VAGINAL DISCHARGE AND STDS

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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 its white becoming yellowish on contact with air.
CON’T…

- 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.
CON’T..

- It’s also composed of proteins, polysaccharides, amino acids, enzymes and Igs.

- It is not uncommon for the normal discharge to be dark, brown or discolored a day or two following the menstrual period.
• Any interference with the vaginal secretions sets up an environment conductive for infections
• Any changes in color, amount, odor and consistency of the discharge may indicate an underlying problem like an infection.
• It`s the most common gynaecological condition encountered by physicians in the office.
<table>
<thead>
<tr>
<th></th>
<th><strong>normal</strong></th>
<th><strong>Cause for concern</strong></th>
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<tbody>
<tr>
<td><strong>Color</strong></td>
<td>Clear or whitish discharge (may be yellowish when dried)</td>
<td>Yellow or greenish discharge, or discharge that suddenly changes color</td>
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<tr>
<td><strong>Odor</strong></td>
<td>Mild odor or odorless</td>
<td>A strong, foul, sometimes &quot;fishy&quot; odor, or a sudden change in odor</td>
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<td><strong>Texture</strong></td>
<td>Can vary from &quot;paste&quot; like and somewhat sticky to clear and stretchy, depending on where you are in your cycle and whether you are aroused</td>
<td>Clumpy or lumpy discharge, with &quot;cottage cheese&quot; like texture</td>
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<tr>
<td><strong>Volume</strong></td>
<td>Can vary from very little to quite a lot (particularly when ovulating or aroused)</td>
<td>Sudden changes in volume, particularly if other symptoms are present</td>
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</table>
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
**TERMINOLOGY**

- **Vaginitis**: significant inflammatory response in vaginal wall. Accompanied by high number of leukocytes in vaginal fluid. Found with candida and trichomonas infections.

- **Vaginosis**: minimal inflammatory response with few leukocytes in vaginal wall. Associated with increase in bacterial concentrations.
I. **History:**

- Source of discharge must be determined. *Perineal discharge* could originate from vagina, cervix, urinary tract and rectum.
- Ascertain the following attributes of the discharge: *quantity, duration, colour, consistency and odour.*
- Symptoms include: *itching or burning, external Dysuria and pain during intercourse.*
Obtain history of the following:

- Prior similar episodes
- Sexually transmitted infection
- Sexual activities
- Birth control method
- Last menstrual period
- Douching practice
- Antibiotic use
- General medical history
- Systemic symptoms such as lower abdominal pain, fever, chills, nausea, and vomiting.
I. Examination:
   1. Inspection (external and internal)
   2. Vaginal PH
   3. Microscopic examination

III. Diagnostic Tools:
   - PH: Nitrazine paper
   - Normal saline preparation: microscopic examination of discharge (clue cells of BV)
   - Whiff test: Fishy odor of BV
   - Culture
CAUSES OF CHANGES IN VAGINAL DISCHARGE
Non-infective causes

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
6. Fistulae
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
## 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, curdlike, 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 acrid discharge</td>
<td>Chlamydial infection</td>
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<tr>
<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>
</tr>
<tr>
<td>Profuse, mucopurulent discharge, possibly foul-smelling</td>
<td>Genital warts</td>
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<tr>
<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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<tr>
<td>Chronic, watery, bloody, or purulent discharge, possibly foul-smelling</td>
<td>Gynecologic cancer</td>
</tr>
<tr>
<td>Frothy, green-yellow, and profuse (or thin, white, and scant) foul-smelling discharge</td>
<td>Trichomoniasis</td>
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BACTERIAL VAGINOSIS
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BV is the most common vaginal complaints

- It is not a true infection but rather an alteration in concentrations of normal vaginal bacteria.

The normal predominant lactobacilli are replaced by massive increases in concentrations of anaerobic species and facultative aerobes.

It is frequently seen in postmenopausal because of low levels of estrogen.

- It is not sexually transmitted, but it is associated with sexual activity.
Risk factors:

1. Unbehavior sexual activity
2. Douching
3. Black race
4. Cigarette smoking
5. Intrauterine device
6. Early age of sexual partners
7. New or multiple sexual partners
The most common patient complaint is a fishy odor. Itching and burning are not present.

Using 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
• Diagnosis is also made by evaluating a **Gram stain** of the vaginal discharge using **Nugent criteria**

<table>
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<th>Table 1: Scoring system of Gram stained smears (Nugent et al)(^6)</th>
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<tr>
<td><strong>Bacterial morphotype</strong></td>
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<tr>
<td>Lactobacilli</td>
</tr>
<tr>
<td>Gardnerella vaginalis and Bacteroides</td>
</tr>
<tr>
<td>Mobiluncus (curved Gram variable bacilli)</td>
</tr>
<tr>
<td>Clue cells</td>
</tr>
</tbody>
</table>

*Average number of morphotypes seen per oil immersion field: 0 = Nil, 1+ = 1, 2+ = 2 to 4, 3+ = 5-30, 4+ = >30.*
• Homogeneous discharge adhering to vaginal walls.

• Discharge in cervix
• **Clue cell on wet prep**
  saline wet preparation reveals clue cells. Squamous cells are covered with bacteria to the extent that cell borders are blurred and nuclei are not visible
The vaginal discharge of patients with BV has a characteristic **fishy odor** due to increased activity of anaerobic species. Addition of KOH will augment this odor.
MANAGEMENT

• Oral or intravaginal treatments with metronidazole or clindamycin are indicated in women with symptoms or those in whom it is diagnosed and elect for treatment – especially prior to gynecological surgical procedures.

• Women with BV should be advised that vaginal douching or excessive genital washing should be avoided.

• Oral Metronidazole administration : 500 mg twice daily for 7 days

• **NO TREATMENT OF SEXUAL PARTNER IS NEEDED**
CANDIDA VAGINITIS
CANDIDA VAGINITIS

• This is the second most common vaginal complaint
• The most common organism is C. albicans and maybe caused also by C. tropicalis and C. glabrata

• Risk Factors
  1. Diabetes mellitus
  2. Systemic antibiotics
  3. Pregnancy
  4. Obesity
  5. Decreased immunity.
CLINICAL PRESENTATION

• The **most common** patient complaint is itching, burning, and pain with intercourse
• Yeast infections may occur more frequently during pregnancy
• Patients with infections caused by C. tropicalis and C. glabrata may have an atypical presentation. Irritation may be paramount with little discharge or prurities.
DIAGNOSIS

- Diagnosis is made by history, physical examination, and microscopic examination of the vaginal discharge in 10% KOH. (100% specific).

- **On Speculum Examination.**
  - Vaginal discharge is typically curdy and white (*cottage cheese*-like)
  - The vaginal epithelium is frequently edematous and inflamed.
  - Vaginal pH is normal (<4.5).
  - Erosion of the vulva may be noticeable
• Infection with *C. tropicalis* and *C. glabrata* may not be associated with the classic discharge; discharge may be white-gray and thin.

• **Microscopic examination** reveals pseudohyphae on a KOH preparation.

• **Cultures** are not necessary to make the diagnosis except in some cases of recurrent infections.
The whitish discharge of candidiasis varying from thin to crud consistency. Cottage cheese–like.
• Micrograph of Candida albicans in a potassium hydroxide preparation. Serpentine **pseudohyphae** are seen.
MANAGEMENT

• The treatment of choice is either a single oral dose of fluconazole (150mg)
• Vaginal creams (Butaconazole, Clotrimazole, Miconazole)
• NO TREATMENT OF SEXUAL PARTNER IS NEEDED
CHRONIC RECURRENT YEAST INFECTIONS:

(5% of women). In most cases, no exacerbating factor can be found; however, the following possibilities should be considered:

1. Failure to complete a full course of therapy.
2. HIV infection.
3. Chronic antibiotic therapy.
4. Infection with a resistant organism such as C. tropicalis or T. glabrata.
5. Sexual transmission from the male partner.
6. Allergic reaction to partner's semen or a vaginal spermicide.
7. Diabetes. Patients should have a fasting serum glucose level if they have recurrent infections.