

Type: Assignments

Subject: Pathophysiology

Subject area: All Subjects

Education Level: Undergraduate/College

Length: 4 pages

Referencing style: APA

Preferred English: English

Spacing Option: Double

Title: Fungal Disease

Instructions: please follow the instruction correctly i will attach the rubric for grading as well. the paper should be 3-5 pages double spaced and in apa format (in-text citations and ref). an abstract is not required. the topic is fungal disease note: you should use a specific disease for your topic. for example, "cancer" is too broad. however, "breast cancer" would be appropriate. please email me if you have any questions regarding this assignment. \*\*use the following section titles to format your paper: introduction, epidemiology, clinical presentation, pathophysiology and treatment. there must be a minimum of three references, two of which must be peer reviewed (journal articles). websites/org home pages are not peer reviewed. references must be in apa format (see examples under course doc). do not just copy and paste the url pathophysiology should be addressed thoroughly criteria grading ratings pts this criterion is linked to a learning outcome content & development clarity of purpose critical and original thought use of examples. main points well developed synthesis of ideas 40 pts full marks 0 pts no marks 40 pts this criterion is linked to a learning outcome organization & reasoning high degree of attention to logic and reasoning of points leads the reader to conclusion easily followed paper is logically organized effective, smooth transitions writing is coherent 40 pts full marks 0 pts no marks 40 pts this criterion is linked to a learning outcome grammar, punctuation and spelling paper is free of distracting spelling and grammatical errors free of fragmented statements college level style ideas followed easily 10 pts full marks 0 pts no marks 10 pts this criterion is linked to a learning outcome references/apa format meets assignment requirements attention to detail essay is correctly assembled apa format for in-text citations apa format for bibliography 10 pts full marks 0 pts no marks 10 pts total points 100

Fungal Disease: Vaginal Candidiasis

Student's Name

Institutional Affiliation

Fungal Disease: Vaginal Candidiasis

Women as well as men suffer from different types of fungal infections. Candidiasis is among the most prevalent fungal diseases among the females. The disease is caused by a type of fungus referred to as Candida. Under normal circumstances, Candida lives in the body in places such as vagina, mouth, gut, or throat without causing any infections. Nonetheless, Candida could sometimes multiply due changes in the vaginal environment, thus causing infections. Therefore,

this is an epidemiology, clinical presentation, pathophysiology, and treatment of vaginal candidiasis.

### **Epidemiology**

Vaginal candidiasis is a common fungal infection among the women. It is estimated that the condition causes around a third of the total diseases of vulvovaginitis, especially among those who have attained reproductive ages (Abdul-Aziz et al., 2019). About 70 percent of females are reported to have suffered from vaginal candidiasis at some point in their life-times (Mbim et al., 2017). It is also estimated that around 8 percent among the infected women suffer recurrent infections of vaginal candidiasis. Besides, about 90 percent of the vaginal candidiasis are caused by *C. albicans* pathogen while the remaining 10 percent of the vaginal candidiasis is estimated to be caused by *Candida glabrata*. Nevertheless, there is a scarcity of epidemiological data regarding vaginal candidiasis since most people use over-the-counter drugs if they suspect to test positive for the disease. It could be as a result of stigmatization in society.

Some factors increase the risk of suffering from vaginal candidiasis. They include the elevated endogenous estrogens due to pregnancies or obesity. An increased use of broad-spectrum antibiotics could heighten the chances of suffering from candidal vulvovaginitis. Besides, individuals with immunosuppression due to organ transplant, chemotherapy, or HIV infections are at greater risks of contracting vaginal candidiasis. It is also hypothesized that sexually active women could easily contract the disease as compared to those who are not sexually active.

### **Clinical Presentation**

The clinical presentation of vaginal candidiasis is clinically suggested through the presence of vulvar pruritus and external dysuria, redness, pain, and swelling. However, more

specific signs would include thick curdy discharge, vulvar edema, excoriations, as well as fissures. The likely diagnosis that also could be made in a female includes the use of wet preparations that enhances the visualization of mycelia and yeast by disordering cellular material that could obscure the pseudohyphae or yeast. Women who exhibit the signs and symptoms of vaginal candidiasis should be tested for wet mount with KOH. Those who test positive are supposed to be treated while those who test negative are supposed to be considered, not necessarily put under long-term treatment.

### **Pathophysiology**

Vaginal candidiasis happens when candida species enter the mucosal lining superficially triggering inflammation as a defensive mechanism by the vagina. The main inflammatory cells are macrophages and polymorphonuclear (Roselletti, Perito, Sabbatini, Monari, & Vecchiarelli, 2019). Consequently, inflammation leads to vaginal itching or swelling, adherent and thick discharge, or vaginal burning. Specifically, there are different virulence that are associated with vaginal candidiasis that trigger various defensive mechanism against the yeast. There is both innate and adaptive mechanism.

### **Adaptive Mechanism**

In this mechanism, immunoglobulin mediated immunity is activated. Systemic IgA, IgM, and IgG antibodies are released to respond to the infections by candida. The interleukin 4 (Th2) promotes cell mediated immunity through the inhibition of anti-Candida activity.

### **Innate Mechanism**

The vaginal epithelial cells defend the vagina against Candida infections through the in vitro inhibition that protects against the growth of Candida. Mannose-binding lectin also helps in

protecting against vaginal candidiasis through the inhibition of *Candida* growth. The vaginal bacterial flora also helps in the production of bacteriocins that hinder the growth of the yeast.

### **Treatment**

The treatment of fungal infections like vaginal candidiasis depends on the severity of the disease and frequency of infections. For those patients with mild to moderate infections, it could be recommended to use the following treatments.

#### **Short-Course Vaginal Therapy**

In this case, a caregiver could prescribe that the patient takes antifungal infections for three days if the infection is moderate and up to seven days if the infections are moderate. Some of the antifungal drugs available for short-course vaginal therapy are suppositories, tablets, creams, and ointments. They include terconazole and miconazole (Calvo, Svetaz, Alvarez, Quiroga, Lamas, & Leonardi, 2019). The patient could acquire the drugs through over-the-counter medications or through prescriptions only.

#### **Single-Dose Oral Medication**

Both the mild and moderate infections could be treated using Diflucan (fluconazole). Diflucan is a single oral dose but not recommendable for pregnant patients (Shabanian, Khalili, Lorigooini, Malekpour, & Heidari-Soureshjani, 2017). If the disease is more severe, it could be recommended that they take two-single doses for about three days. Nevertheless, it is advisable that the patients return to the doctor if their signs and symptoms do not heal or reoccur with a period of two months.

If vaginal candidiasis is severe or a patient has multiple infections, then three different treatment options could be used. They include the long-course vaginal therapy, multidose oral medication, or azole resistant therapy.

**Long-Course Vaginal Therapy**

In the long-course vaginal therapy, it is recommended that you prescribe the patient, firstly, with antifungal drugs for around two weeks. Then, it should be followed by weekly doses for around six months. That is, take one dose per week for another six months.

**Multidose Oral Medication**

In the multiple oral medication, a doctor should prescribe antifungal medications that are administered through the mouth as opposed to vaginal therapy. The doses are either two or three. Nonetheless, the therapy is considered unfit for pregnant patients.

**Azole Resistant Therapy**

Azole resistant therapy is also an appropriate treatment option if the infections are severe. In this case, the doctor administers boric acid through a capsule that is inserted into the vagina. However, the therapy could be fatal especially when taken orally. Therefore, the treatment should only be administered in extreme cases of vaginal candidiasis. That is, it is only used for the treatment of candida fungus that has proved to be resistant to the common antifungal medications.

**Alternative Medicine**

Currently, therapies using alternative medicines have not been clinically approved to treat vaginal infections. Nonetheless, some alternative and complementary therapies could be used to offer temporary relief for the disease if combined with close doctor's attention. Therefore, patients need to discuss with their doctors about the available alternative treatment options before choosing the safest alternative medicine to manage their conditions.

To sum up, vaginal candidiasis is among the leading fungal diseases in women. It is caused by a yeast called Candida. It is estimated that about 70 percent of sexually active women

suffer from the disease at some point in their lives. However, the risk factors for the disease include immunosuppression, increased intakes of broad-spectrum antibiotics, as well as the level of sexual activeness of women. The treatment options for the disease depends on the severity and frequency of the disease.

#### References

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