# Abnormal vaginal Discharge

## BACKGROUND

Vaginal discharge can be a distressing symptom for women to experience. A through history is necessary, which includes addressing the patient's concerns. An examination is frequently helpful, especially in re-presentations. This guideline refers to management of cis-female patients. Trans-M and Trans-F are likely to benefit from specialist input at Sexual Health clinic.

## CAUSES of abnormal Vaginal discharge

Consider the interplay of hormones, inflammation and infection in considering the causes of altered vaginal discharge. Causes can be considered broadly as infective or non-infective causes:

| Infective causes (1) | Non-infective causes |
|---|---|
| **Non-STI:**<br>Vulvovaginal Candidiasis<br>Bacterial Vaginosis<br>Streptococcal infection<br><br>**STI:**<br>Trichomonas Vaginalis<br>Gonorrhoea<br>Chlamydia | Physiological<br>Cervical ectropy<br>Related to foreign body (i.e. tampon, condom)<br>Cytolytic vaginosis<br>Carcinoma – Cervical / endometrial<br>Desquamative Inflammatory Vaginitis |

## HISTORY

*What should be covered:* characteristics of discharge –onset, duration, colour, odour, consistency, cyclical changes, exacerbating factors. (2)
**Associated symptoms**: itch, dyspareunia abnormal vaginal bleeding or pyrexia.
**Sexual history** – is the patient at increased risk of STI (age <25, now partner or more than one partner in past year, previous STI).
**Contraceptive or hormone** use.
**Pregnancy and risk of pregnancy.**
**Concurrent and recent medication**, antibiotics, steroids, home treatment.
**Medical conditions** – eg diabetes, immunosuppression, skin conditions.
**Vulval Care** – recommend avoid hair removal (trimming can be an alternative), advise against douching, advise against use of soaps around the vulva – emollient such as E45 or Aqueous cream may be used as a substitute.
**Symptoms and signs** which can indicate **abnormal** discharge: pus-like, white and clumpy, grey, green yellow or blood-tinged, foul-smelling, or accompanied by rash, itch, or soreness.

Normal, **physiological discharge** is clear, cream or faint yellow in colour – the amount, consistency will vary with time of the menstrual cycle. Ovulation, sexual arousal, pregnancy and cervical ectropion can increase the volume of discharge.

**Red Flag symptoms:** Dyspareunia, Pelvic pain, Post Coital Bleeding, Inter-menstrual bleeding may raise suspicion of PID or malignancy and should be investigated or referred appropriately.

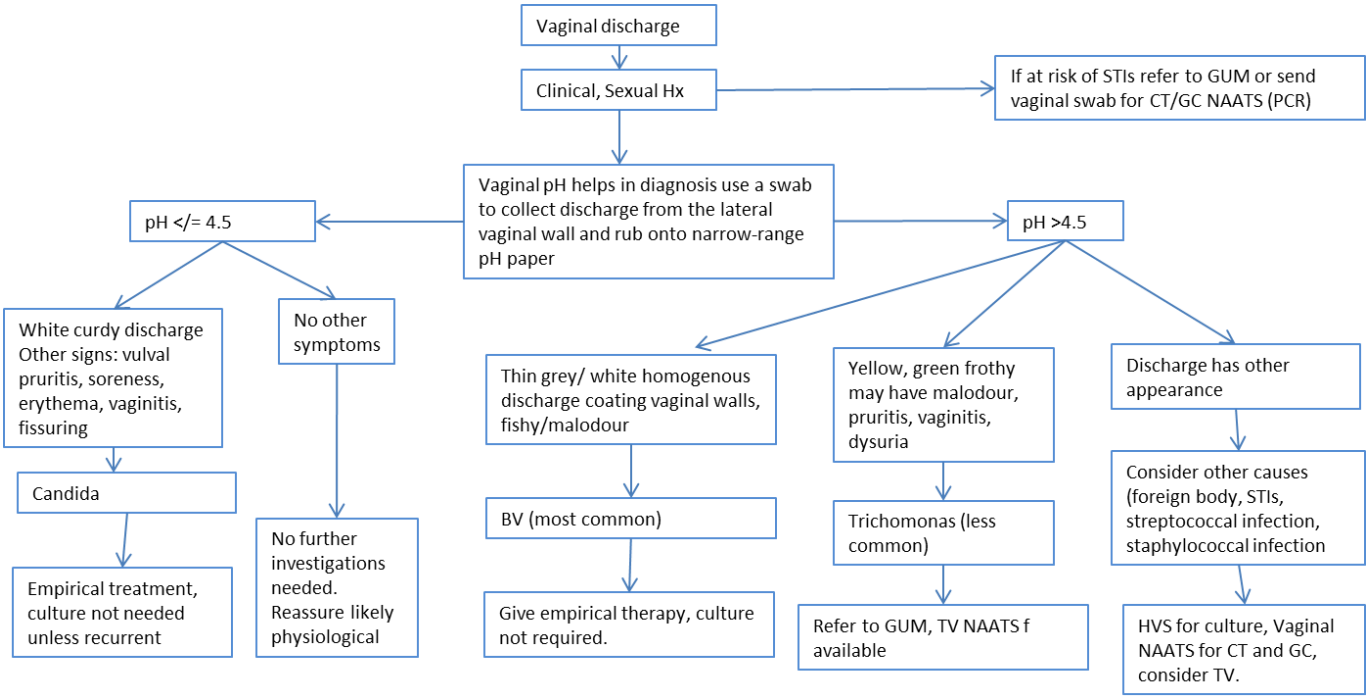


Fig 1. Flow chart adapted from Colver et al. (3)

**Always offer examination**, but if patient declines, treatment for candidia or BV can be considered without examination if the risk of STI is low, there is a low chance of alternate diagnosis and no red flags for PID. **Patients reporting abnormal discharge with no fed flag symptoms may register themselves for online self-testing at https://www.shl.uk/**

**Always consider pregnancy** in a patient who is sexually active prior to treating.

**Abdominal and PV examination**: abdominal palpation for tenderness or mass. Inspect vulva for discharge, erythema, ulceration, skin lesions or changes. Bimanual exam if indicated for adnexal or uterine tenderness or mass, and for cervical motion tenderness (indication possibility of Pelvic Inflammatory Disease)
Speculum exam to inspect vaginal walls, cervix. Vaginal pH can be extremely helpful as a bedside test (see fig 1)
Clinician taken or patient self-taken swabs can be sent for GC and CT PCR and in some locations TV PCR. High vaginal swabs are of limited diagnostic value except in pregnancy, post-instrumentation, failed treatment, recurrent symptoms, or to confirm candidiasis in a setting without lab on-site.

**Investigations:**

1. Always offer an annual CT/GC screen to women under 25
2. Bedside pH testing can guide diagnosis in examination of women with abnormal vaginal discharge.
3. CT/GC PCR and if available, TV PCR. Test for all STIs (GC, CT, HIV, syphilis) if one is diagnosed.
4. High Vaginal Swab for candida.
5. High Vaginal Swab for Streptococcal infection only if symptomatic (discharge, pain, pruritis) and STI cause not found.
6. **Patients assessed on the telephone and reporting abnormal discharge with no red flag symptoms may register themselves for online self-testing at https://www.shl.uk/**

## TREATMENT

General advice should be given to all patients regarding **vulval care**. Advise to not douche, wash only with water, moisturise with emollient, avoid tight synthetic clothing. Education about normal physiological vaginal discharge and fluctuations in consistency and odour may be needed. Blue boxes below indicate conditions likely to be treated in primary care; purple indicate that onward referral may be needed.

### Vulvovaginal Candidiasis

Asymptomatic Candida is present in 10-25% of cis women, does not need treatment. Vulval itch, soreness, thick clumpy white discharge may indicate candida infection. pH <4.5.

Treatment options include Fluconazole 150mg STAT (not in pregnancy), or clotrimazole 500mg pessary ON, or if pregnant a longer course of clotrimazole pessaries has been recommended (4). Advice on maintaining the barrier function of the skin using emollient and avoiding soaps is particularly important. If treatment is unsuccessful, examination is indicted. Consider alternate diagnosis or possibly resistance.

### Bacterial Vaginosis

BV is an alteration in the vaginal microbiome, with an overgrowth of anaerobic bacteria (ie Gardnerella vaginalis) and reduction in the usual lactobacilli. pH >4.5. It is not sexually transmitted, although there is a high rate of concordance on female partners of women with BV, there is no proven advantage to treating asymptomatic female partners. Treat even in absence of a positive HVS. Counsel regarding smoking cessation. It is important to treat in pregnancy as it can cause complication such as miscarriage and premature birth. Metronidazole 400mg BD for 5 days, or STAT 2g (5) (not in pregnancy) Counsel about ETOH and metronidazole. Second line treatment includes Clindamycin gel.

### Cytolytic Vaginosis

If suspected, referral to GUM. Prutitis, vulval dysuria, dyspareunia. More frequently found in luteal phase of menstrual cycle. Overgrowth of lactobacilli and decrease in vaginal pH due to the production of hydrogen peroxide. This in turn can damage the vaginal epithelium and can break down the cells ('cytolytic'). Whilst vulval candida makes up 10-30% of vulval discharge presentations, 5-7% will be due to cytolytic vaginosis(6,7). pH frequently 3.5-4.5, and evidence of lactobacilli overgrowth and cytolysis will be seen during microscopy. Treatment involves douching with sodium bicarbonate twice a week, or using baking soda dissolvable pessaries.

**Recurrent BV:** Not all women with BV require treatment, If symptomatic with low risk of complications, general advice to avoid douching, advise to shower instead of bath, use condoms for sexual intercourse, can reduce frequency of occurrences. If pregnant, undergoing instrumentation (IUD insertion, TOP, etc.) If lifestyle measures to not help, referral to GUM may be warranted.

### Chlamydia Trachomatis

C. Trachomatis – can cause purulent discharge, but asymptomatic in 80% women Consider referral to genitourinary medicine if GC, trichomoniasis or pelvic disease is suspected, although treatment should be commenced. PN is required for STIs. If there is diagnostic uncertainty, or recurrent or persistent symptoms. Test for other STIs. Treatment is 100mg Doxycycline BD for 7 days(8) (alternate treatment needed in pregnancy, Azithromycin 1g STAT).

### Trichomonas Vaginalis

Advise referral to GUM Clinic. T Vaginalis – offensive yellow discharge, again may be asymptomatic. Profuse, frothy discharge, soreness and itch, dysuria, abdominal pain. Treatment is Metronidazole 400mg BD for 5 days. Partners need to be treated. Treatment is 90% effective. (9)

### Neiserria Gonorrhoea

Advise referral to GUM Clinic. N. Gonorrhoea is asymptomatic in 50%, may present with purulent discharge. Treatment is currently recommended as 1g Ceftriaxone IM. (10) A culture is taken prior to treatment to confirm sensitivities. A test of cure is always recommended and partner notification is necessary so a referral to genitourinary medicine is advised.

**Consider referral to genitourinary medicine** if Gonorrhoea, trichomoniasis or pelvic disease is suspected, although treatment should be commenced. Partner Notification is required for STIs. Referral is also appropriate if Cytolytic Vaginosis, recurrent BV is suspected, also if there is diagnosistic uncertainty, or recurrent or persistent symptoms. Test for other STIs.(11)

**Refer to hospital Gynaecology** if suspicion of cervical abnormality on examination, unexplained post coital or intermenstrual bleeding.

## Allergic reactions

Allergy or contact dermatitis can result from sperm, latex, or allergies to soaps, douches, tampons, pads, lubricants (12). This should be elicited from history and examination.

## Rarer causes

Rarer causes of abnormal vaginal discharge include: erosive lichen planus, Behcet's Syndrome, prolapsing fibroids or vaginal fistula (12).Consider referral to Vulval Dermatoloy clinic for sustected genital dermatoses. A 2WW referral is appropriate for suspected vulval malignancy.

## Desquamative Inflammatory Vaginitis

Diagnosis of exclusion once STIs and infective causes ruled out, so if considered the GUM referral is recommended. Primarily perimenopausal white cis women. Discharge, pruritis, irritation, inflammation, rash, areas of ecchymosis, paucity of lactobacilli. pH >5. Increased parabasal cells and neutrophils on microscopy. Cause unknown. Treatment options Clindamycin 2% cream ON for 1-3 weeks then maintenance once or twice a week 2-6 months. 10% hydrocortisone cream intravaginally daily (bedtime) for 3 weeks; Consider maintenance once or 2x week for 2-6 months or topical cortisone 25mg sup, or clobetasol proprionate intravaginally for one week. *Consider Fluconazole 150mg OW if giving steroid or Clindamycin prolonged course.*

## Atrophic vaginitis

Related to low oestrogen states, which leads to the thinning of the vaginal mucosa. Most frequent causes: being postmenopausal, treatments which lead to low oestrogen states, or prolonged breastfeeding. A topical, local oestrogen vaginal pessary or cream may be used, is safe as very little is absorbed systemically (only contraindication unexplained vaginal bleeding).

## Streptococcal infection

Streptococcal infection:
Group A streptococcal vulvovaginitis in symptomatic patients can be treated with oral penicillin, or topical intravaginal clindamycin gel. (13)

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