive candidiasis is primarily diagnosed through blood culture

