# Obstetrics & Gynaecology - Topic 22 - Vaginal discharge

## Understanding Vaginal Discharge

### Physiological Discharge

#### Composition, Acidity and Normal Appearance

- Normal vaginal discharge contains cervical mucus, vaginal fluid, shed epithelial cells and organisms that normally live in the vagina.
- In reproductive-age women, lactobacilli commonly help maintain an acidic environment, usually with a pH around 3.8 to 4.5.
- Physiological discharge is generally clear, white or off-white, without a strong offensive smell, marked itching, pain or inflammation.

#### Physiological Variation and Reassurance

- Its amount and texture change during the cycle, and it may become clearer and more stretchy near ovulation.
- Pregnancy, sexual arousal and hormonal contraception can also alter the amount of normal discharge.
- A person with normal discharge and no concerning findings usually needs explanation and reassurance rather than antibiotics or antifungal treatment.
- The vaginal environment differs before puberty and after menopause, so adult reproductive-age pH patterns should not be applied without considering age and oestrogen status.

### When Discharge Is Abnormal

- A new unpleasant odour, marked itching, burning, pain, bleeding, dysuria or a major change in discharge suggests the need for assessment.
- Common causes include vulvovaginal candidiasis, bacterial vaginosis, trichomoniasis and cervicitis, but mixed conditions can occur.
- Irritant products, a retained foreign body, low-oestrogen change and skin disorders can cause symptoms without a sexually transmitted infection.
- Persistent watery or blood-stained discharge, especially after menopause, requires assessment for cervical, endometrial or other pathology.
- Discharge colour alone is not a reliable diagnosis, and unnecessary repeated empirical treatment can delay recognition of the true cause.

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# Clinical Assessment

## History and Examination

### Symptoms, Predisposition and Sexual History

- Ask about onset, amount, odour, itching, pain, urinary symptoms, menstrual timing, bleeding and previous treatment.
- Check pregnancy possibility, recent antibiotics, diabetes, immunosuppression, new cleansing products and the possibility of a retained tampon or other object.
- Take a sensitive, confidential sexual history, including new partners, condom use and partner symptoms, without assuming behaviour from appearance or marital status.

### Warning Features and Consented Examination

- Fever, lower abdominal pain, cervical-motion tenderness, pregnancy with pain or systemic illness requires assessment for pelvic inflammatory disease or another urgent condition.
- Explain the examination, obtain consent and provide privacy and a chaperone according to preference and clinical policy.
- Inspect for erythema, fissures, excoriations, ulcers and other skin changes, and use a speculum when indicated and acceptable to identify the source of discharge.
- Assess whether the discharge arises mainly from the vagina or from an inflamed cervix, because the likely organisms and treatment differ.

## Diagnostic Methods for Vaginal Discharge

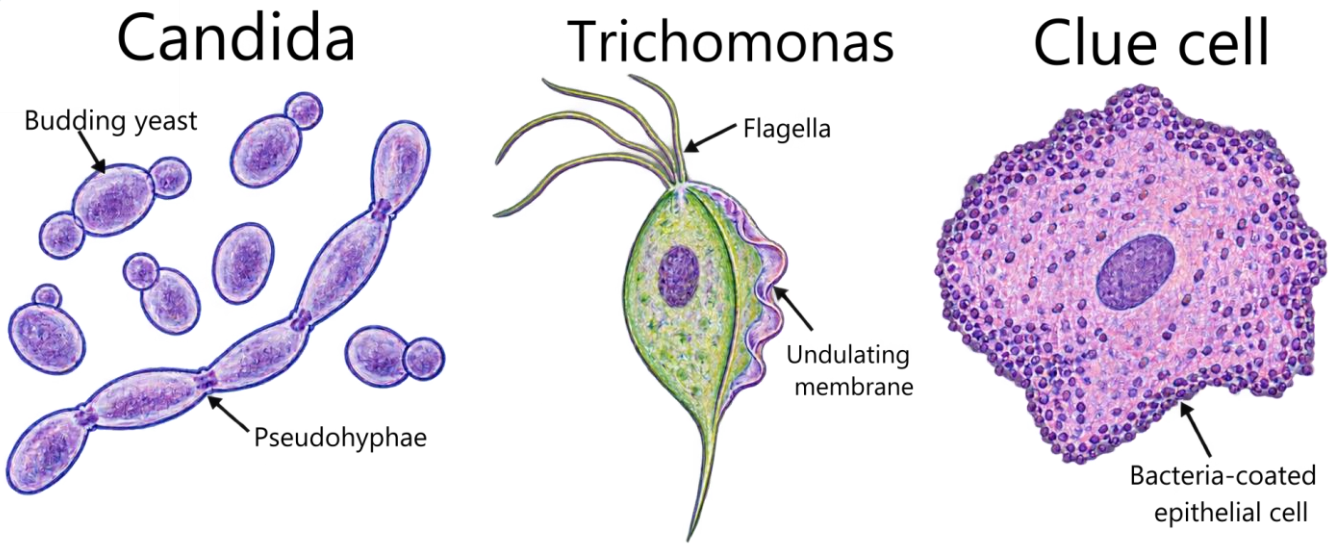
### 1. Bedside Tests

- Measure vaginal pH from an appropriate sample, avoiding contamination by blood, semen or cervical mucus that can alter the reading.
- A saline wet mount may show motile trichomonads or clue cells, while a potassium hydroxide preparation can reveal budding yeast and pseudohyphae.
- A positive amine or whiff test supports bacterial vaginosis, but the result should be interpreted with the other findings.
- Wet-mount microscopy has limited sensitivity, especially for trichomoniasis, so a negative result does not reliably exclude infection.

### 2. Laboratory Tests

- Nucleic acid amplification testing is preferred where available for trichomoniasis, gonorrhoea and chlamydia according to the clinical assessment.
- Gram staining with a Nugent score can support a diagnosis of bacterial vaginosis.
- Culture or appropriate molecular testing helps identify Candida species in recurrent, severe or treatment-resistant disease.
- Offer HIV and syphilis testing and other STI assessment according to risk and national service guidance.

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*Illustrative microscopy patterns show budding yeast and pseudohyphae, a trichomonad and a bacteria-coated clue cell; the drawing is not a diagnostic specimen*

# Vulvovaginal Candidiasis

## Cause and Clinical Features

### Organism and Predisposing Factors

- Candida albicans is the usual cause, although other species become more important in recurrent or difficult cases.
- Antibiotic exposure, pregnancy, poorly controlled diabetes and immunosuppression can increase susceptibility, but many affected women have no clear risk factor.

### Clinical Features and Diagnostic Interpretation

- Itching is often prominent, with vulval soreness, redness, fissures, external dysuria and thick white discharge.
- The discharge may be described as curdy, but its absence does not exclude the diagnosis.
- Vaginal pH is usually within the acidic range, and microscopy can show yeast forms or pseudohyphae.
- Candida can be present without causing symptoms, so a positive test alone does not always require treatment.

## Management

### Uncomplicated Disease and Pregnancy

- For uncomplicated symptomatic disease, a topical azole is effective; an Indian example is clotrimazole 100 mg vaginally each night for seven nights.
- A single oral fluconazole dose of 150 mg is an option for an eligible non-pregnant patient after checking interactions and contraindications.

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- During pregnancy, use a topical azole course for seven days and avoid routine oral fluconazole.

### Recurrence and Partner Assessment

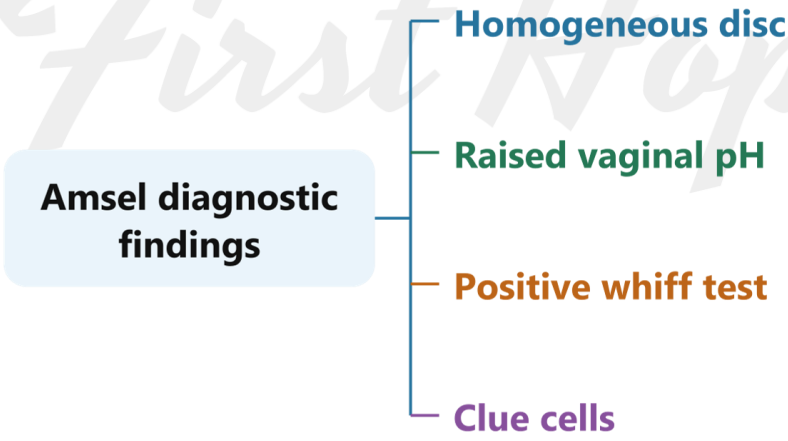
- Recurrent disease, commonly defined as at least three symptomatic episodes in a year, needs confirmation, species assessment and review of diabetes or other contributing factors.
- Longer induction and suppressive treatment may be needed under specialist guidance rather than repeated isolated single doses.
- Routine treatment of an asymptomatic partner is not required, but a partner with symptomatic balanitis needs assessment and appropriate treatment.

## Bacterial Vaginosis

- Bacterial vaginosis is a change in the vaginal microbial community, with reduced protective lactobacilli and increased mixed anaerobic bacteria.

### Mechanism and Diagnosis

- It commonly produces a thin, homogeneous grey-white discharge with a fishy odour, often without the marked inflammation seen in candidiasis.




- Amsel diagnosis requires at least three of four findings: typical homogeneous discharge, pH above 4.5, a positive whiff test and clue cells.
- A Nugent score of 7 to 10 on Gram stain supports bacterial vaginosis, while intermediate results need clinical interpretation.
- The condition is associated with sexual activity and other risks but should not be used to make assumptions about fidelity or hygiene.

### Interpreting Amsel and Nugent Findings

- Amsel criteria combine clinical and microscopy findings, while the Nugent score grades bacterial morphotypes on Gram stain.
- A Nugent score of 0 to 3 is usually consistent with a lactobacillus-predominant pattern, and 4 to 6 is intermediate.

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- Neither scoring system should replace assessment of symptoms, pregnancy and other causes of discharge.

## Management and Recurrence

### Antimicrobial Regimens and Pregnancy

- Treat symptomatic disease; an accepted oral regimen is metronidazole 400 mg twice daily for seven days under the Indian guidance.
- Alternative regimens include appropriate vaginal metronidazole or clindamycin preparations, selected according to pregnancy, tolerance, availability and the local protocol.
- Symptomatic pregnant women should be assessed and treated with a pregnancy-appropriate regimen because the condition is associated with adverse pregnancy outcomes.

### Recurrence Prevention and Partner Care

- Avoid douching and unnecessary intravaginal products, which can disturb the vaginal environment and increase recurrence.
- Recurrence is common and does not automatically mean that the person failed to follow instructions.
- Older routine guidance does not treat asymptomatic partners for every episode, but newer evidence supports considering concurrent partner therapy in selected recurrent symptomatic cases through shared specialist care.

# Trichomoniasis

- Trichomonas vaginalis is a sexually transmitted flagellated protozoan that can cause vaginitis, although many infections have few or no symptoms.

## Cause and Diagnosis

- Features may include diffuse malodorous yellow-green discharge, irritation, dysuria and vaginal or cervical inflammation.
- A strawberry appearance of the cervix can occur but is not present in every case and should not be required for diagnosis.
- Vaginal pH is usually above 4.5, and a fresh wet mount may show motile organisms, while a sensitive molecular test detects more cases.

## Treatment and Partner Care

### Effective Systemic Treatment

- For women, oral metronidazole 400 mg or 500 mg twice daily for seven days is a current recommended regimen, including appropriately assessed pregnant women.

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