

Candidiasis:

Candidiasis is a global disease caused by a yeast-shaped form of *Candida*, the most common of which is white candidiasis *Candida albicans* Which account for 75% of human cases. In the late 1970s, doctors in New York City and San Francisco observed a growing number of patients with unusual symptoms.

There are healthy young men who come to the doctors and have patches or white smudges covering the inside of the mouth. It was puzzling and confusing in how to diagnose cases and how to explain the evolution of the situation among these young people.

All these patients suffer from yeast infections and then known as Candidiasis Oropharyngeal oral *Candida* and called since the castles Thrush. This disease was previously observed only in preterm infants or in newborns with impaired immune immunity.

So it was the beginning of the worst epidemic facing humanity, as it turned out that these young people are all suffering from AIDS during the years of their lives and Thrush (castles) is the first stage to invade the most serious case of fungal infections and that these fungal infections that have eliminated and will eliminate a huge number of these young people.

Sadly, AIDS and *Candida* have shown a high degree of compatibility.

Candida sp:

Candida is a small cell that has a diameter of 4-6 microns, oval-shaped, with a thin wall similar to the wall, which multiplies with sprouts or fission. *Candida* grows quickly in the bloodstream, as well as in avian dishes.

They do not need special requirements to grow, the *Candida* is a white, creamy white colony.

Despite the large preparation of *Candida* species, it is easy to identify them based on the following:

1 - The characteristics of growth and the characteristics provided by the commercial kit, which assesses their ability to represent carbohydrates and fermentation reactions where the species are identified in 2-4 days.

2 - Adoption of the selection of germination tube is a highway to diagnose *C. albicans* but not specialized, and this test is achieved through the development of yeast serum Serum at 37 ° C and chase the emergence of small protruding from the wall of the yeast cell where this tube is noticed after 60 - 90 minutes of cell bosom.

3. The center of Chromo agar is used as a medium for the rapid diagnosis of many common types of Candida species, which uses colored chemicals with alkali to differentiate between species.

The genus Candida contains more than 200 species, a few types of Candida that cause diseases for humans and pathogens and are clinically recognized as:

1- *albicans Candida (albicans Oidium, albicans Monilia)*.

2- *C.glabrata (Torulopsis glabrata)*

3- *C. Parapsilosis*

4- *C. tropicalis*

5- *C.krusei (Pichia kudriavezii)*

6- *C.kefyr (Kluveromyces fragilis)*

7- *C. guilliermondii (Pichia guilliermondii)*

8- *C.lusitaniae, C.stellatoidea, ,C.dubliniesis* (A type that has recently been isolated from AIDS patients).

Candida SPP. Pathogenicity:

1 - the ability and ability of Candida to adapt to changes in the environment to enable them to survive in the environment of the family.

2. Albicans suffer from appearance changes between the pseudo-innate innate yarn and the appearance of the innate yarn.

3. Candida is a pair of double mutants that control the appearance of the yeast and the ability of the yeast to open one shape or change it to the other to directly affect its ability to cause the disease. Antivirals and drugs that inhibit the transition from yeast to fungal yarn without effective antifungal activity have a role in curbing the disease. At least 15 genes have been identified to play a role in morphogenesis.

4. The first step in yeast infection is the colonization of epithelial tissues based on the ability of yeast adhesion with surface proteins of epithelial cells. Phospholipase is the secretion of lipids and proteins that facilitate the invasion of tissues.

The most common clinical cases of Candida:

1- candidiasis Oropharyngel (OPC):

Oral thrush has been diagnosed and documented since the 19th century. The causative agent was not discovered until 1839 but the causative factor was confirmed in 1846 by the relationship between fungi and ulcers present in the mouth. Until 1933 when Berkhout (1923) named the name Candida and separated this sex from the genus Monilia which affects fruits and vegetables.

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2- candidiasis Esophageal (EC):

Candida reaches the esophagus through oral secretions, and EC is an indication of AIDS or immunosuppression. A major symptom of EC is the difficulty of swallowing, fever and stomach aches. EC can be diagnosed by a procedure chosen from the esophagus Biopsy biopsy to see how far the yeast invasion of pharynx tissue.

3- Gastric candidiasis:

Candida is a natural co-existence in the stomach and usually, the gastric membrane is resistant to Candida because the acidity of the stomach plays a role in the infection of the

wall of the stomach or not in the yeast and gastric ulcers, but also in cases of immune deficiency can infect the stomach, *Candida*.

4- candidiasis Cutaneous:

Candida yeast can attack and invade any part of the human skin and superficial injury occurs in the skin, hair, and nails. Dry skin is usually a preventative or preventative agent against the invasion of yeasts and fungi. While wet skin and moist skin work to reduce the resistance of the body against this invasion. *C. albicans* and *C. tropicalis* are among the common causes of superficial skin lesions of both skin and nails.

5- Candidiasis Vulvovaginal (VVC):

Vaginal candidiasis is the second most common type of vaginal disease in the United States. During pregnancy, 75% of women were at least once exposed to vaginal candidiasis (VVC). And 40% -50% have been attacked again with yeast. Candidiasis is the most common disease of *Candida* and vaginal bleach, or so-called vaginal yeast infections get up to more than 90% of all cases of *Candida*.

6- Ocular Candidiasis:

Candida yeast enters the eye in two ways: the direct route where *Candida* reaches the eye by surgery, or the eye is injured or the indirect way where the eye reaches through the blood components. The symptoms of candida are blurred, cloudy or cloudy eyes, scotomata, and blindness. And the appearance of balls resembling cotton balls and most of the causes of eye bleaches are *C. albicans*.

7- Candidemia:

Although most opportunistic fungi attack the body through entering the lungs, *Candida albicans* enters the body through the digestive system and enters the bloodstream and causes injury to the organs. This condition is known as Candidemia.

Systemic blood clots were divided into four groups or four phenomena:

- a. Candidiasis associated with the catheter.
- b. Candidiasis disseminated Acute.
- c. Candidiasis Chronic disseminated or Candidiasis Hepatoseptic .

d. organ Candidiasis Deep.

One of the most dangerous factors affecting leukemia is the use of systemic antibiotic agents, chemical substances, corticosteroids, modern surgeries, malignancy, and paraplegics.

8- Cardiac and endovascular candidiasis:

Myocardial infarction occurs in the blood vessels of the blood vessels. This infection occurs in 62% of 50 patients. Candida also occurs after surgery in the heart. There are many factors that help in obtaining heart valve surgery and the mortality rates of candida heart are very high.

9- Chronic systemic candidiasis (CSC):

Liver Candida and spleen are one of the chronic forms of candidiasis. Candida reaches these organs and is caused by gastrointestinal infection. The symptoms associated with infection are antibiotic resistance, fever, abdominal pain and vomiting. This infection causes *C. albicans*, *C. tropicalis*, *Trichosporon*, *Fusarium* and some types of *Aspergillus*.

10- Neonatal candidiasis :

This type of Candida is observed in infants with low weights with systemic Candida and may have been preterm. They originate from the spread of Candida through the blood and are concentrated such infections in the lungs, skin, and CNS.

11- Nervous system candidiasis :

Candida outbreaks that cause fungal infections of the cerebrosphere occur. In both brain tissue and brain membranes (meninges), yeast types are caused by *C. tropicalis* and *C. albicans*.

12- Pulmonary candidiasis :

Types of Candida are frequent in the bronchodilator and are likely to have a role in pulmonary diseases. Despite the role of Candida in many cases of the disease, but it is rare cases, and that such Candida is caused by candida blood cases and may be associated with these infections Pneumonia and pulmonary allergies.

13- Urinary tract candidiasis :

Urinary tract bleaches are rare and represent 15 out of 1500 patients. Diabetes is a contagious factor. Candida is a contaminant in the urine.

14- Peritonitis candidiasis :

Candida infections increase in the abdomen and are associated with high rates of mortality. Infections of the abdomen may be caused by a single microbe or produced by multiple microbes. Candida is acquired after open surgery.

15- Biliary Candidiasis :

Candida yeast infections are not common, Candida yeast causes cholecystitis and bronchitis Cholangitis. The risk factors for this disease are diabetes, immune blockages, and abdominal malignancies.

16- Osteomyelitis arthritis candidiasis :

Although the injury was rare, it has become more common because of increased bone marrow growth in children and parts of the skeleton in adults. Inflammation may occur weeks or months after Candida.

17- Burns candidiasis :

The fungal infections are the most serious risk of burns and the risk factors associated with this infection are the use of broad-spectrum anti-bacterial drugs and the use of catheter and exposure to the surface of burns to the outer environment infected with fungus.

Treatment of candidiasis:

Most cases of Candida are treated with effective systemic anti-yeast medications such as AmB, Ketoconazole, Itraconazole, Fluconazole, Voriconazole, Caspofungin, and Flucytosine. The choice or choice of the fungal antibody depends on the type and clinical condition of the yeast. The selection of the fungal antibody is subject to the degree of toxicity and to the patient's condition and the available information about the microorganisms located or targeted.