

Vaginitis

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دعاء قبل المذاكرة

اللهم إني أسألك فهم النبيين و حفظ المرسلين و الملائكة)
اللهم اجعل ألسنتنا عامرة بذكرك و قلوبنا بخشيتك ,المقربين
(إنك على كل شيء قدير و حسبنا الله و نعم الوكيل

Terminology and pathogenesis

- **Vulvovaginitis, vulvitis, and vaginitis :**

Are general terms that refer to the inflammation of the vagina and/or vulva .

- **Normal flora and Lactobacilli ¹**

- **Changes in the vaginal acidity or disturb the normal bacteria in the vagina may predispose to an infection.**

Characteristics of the Vagina and Cervix in Women of Reproductive Age :

	Vagina	Cervix
PH	Less than 4.5	7
Epithelial cells	Squamous	columnar
Pathogen/syndrome	Bacterial vaginosis Candida species Trichomonas Vaginalis	Neisseria Gonorrhoeae Chlamydia Trachomatis

Characteristic of normal vaginal secretion:

- Oderless
- No itching or irritation

1: Lactobacillus is one of the normal microorganisms found in the vagina, along with yeast. An imbalance in the vagina can result in overgrowth of this microorganism

VAGINOSIS/VAGINITIS

- **History:**

- General gynecological history
- Menstrual history
- Pregnancy
- Sexual Hx
- Contraception
- Sexual relationship
- Prior infection
- - General medical Hx (Allergies
DM Malignancies
Immunodeficiency)
- Medication OCP<steroids, duches
- Symptoms.

- **Most common reason for patient visit to OB/GYN.**

- Three primary infections in order of prevalence:

1- Bacterial vaginosis.

2- Candidiasis.

3- Trichomoniasis.

Causes of vulvovaginitis

Low estrogen levels (called "atrophic vaginitis")¹

Fungal:
Candida vulvovaginitis (25%)

Parasitic :
trichomonal vulvovaginitis (25%)

Allergic or irritation or injury response from spermicidal products², condoms, soaps, and bubble bath called "contact vulvovaginitis".

Bacterial : most common
Bacterial vaginosis (40%)

1:the thinning of the walls of the vagina caused by decreased estrogen levels.
Spermicide is a contraceptive substance that destroys sperm2:

Bacterial vaginosis

- Most common of vaginal syndrome

- A change in the balance of normal vaginal bacteria.
- Very high numbers of bacteria such as:
Gardnerella vaginalis, Mycoplasma hominis, Bacteroides species, and Mobiluncus species.
- In contrast, **Lactobacillus bacteria** are in very low numbers or completely absent.



lactobacilli produce hydrogen peroxide and lactic acid. These substances lower the vaginal pH. If the number of lactobacilli falls off, the resulting increase in pH favors an overgrowth of anaerobic and facultative bacteria, which can develop into vaginitis.

Clinical Features:

- Itching and burning.
- **Fishy-smelling** (specially after sexual intercourse and menses) thin, milky-white or gray vaginal discharge.

Clinical presentation of BV

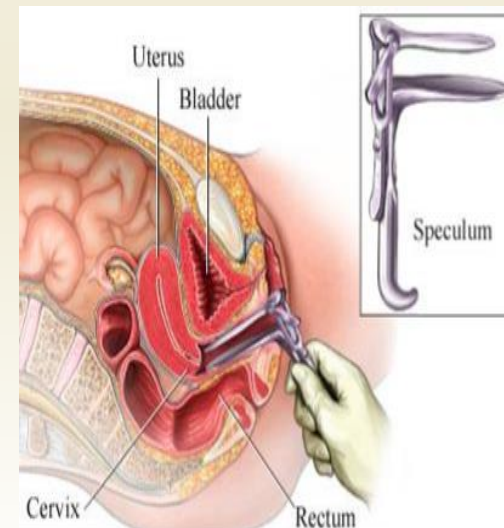


Bacterial Vaginosis sequelae (consequences)

GYN complication	OB complication
Pelvic inflammatory disease (PID)	Preterm delivery
Postbortal pelvic inflammatory disease	Premature rupture of membranes
Post-hystrectomy infections	Amniotic fluid infection
Mucopurulent cervicitis	Chorioamnionitis
Endometritis	Postpartum endometritis
Increased risk of HIV/STD	Premature labor
	Low birth weight

Diagnosis

- Related symptoms and sexual history.
- Examination of introitus¹ may reveal erythema of the vulva and edema of the labia.
- Speculum examination.
- A sample of the vaginal swab.



1: vaginal **introitus** is the opening that leads to the vaginal canal

Office Diagnostics for vaginitis:

- Empiric diagnoses often inaccurate and lead to incorrect treatment and management.
- Need for rapid, accurate and inexpensive diagnostic tests.

Office based tests for vaginitis:

- Simple, inexpensive, office based tests were underutilized.
1- microscopy. 2- PH measurement. 3- whiff amine test.

Gram stain diagnosis:

- Predominance of lactobacillus = normal.
- Mixed small gram positive and gram negative rods +/- curved rods = BV.

Clinical diagnosis of BV:

- Clinical diagnosis **3 out of 4 of these criteria.**

- 1- PH greater than 4.5.
- 2- positive whiff test.
- 3- Any **clue cells.**
- 4- Homogenous discharge.



Wet mount preparation:

- Vaginal secretion sample from the anterior fornix and lateral wall.
- Place swab in test tube with small amount of normal saline and place sample on glass slide with cover slip.
- Visualise at both low and high power.
- Clue cell, yeast, trichomonas, WBC, and bacteria.

PH test:

- PH indicator strips: PH 3.5 to 7.
- Place sample of vaginal secretion on test strip: read while still moist.
- PH > 4.5 indicates abnormality (i.e. BV- trichomonas or menstrual blood).
- Be careful not to sample the cervix; cervical secretions and blood have a PH of 7.

KOH "Whiff" test:

- Sample of vaginal secretions are placed in a test tube with 10% KOH.
- KOH alkalizes amines produced by anaerobic bacteria results in a sharp (fishy odor).

Candidiasis

- Candida is a normal flora in the vagina and candidiasis result from its overgrowth
- **Causative agents:** Candida Albicans and Candida Glabrata
- **Risk factors:**
 - 1- diabetes
 - 2- pregnancy
 - 3- antibiotics
 - 4- immunocompromised.

Clinical presentation and diagnosis

Clinical presentation:

- irritation and pruritis
- Painful sexual intercourse and urination
- Thick white cottage cheese like vaginal discharge
- Odourless vaginal discharge

Diagnosis:

- wet preparations to see **pseudohyphae** and budding yeast in C.albicans
- budding yeast without pseudohyphae in C.glabrata
- culture is done when the infection is recurrent

Treated by Flucanazole and Itraconazole •



Trichomoniasis

- * Trichomonas is the **most prevalent non-viral sexually transmitted disease (STD)**
- * **Complications:** premature rupture of membranes, preterm labor, low birth weight, and increase the of transmission of other STDs

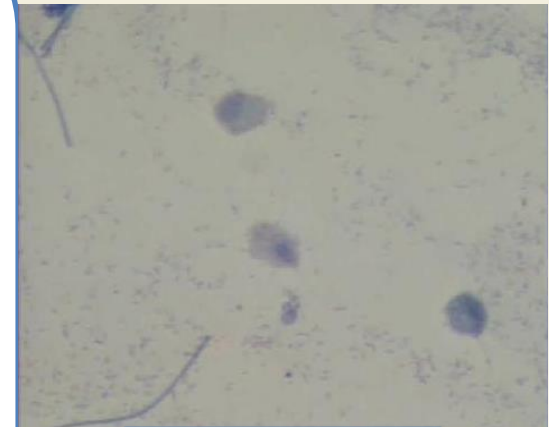
Clinical presentation and diagnosis

Clinical features:

Pruritus, painful urination and sexual intercourse
Yellow-green, frothy, malodorous smelling vaginal discharge
Asymptomatic in males

Diagnosis:

- Wet preparations-papsmear to visualize the flagella
 - Culture is the gold standard but it is expensive and takes time
 - Other methods include ELISA and DNA probe
- Treatment metronidazole



Trichomonas
Pap smear

MCQs:

1- what is the PH indicator strips:

A- 3.5 to 4.5.

B- 5 to 6.

C- 3.5 to 7.

D- 5.5 to 7.

2- which organism cause yellow-green, frothy, malodorous vaginal discharge

A- Lactobacilli

B- C.albicans

C- Trichomonas

D- Gardnerella vaginalis

3- a woman came to ER with painful urination and sexual intercourse and she found to have normal flora, what is the test that is used:

A- wet preparation

B- gold standard culture

C- ELISA

D- other

SAQs:

Q- What is the most common of vaginal syndrom?

Ans: Bacterial Vaginosis

Q- mention the clinical diagnosis of BV?

Ans?

1- PH greater than 4.5.

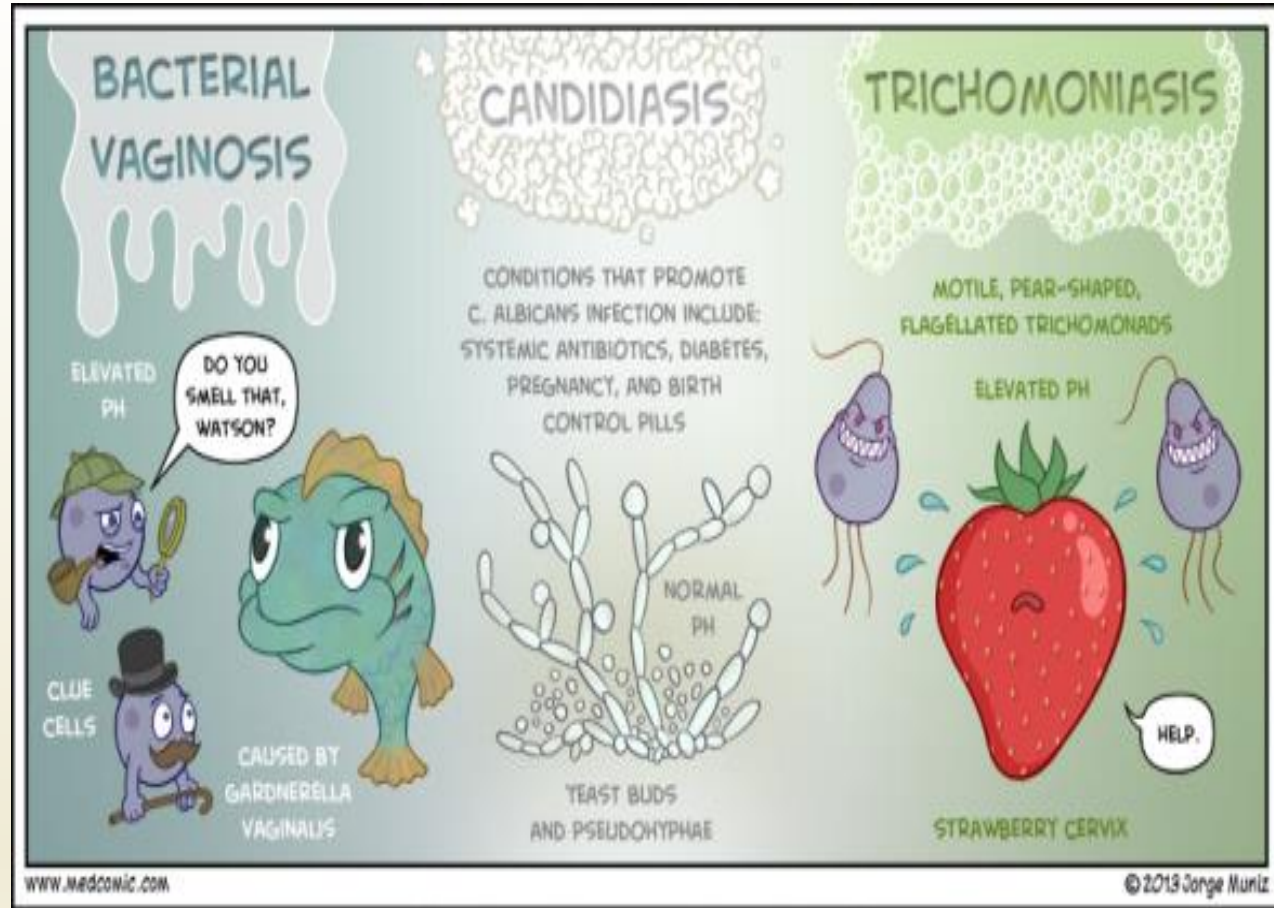
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دعاء بعد المذاكرة

اللهم إني استودعتك ما قرأت وما حفظت وما تعلمت فرده لي (عند حاجتي إليه إنك على كل شيء قدير وحسبنا الله و نعم الوكيل)