Vaginal discharge

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Outcomes:

Know the Defensive mechanism in vagina
Normal vaginal discharge and vaginal discharge in concerns
Know the Non STD infective causes of vaginal discharge
Clinical approach
Vaginal defensive mechanism
- In adult female vagina is lined by stratified squamous epithelium
- Squamous epithelium is resistant to gonococcal infection
- Local vagina bacteria (lactobacilli) break down the glycogen present in vaginal epithelium into lactic acid
- Ph of vagina acidity <4.5 (barrier of external organisms)
- Cone vaginal shape
Vaginal discharge
Vaginal discharge is common to all women and it helps vaginas stay healthy by regularly flushing them out and maintaining their pH.

- It acts as a lubricant for sexual intercourse and as a protective shield to keep infections away (because it’s acidic).
  - Normally it’s white becoming yellowish on contact with air

A normal vaginal discharge consists of about a teaspoon (4 ml) per day that is white or transparent, thick to thin, odorless, and it’s a mixture of:
  - Desquamated epithelial cells
  - Mucus from the cervical glands (90% water)
  - Bacteria (lactobacilli + some anaerobic species)
  - Transudate from the vaginal wall

- It’s also composed of proteins, polysaccharides, amino acids, enzymes and IgS.
- It’s not uncommon for the normal discharge to be dark, brown or discolored a day or two following the menstrual period.
Normal vaginal secretions are
- floccular in consistency,
- white in color
- Mild odor / odorless
- Volume (can vary from little to quite a lot) *(when increased?)*
- usually located in the dependent portion of the vagina (posterior fornix).
Vaginal discharge in concerns

- Yellow or greenish discharge, or discharge that suddenly changes color
- Strong, foul, sometimes "fishy" odor, or a sudden change in odor
- Sudden changes in volume, particularly if other symptoms are present
Vaginal discharge might be a sign of an infection if it causes:

- 1. itching
- 2. Swelling
- 3. Bad odor
- 4. Changes in color like: green, yellow or gray
- 5. Looks foamy or like cottage cheese
Infective causes of vaginal discharge/Non-STD
Bacterial vaginosis

- **The commonest cause of abnormal vaginal discharge**
  - A definitive cause is not determined, depletion of the lactobacilli dominant in the healthy vaginal flora is observed, together with an elevation of vaginal pH to above 4.5.
  - The existence of a vaginal epithelial biofilm consisting of *Gardnerella vaginalis* (overgrowth) and other species has been more recently described.

- **Other risk factors include**
  - Douching
  - Black race,
  - Smoking
  - Having a new sexual partner and receiving oral sex.

It is frequently seen in postmenopausal because of low levels of estrogen.
Symptoms include:
- an offensive vaginal discharge that is often reported as having a ‘fishy’ malodour,
- and on examination a homogenous off-white vaginal discharge with a high pH is observed.

Diagnosis is:
- made by evaluating a Gram stain of the vaginal discharge using a validated method, such as the Hay-Ison or Nugent criteria, or, less frequently in modern practice, by using Amsels criteria.
Amsel’s criteria

- Gray, homogeneous discharge adherent to walls
- pH > 4.5
- Fishy odor with 10% KOH (+ve whiff test)
- Clue cells on wet preparation

- At least three of these criteria must be present to confirm the diagnosis
• Homogeneous discharge adhering to vaginal walls.

• Discharge in cervix
BV is associated with a number of pathologies including pelvic inflammatory disease (PID), posthysterectomy vaginal cuff cellulitis and, in pregnancy, preterm birth and rupture of membranes and miscarriage.
Management

- metronidazole or clindamycin /symptomatic / oral, intravaginal

- Oral Metronidazole administration : 500 mg twice daily for 7 days
- • NO TREATMENT OF SEXUAL PARTNER IS NEEDED
Vulvovaginal candidiasis
Candida is the second most common cause of vaginitis. This condition occurs when yeast of the Candida species, most frequently C. albicans, cause vulval and vaginal inflammation. The vagina is colonized with Candida sp. in up to 20% of women in their reproductive years, rising to 40% in pregnancy, and is most often asymptomatic.

When symptoms occur they include itching, irritation and a typically white, curdy vaginal discharge.

On examination, signs of inflammation, including erythema, oedema and fissuring of the vulva and vagina, together with the discharge may be observed. Symptoms may be more frequent and persistent when the woman is diabetic, immunocompromised or in pregnancy.
Vulvovaginal Candidiasis

**Risk factors**
- Diabetes
- HIV
- Recent antibiotic use
- Pregnancy

**Clinical**
- Pruritus
- Dysuria
- Dyspareunia

**Discharge**
- White, cottage cheese-like
- pH < 4.5
- KOH odor neg
- Pseudohyphae, spores

Pseudohyphae
- The diagnosis is made by taking a **bacterial swab for microscopy and culture** and treatment with topical intravaginal pessaries or oral imidazoles are effective.
- Topical vulval antifungals and the use of aqueous cream as an emollient and cleansing agent provide symptomatic relief.
- **This is not an STI and partners without symptoms do not require treatment**
Clinical approach
Clinical approach

- History
- Source of discharge / perennial discharge (vagina, cervix, urinary tract and rectum)
- Discharge (amount / consistency / colour / duration / odour)
- Associated symptoms (itching / burning / external dysuria / pain during intercourse)
Obtain history of the following:

- Prior similar episodes
- Sexually transmitted infection
- Sexual activities
- Douching practice
- Antibiotic use
- General medical history
- Systemic symptoms such as lower abdominal pain, fever, chills, nausea, and vomiting.
Causes of vaginal discharge

Non infective

1. Physiological
   - Menstrual cycle
   - Pregnancy
   - Sexual excitement
   - Emotional stress
   - Nutritional status
   - Medications

2. Cervical polyps

3. Foreign bodies (Retained tampon)

4. Valvular dermatitis

5. Genital tract malignancy

Infective causes

A. Non-sexually transmitted infections
   - Bacterial vaginosis
   - Candida vaginitis

b. Sexually transmitted infections
   - Chlamydia trachomatis
   - Neisseria gonorrhoeae
   - Trichomonas vaginitis
   - Syphilis
   - HSV
   - HPV
   - HIV
Examination:
1. Inspection (external and internal)
2. Vaginal PH
3. Microscopic examination
Diagnostic Tools:

- PH: Nitrazine paper
- Normal saline preparation: microscopic examination of discharge (clue cells of BV)
- Whiff test: Fishy odor of BV
- Culture
# Identifying causes of vaginal discharge

The color, consistency, amount, and odor of your patient’s vaginal discharge provide important clues about the underlying disorder. For quick reference, use this chart to match common characteristics of vaginal discharge and their possible causes.

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>POSSIBLE CAUSES</th>
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<tbody>
<tr>
<td>Thin, scant, watery white discharge</td>
<td>Atrophic vaginitis</td>
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<tr>
<td>Thin, green or gray-white, foul-smelling discharge</td>
<td>Bacterial vaginosis</td>
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<tr>
<td>White, curd-like, profuse discharge with yeasty, sweet odor</td>
<td>Candidiasis</td>
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<tr>
<td>Mucopurulent, foul-smelling discharge</td>
<td>Chancroid</td>
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<tr>
<td>Yellow, mucopurulent, odorless, or acid discharge</td>
<td>Chlamydial infection</td>
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<td>Scant, serosanguineous, or purulent discharge with foul odor</td>
<td>Endometritis</td>
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<tr>
<td>Copious mucoid discharge</td>
<td>Genital herpes</td>
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<tr>
<td>Profuse, mucopurulent discharge, possibly foul-smelling</td>
<td>Genital warts</td>
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<td>Yellow or green, foul-smelling discharge from the cervix or occasionally from Bartholin’s or Skene’s ducts</td>
<td>Gonorrhea</td>
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<td>Chronic, watery, bloody, or purulent discharge, possibly foul-smelling</td>
<td>Gynecologic cancer</td>
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<tr>
<td>Frothy, green-yellow, and profuse (or thin, white, and scant) foul-smelling discharge</td>
<td>Trichomoniasis</td>
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Thank you