Please see the following weblink for up to date guidance on this topic:


Management of Vaginal Discharge in Non-Genitourinary Medicine Settings

Clinical Effectiveness Unit
February 2012
ABBREVIATIONS USED

BASHH British Association for Sexual Health and HIV
BNF British National Formulary
BV bacterial vaginosis
CEU Clinical Effectiveness Unit
CHC combined hormonal contraception
Cu-IUD copper-bearing intrauterine device
CVR combined vaginal ring
FSRH Faculty of Sexual and Reproductive Healthcare
GUM genitourinary medicine
HIV human immunodeficiency virus
HVS high vaginal swab
LNG-IUS levonorgestrel-releasing intrauterine system
NAAT nucleic acid amplification test
OTC over-the-counter
RCT randomised controlled trial
SPC Summary of Product Characteristics
STI sexually transmitted infection
TV Trichomonas vaginalis
VVC vulvovaginal candidiasis
VVS vulvovaginal swab

GRADING OF RECOMMENDATIONS

A Evidence based on randomised controlled trials
B Evidence based on other robust experimental or observational studies
C Evidence is limited but the advice relies on expert opinion and has the endorsement of respected authorities
✓ Good Practice Point where no evidence exists but where best practice is based on the clinical experience of the multidisciplinary group
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NHS Evidence has accredited the process used by the Faculty of Sexual and Reproductive Healthcare of the Royal College of Obstetricians and Gynaecologists to produce guidelines. Accreditation is valid for five years from May 2011 and is applicable to guidance produced using the processes described in the Faculty of Sexual and Reproductive Healthcare: Clinical Effectiveness Unit Framework for Guidance Development (May 2011). More information on accreditation can be viewed at www.evidence.nhs.uk
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SUMMARY OF KEY RECOMMENDATIONS

Causes of vaginal discharge

Health professionals should be aware that the most common causes of altered vaginal discharge are physiological, bacterial vaginosis (BV) and candida, but sexually transmitted infections (STIs) and non-infective causes must be considered.

Management of vaginal discharge

A detailed history, including sexual history, is essential to identify the necessary investigations and treatment options.

Women experiencing vaginal discharge who are at low risk of STI can be treated by syndromic or empirical management (Figure 1).

All women with persistent vaginal discharge should be examined to exclude serious pathology.

Women assessed as being at risk of STI, or who request testing should be offered appropriate tests for chlamydia, gonorrhoea, syphilis and HIV.

A high vaginal swab (HVS) is of limited diagnostic value in the management of vaginal discharge except in cases of inconclusive assessment, recurrent symptoms, treatment failure, or in pregnancy, postpartum, post-abortion or post-instrumentation.

Treatment of vaginal discharge

Metronidazole and clindamycin administered either orally or vaginally are effective in the treatment of BV.

In the management of BV, testing and treatment of male sexual partners is not indicated but testing and treatment of female sexual partners can be considered.

Vaginal and oral azole antifungals are equally effective in the treatment of vulvovaginal candidiasis (VVC).

Women with vulval symptoms of VVC may use topical antifungals (in addition to oral or vaginal treatment) until symptoms resolve.

There is no need for routine screening or treatment of sexual partners in the management of candidiasis.

Oral nitroimidazole drugs (e.g. metronidazole) are effective in treating trichomoniasis.

Current sexual partners of women diagnosed with Trichomonas vaginalis (TV) should be offered a full sexual health screen and should be treated for TV irrespective of the results of their tests.

Management of vaginal discharge in special circumstances

Women with BV who are pregnant or breastfeeding may use metronidazole 400 mg twice daily for 5–7 days or intravaginal therapies. A 2 g stat dose of metronidazole is not recommended in pregnancy or breastfeeding women.

Women with VVC in pregnancy should avoid oral antifungals.

Women with VVC in pregnancy can be treated with topical imidazoles. Single-dose treatment is less effective than longer regimens of up to 7 days.

For HIV-positive women with TV, longer treatment regimens with oral metronidazole may be more effective than a single dose.

For women with recurrent BV, suppressive treatment with metronidazole vaginal gel may be considered. Evidence to support other regimens is limited.
Management of vaginal discharge in special circumstances

- Women using acidifying gels for recurrent BV can be advised to use them alternate evenings for 1 month or longer if required.

- For women with recurrent VVC, an induction and maintenance regimen may be used for 6 months.

- Recurrent TV is usually due to re-infection, but consideration should be given to the possibility of drug resistance.

Contraception and vaginal discharge

- Additional contraceptive precautions are not required when using antibiotics that do not induce liver enzymes.

- Women and male partners should be advised that latex contraceptives may be damaged by some vaginal/vulval antifungal treatments.

- Women using combined hormonal contraception who experience recurrent VVC may wish to consider switching to an alternative method of contraception.

- Women with a copper-bearing intrauterine device who experience recurrent BV may wish to consider switching to an alternative method of contraception.

Personal hygiene and vaginal discharge

- Women experiencing vaginal discharge can be advised to avoid douching and local irritants as part of general management.
1 Purpose and Scope

This guidance provides information for health professionals working in non-genitourinary medicine (GUM) settings on management of vaginal discharge in women of reproductive age. Non-GUM settings include general practice, non-integrated or peripheral sexual health clinics and gynaecology clinics. The document has been produced by the Faculty of Sexual and Reproductive Healthcare (FSRH) in collaboration with the British Association for Sexual Health and HIV (BASHH). It updates previous guidance published in 2006. Changes include:

- New tests for gonorrhoea and chlamydia
- Changes to treatments available for vulvovaginal candidiasis (VVC) and bacterial vaginosis (BV)
- New advice on combined hormonal contraception (CHC) and antibiotics.

The guidance focuses on the most common causes of vaginal discharge in women of reproductive age: physiological and infective. Less common causes are considered briefly (e.g. foreign bodies, cervical ectopy and genital tract malignancy). Some recommendations are provided on the management of VVC, BV and Trichomonas vaginalis (TV) during pregnancy and in women with recurrent infection. This document is not intended to provide comprehensive guidance on discharge in pregnancy or after surgical procedures where local protocols or specific guidance may apply. The management of vaginal discharge in children and postmenopausal women is outside the scope of this guidance.

Recommendations are based on available evidence and consensus opinion of experts. They should be used to guide clinical practice but they are not intended to serve alone as a standard of medical care or to replace clinical judgement in the management of individual cases. A key to the Grading of Recommendations, based on levels of evidence, is provided on the inside front cover of this document. Details of the methods used in developing this guidance are outlined in Appendix 1 and in the Clinical Effectiveness Unit (CEU) section of the FSRH website (www.fsrh.org). Information on the management of sexually transmitted infections (STIs) can be found on the guidelines page of the BASHH website (www.bashh.org). Information for patients is available from BASHH and from the Family Planning Association (FPA) website (www.fpa.org.uk).

2 Background

2.1 Physiological discharge

It is normal and healthy for women of reproductive age to have some degree of vaginal discharge. The quantity and type of cervical mucus changes during the menstrual cycle as a result of hormonal fluctuations. Prior to ovulation, estrogen levels increase, altering cervical mucus from non-fertile (thick and sticky) to fertile (clearer, wetter, stretchy and slippery). After
ovulation, estrogen levels fall and progesterone levels increase; cervical mucus becomes thick, sticky and hostile to sperm.

The vagina is colonised with commensal bacteria (normal vaginal flora). Rising estrogen levels at puberty lead to colonisation with lactobacilli which metabolise glycogen in the vaginal epithelium to produce lactic acid. Thus the vaginal environment is acidic and normally has a pH ≤ 4.5. Other commensal bacteria include anaerobes, diphtheroids, coagulase-negative staphylococci and α-haemolytic streptococci. Some commensal organisms can cause a change in discharge if they ‘overgrow’. These include Candida albicans, Staphylococcus aureus and Streptococcus agalactiae (Group B streptococcus).

3 What are the Commonest Causes of Altered Vaginal Discharge in Women of Reproductive Age?

There are three common causes of altered vaginal discharge in women of reproductive age:

- **Infective (non-sexually transmitted)**
  - Bacterial vaginosis
  - Candida

- **Infective (sexually transmitted)**
  - Chlamydia trachomatis
  - Neisseria gonorrhoeae
  - Trichomonas vaginalis
  - Herpes simplex virus

- **Non-infective**
  - Foreign bodies (e.g. retained tampons, condoms)
  - Cervical polyps and ectopy
  - Genital tract malignancy
  - Fistulae
  - Allergic reactions.

3.1 Non-sexually transmitted infections

3.1.1 Bacterial vaginosis

BV is the commonest cause of abnormal vaginal discharge in women of reproductive age. Reported prevalence varies and may be influenced by behavioural and/or sociodemographic factors. It can occur and remit spontaneously and is characterised by an overgrowth of mixed anaerobic organisms that replace normal lactobacilli, leading to an increase in vaginal pH (>4.5). Typical signs and symptoms are shown in Table 1. Gardnerella vaginalis is commonly found in women with BV but the presence of Gardnerella alone is insufficient to constitute a diagnosis of BV because it is a commensal organism in 30–40% of asymptomatic women. Other organisms associated with BV include Prevotella species, Mycoplasma hominis and Mobiluncus species.

Reports of BV occurring in virgins led to the belief that BV was not an STI. However, there is a growing body of evidence that suggests a link with sexual behaviour. A study that took account of a wider range of sexual activities, including oral and digital intercourse, did not find any cases of BV in truly sexually inexperienced women. Thus BV is considered to be ‘sexually associated’ rather than truly ‘sexually transmitted’. There is some evidence that consistent condom use may help to reduce BV prevalence, although one study suggested this may only be in women who were BV-negative at baseline.

3.1.2 Vulvovaginal candidiasis

VVC is common among women of reproductive age. It is caused by overgrowth of yeasts; C. albicans, in 70–90% of cases, with non-albicans species such as C. glabrata in the remainder. The presence of candida in the vulvovaginal area does not necessarily require treatment, unless symptomatic, as between 10% and 20% of women will have vulvovaginal colonisation.

Candidiasis occurs most commonly when the vagina is exposed to estrogen, therefore it is
more common during the reproductive years and during pregnancy. An episode of VVC is often precipitated by use of antibiotics. Immunocompromised women and women with diabetes are predisposed to candidiasis. VVC does not appear to be associated with tampons, sanitary towels or panty liners when they are used appropriately.

As VVC can be found in non-sexually active individuals, it is not classed as an STI.

### 3.2 Sexually transmitted infections

#### 3.2.1 Chlamydia trachomatis

*Chlamydia trachomatis*, the most common bacterial STI in the UK, is usually asymptomatic in women (approximately 70%). However, women may present with vaginal discharge due to cervicitis, abnormal bleeding (postcoital or intermenstrual) due to cervicitis or endometritis, lower abdominal pain, dyspareunia or dysuria.

#### 3.2.2 Neisseria gonorrhoeae

Gonorrhoea is an STI caused by *Neisseria gonorrhoeae*. Up to 50% of women will be asymptomatic. Common symptoms may include increased or altered vaginal discharge and lower abdominal pain. It can also be a rare cause of heavy menstrual, postcoital or intermenstrual bleeding due to cervicitis or endometritis.

#### 3.2.3 Trichomonas vaginalis

TV is a flagellated protozoan that causes vaginitis. Women with TV commonly complain of vaginal discharge and dysuria (due to urethral infection). Typical signs and symptoms are shown in Table 1. TV is always sexually transmitted and is a rarer condition than BV or VVC.

#### 3.2.4 Herpes simplex

Women with cervicitis due to herpes simplex virus infection may occasionally present with vaginal discharge.

### 3.3 Other causes of vaginal discharge

Other causes of vaginal discharge include foreign bodies (e.g. retained tampons or condoms), cervical ectopy or polyps, genital tract malignancy, fistulae and allergic reactions. Exclusion of infective and other causes can help confirm that a vaginal discharge is physiological.

There is some association between methods of contraception and vaginal discharge (see Section 7 on page 11). Women complaining of vaginal discharge should be asked about current and past contraception.

Douching is the process of intravaginal cleaning with a liquid solution. Some women use the practice of douching as part of their general hygiene or cultural practice. Data suggest that douching changes vaginal flora and may predispose women to BV, although not all studies have reported this finding. Overall, the evidence suggests that douching should be discouraged as there are no proven health benefits. Recommendations on personal hygiene and vaginal discharge can be found in Section 8 on page 12.

Women with cervical ectopy may complain of increased physiological discharge. Ectopy is a normal finding in women of reproductive age but treatments such as acidic gel, silver nitrate cauterisation, laser or cold coagulation are occasionally used in a gynaecology setting for symptomatic relief of vaginal discharge or postcoital bleeding. There is a lack of robust evidence for the effectiveness of these treatments in reducing vaginal discharge. Cervical pathology must be excluded prior to treatment, and women should be informed of potential risks of treatment and the fact that discharge symptoms may initially worsen before there is any improvement.

Health professionals should be aware that the most common causes of altered vaginal discharge are physiological, BV and candida, but STIs and non-infective causes must be considered.
4 Management of Women Presenting with Vaginal Discharge

4.1 Clinical and sexual history

When a woman presents with a vaginal discharge that she feels is different from her normal discharge this should be assessed by first taking a clinical history. She may have underlying concerns (e.g. STI or cancer) or specific expectations that should be explored.

The presence of vaginal discharge is, in itself, a poor predictor of an STI. Nevertheless, a sexual history (e.g. number and gender of partners, sexual activities, use of condoms) should be taken to assess the risk of STIs. Sexually active women are at higher risk of STI if they are aged <25 years; or have changed their sexual partner or had more than one sexual partner in the last 12 months. Other risk factors include a lack of consistent condom use, and a previous diagnosis of chlamydia infection in the last 12 months.

4.2 Assessment of symptoms

Symptoms associated with vaginal discharge can guide a health professional to the most likely cause (Table 1).

The characteristics of the vaginal discharge should be determined:
- What has changed
- Onset
- Duration
- Odour
- Cyclical changes
- Colour
- Consistency
- Exacerbating factors (e.g. after intercourse).

Enquiry should also cover any associated symptoms:
- Itching
- Superficial dyspareunia
- Vulval or vaginal pain
- Dysuria
- Abnormal bleeding (heavy, intermenstrual or postcoital)
- Deep dyspareunia
- Pelvic or abdominal pain
- Fever.

NB. Itching or superficial dyspareunia may indicate dermatological disease (e.g. lichen planus), which can be associated with vaginal discharge [see Royal College of Obstetricians and Gynaecologists (RCOG) guidance on vulval skin disease]. These symptoms are indicative of upper genital tract infection. For management see BASHH guidance on pelvic inflammatory disease.

<table>
<thead>
<tr>
<th>Sign/symptom</th>
<th>Bacterial vaginosis</th>
<th>Candida</th>
<th>Trichomoniasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge</td>
<td>Thin</td>
<td>Thick white</td>
<td>Scanty to profuse</td>
</tr>
<tr>
<td>Odour</td>
<td>Offensive/lthy</td>
<td>Non-offensive</td>
<td>Offensive</td>
</tr>
<tr>
<td>Itch</td>
<td>None</td>
<td>Vulval itch</td>
<td>Vulval itch</td>
</tr>
<tr>
<td>Other possible symptoms</td>
<td>Soreness</td>
<td>Superficial dyspareunia</td>
<td>Dysuria</td>
</tr>
<tr>
<td>Visible signs</td>
<td>Discharge coating the vagina and vestibule</td>
<td>Normal findings or Vulvar erythema</td>
<td>Frothy yellow discharge Vulvulitis Vaginitis Cervicitis ‘Strawberry cervix’ (ectocervix sometimes resembles the surface of a strawberry)</td>
</tr>
<tr>
<td></td>
<td>No vulval inflammation</td>
<td>Vulval erythema</td>
<td>Cervicitis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oedema</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fissuring</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Satellite lesions</td>
<td></td>
</tr>
<tr>
<td>Point-of-care test: vaginal pH</td>
<td>&gt;4.5</td>
<td>≤4.5</td>
<td>&gt;4.5</td>
</tr>
</tbody>
</table>
The health professional should determine if prescribed medicines, over-the-counter (OTC) treatments or home remedies have been tried. Guidelines are available for OTC treatment of presumed candida in pharmacies. However, studies suggested that even women with a previously confirmed episode of candida are not good at self-diagnosis. Women appear to be very aware of VVC but less aware of BV, and therefore it may be that women who self-diagnose themselves with VVC may actually have other conditions.

4.3 Examination, point-of-care investigations and STI testing

History-taking alone may guide health professionals towards the most likely diagnosis but diagnostic accuracy varies. In addition to the clinical and sexual history, physical examination and vaginal pH may be helpful.

It should be standard clinical practice to offer to examine people presenting with genital symptoms. If the history indicates candidiasis or BV, the risk of STI is low, and there are no symptoms indicative of upper genital tract infection, treatment for candidiasis or BV may be given without examination (i.e. syndromic management). Women should be advised to undergo examination if symptoms persist or reoccur (Figure 1).

STI testing should ideally be offered to all sexually active women. For women who decline an offer of examination, a self-taken vulvovaginal swab (VVS) may be an option for chlamydia +/- gonorrhoea testing by nucleic acid amplification test (NAAT) (see laboratory investigations on page 7). Urine tests are appropriate for men but in women NAAT testing of VVS or endocervical swabs are preferable to urine.

Women who accept examination should have a vaginal pH measurement using narrow-range pH paper (pH 4–7). Secretions should be collected from the lateral sides of the vaginal wall using a loop or swab. Vaginal pH testing can be used to assess the likelihood of candida (pH ≤ 4.5) or of BV or TV (pH >4.5) but it cannot distinguish between BV and TV.

If STI testing is indicated and/or requested, endocervical swabs for chlamydia and gonorrhoea should also be taken, and a high vaginal swab (HVS) may be indicated in some cases (see page 7).

Physical examination should include:
- Inspection of the vulva (for obvious discharge, vulvitis, ulcers, other lesions or changes)
- Speculum examination (inspection of: vaginal walls, cervix, foreign bodies; amount, consistency and colour of discharge).

Where there is any suggestion of upper genital tract infection physical examination should also include:
- Abdominal palpation (for tenderness/mass)
- Bimanual pelvic examination (adnexal and/or uterine tenderness/mass, cervical motion tenderness).

A detailed history, including sexual history, is essential to identify the necessary investigations and treatment options.

Women experiencing vaginal discharge who are at low risk of STI can be treated by syndromic or empirical management (Figure 1).

All women with persistent vaginal discharge should be examined to exclude serious pathology.

4.4 Laboratory investigations

Health professionals should liaise with their local laboratory to find out how specimens are routinely processed and what information will be provided on result forms. Relevant clinical information should be provided to laboratory staff to help in processing of samples:
- Site sampled
- Suspicion of specific infection
- Treatment failure or recurrent symptoms
- Current/recent use of intrauterine device/system
- Current/recent pregnancy
- Recent procedure or instrumentation
- Foreign body.
**Things to consider in clinical and sexual history**

- Reasons for presentation and concerns
- Characteristics of the discharge (changes, odour, onset, duration, colour, consistency)
- Any associated symptoms (itch, superficial dyspareunia, dysuria) and symptoms indicative of upper reproductive tract infection (abdominal pain, deep dyspareunia, abnormal vaginal bleeding, dysuria, pyrexia)
- Risk of STIs (aged <25 years, new sexual partner or more than one sexual partner in last year)
- Contraceptive use, pregnancy, postpartum, post-abortion
- Concurrent medications, previous treatments used (prescription, over-the-counter or home remedies)
- Medical conditions (e.g. diabetes, immunocompromised state)
- Non-infective causes of discharge (foreign body, cervical ectopy, polyps, genital tract malignancy, dermatological disease)

**Syndromic Treatment** Based on clinical and sexual history

- Not sexually active or low risk of STI AND
- No symptoms indicative of upper reproductive tract infection

**Empirical Treatment** Based on pH, clinical and sexual history. Can be given before results of any laboratory testing

- Non-offensive white discharge with itch
  - Candida — treat with antifungal
  - Recurrent infection, failed treatment, suspicion of STI (e.g. vaginitis)*

- Offensive discharge without an itch
  - BV — treat with metronidazole (first line)

**Investigate**

- Examination (including bimanual if patient has symptoms of upper reproductive tract infection)
- Vaginal pH (see page 5)
- Endocervical swab(s) for gonorrhoea and chlamydia (see page 7)
- Offer blood test for HIV and syphilis
- Consider high vaginal swab (see page 7)

- Higher risk of STI (aged <25 years, new sexual partner or more than one sexual partner in last year)
- OR Upper reproductive tract symptoms
- OR Women requesting investigation/STI test
- OR Pregnancy, postpartum post-abortion, post-instrumentation
- OR Recurrent infection
- OR Failed treatment

- Synergistic Treatment
- VVS for CT +/− NG and syndromic treatment

**Women of reproductive age complaining of vaginal discharge**

- Declines offer of examination
- Accepts offer of examination
- Accepts examination
- Declines examination*

**VVS for CT +/− NG and syndromic treatment**

*NB. Examination should be encouraged to exclude sexually transmitted infection, malignancy or foreign body.

Abbreviations: BV, bacterial vaginosis; CT, Chlamydia trachomatis; NG, Neisseria gonorrhoeae; STI, sexually transmitted infection; VVS, vulvovaginal swab.
Investigations should be undertaken according to the latest clinical standards and/or local protocols. Appendix 2 summarises the various laboratory tests and methods for investigating vaginal discharge and testing for STIs.

There is agreement in the UK that the minimum tests that constitute an STI screen are chlamydia, gonorrhoea, syphilis and HIV tests. Lengthy pre-test discussion is not required unless a patient needs or requests this. HIV testing in primary care settings has been encouraged by Chief Medical and Nursing Officers. Guidelines on HIV testing including pre- and post-test discussions are available from BASHH.

4.4.1 High vaginal swabs

HVS are often used to diagnose causes of vaginal discharge but they are of limited value. BV may be under-diagnosed if no other diagnostic criteria are used. Reporting of commensal bacteria can cause anxiety and lead to overtreatment.

HVS may be used to aid the diagnosis of BV, VVC, TV or other genital tract infections (e.g. streptococcal organisms) but their use should generally be reserved for the following situations:

- When symptoms, signs and/or pH are inconsistent with a specific diagnosis
- Pregnancy, postpartum, post-abortion or post-instrumentation
- Recurrent symptoms
- Failed treatment

If TV is suspected an HVS can be taken from the posterior fornix but sensitivity may be low because motility reduces with transit time. Therefore, referral to GUM is recommended for confirmation by wet microscopy +/- culture, and also for partner notification. Laboratories may not routinely perform wet microscopy or TV culture so suspected TV should be mentioned on the laboratory request form.

4.4.2 Nucleic acid amplification tests

NAATs should be used for the diagnosis of chlamydia and gonorrhoea (Appendix 2). Combined chlamydia and gonorrhoea tests are now available. False-positives can occur with NAATs. In areas of low disease prevalence the positive predictive value may be suboptimal (<90%) and local laboratories may advise a supplementary or confirmatory test. This should be agreed with your local laboratory.

4.4.3 Endocervical swabs

If a woman is being examined an endocervical swab should be used for NAAT testing for gonorrhoea and/or chlamydia. If gonorrhoea is suspected an additional endocervical swab should be taken for microscopy, culture and sensitivity. Facilities for direct plating of samples for N. gonorrhoeae culture are not usually available in primary care, but transport medium (e.g. charcoal swab) gives acceptable results if plated immediately in the laboratory. If sending swabs to the laboratory in transport medium they should be stored at 4°C as soon as possible and transported to the laboratory ideally within 48 hours. Fluctuations in temperature should be avoided during transit.

4.4.4 Microscopy

Immediate microscopy of specimens (wet mount of posterior vaginal fluid and dry Gram stained slide of lateral vaginal wall and endocervical fluid) can potentially identify TV (sensitivity 70%), candidiasis (sensitivity 50%) and gonorrhoea (sensitivity 30–50%). Dry Gram stain is the definitive diagnostic test for BV.

When immediate microscopy is not available a dry Gram stain slide can be prepared in the laboratory from an HVS or endocervical swab. However, this is far less sensitive for BV diagnosis than immediate microscopy (sensitivity 37% vs >95%) (Appendix 2).

A wet mount can be prepared in the laboratory from an HVS by dipping a small amount of discharge into saline on a microscopic slide. This is less sensitive than immediate microscopy but can identify TV and candida.

4.4.5 Culture

Culture can be used to detect candida if microscopy is inconclusive or if the identification of
species type would be useful (recurrent infection). Culture media are also available for TV. Gonococcal cultures should be performed for anyone with a positive gonorrhoea NAAT result so that antibiotic sensitivity testing can be performed and resistant strains identified.\textsuperscript{25,39} A test of cure is also needed and should be reported to the Health Protection Agency if positive.\textsuperscript{25}

\checkmark Women assessed as being at risk of STI, or who request testing, should be offered appropriate tests for chlamydia, gonorrhoea, syphilis and HIV.

\checkmark An HVS is of limited diagnostic value in the management of vaginal discharge except in cases of inconclusive assessment, recurrent symptoms, treatment failure, or in pregnancy, postpartum, post-abortion or post-instrumentation.

5 Which Treatments are Appropriate for Women Complaining of Vaginal Discharge?

Appendix 3 details the treatment regimens for BV, TV and candida infection in particular situations. Costs are available in the \textit{British National Formulary} (BNF).\textsuperscript{46}

5.1 Treatment of non-sexually transmitted infections

5.1.1 Bacterial vaginosis

High initial cure rates (70–80\%) are achieved with medical treatment. In the treatment of non-pregnant women with BV, clindamycin and metronidazole treatments show comparable efficacy in terms of eradication of symptoms, irrespective of dosing regimen or route of administration.\textsuperscript{2,47} Oral metronidazole is the recommended first-line treatment for BV in the UK because it is less expensive than vaginal preparations and safer than oral clindamycin, which has been associated with pseudomembranous colitis.\textsuperscript{2} However, alternative treatments can be considered for women who experience side effects on oral metronidazole such as metallic taste and gastrointestinal symptoms\textsuperscript{2,47} (Appendix 3).

There is limited evidence for the effectiveness of acidifying gels in the treatment of BV but they may help prevent recurrence (see section on recurrent vaginal discharge on page 10).

Treatment of male partners has not been shown to be effective in preventing recurrence of BV in women.\textsuperscript{48,49} Therefore, routine testing and treatment of male sexual partners is not currently recommended. As studies have found high concordance rates of vaginal microflora amongst monogamous women who have sex with women (WSW)\textsuperscript{50} consideration may be given to testing and treating female partners of women with BV.

Metronidazole and clindamycin administered either orally or vaginally are effective in the treatment of BV.

In the management of BV, testing and treatment of male sexual partners is not indicated but testing and treatment of female sexual partners can be considered.

5.1.2 Vulvovaginal candidiasis

A Cochrane review\textsuperscript{51} found that for uncomplicated VVC, treatment with oral and intravaginal imidazole and triazole antifungals has demonstrated a clinical cure of up to 80\% and mycological cure of up to 83\%. No statistically significant differences have been shown between oral and intravaginal antifungals when administered as single doses.\textsuperscript{51}

Choice of treatment should take into account personal preference, cost, availability and affordability.\textsuperscript{51}

There are no data to support treatment of partners.

Topical antifungal preparations can also be offered for symptom relief but there is little evidence of added benefit over emollients, and there is potential for local irritant reaction.

Vaginal and oral azole antifungals are equally effective in the treatment of VVC.

Women with vulval symptoms of VVC may use topical antifungals (in addition to oral or vaginal treatment) until symptoms resolve.

There is no need for routine screening or treatment of sexual partners in the management of candidiasis.
5.2 Treatment of sexually transmitted infections

The management of STIs should be in line with national standards and current clinical guidance from BASHH. Where testing for other STIs or partner notification are not available, local integrated pathways should be in place to facilitate referral (Box 1).

5.2.1 Trichomonas vaginalis

Nitroimidazole drugs (e.g. metronidazole, tinidazole) are effective in achieving cure. While a single oral dose can achieve cure, side effects may be more frequent when compared with a longer course of treatment. Intravaginal treatment cure rates are low. In the UK, first-line recommended treatment is oral metronidazole (Appendix 3).

As TV is an STI, treatment of partners is recommended. Test of cure is only recommended if symptoms persist or recur.

5.2.2 Chlamydia and gonorrhoea

Health professionals should refer to current national guidance for information on the management of chlamydia and gonorrhoea.

6 Management of Vaginal Discharge in Special Circumstances

6.1 Vaginal discharge in pregnancy

A woman’s obstetrician should be informed of vaginal discharge symptoms in pregnancy and any tests or treatment given.

6.1.1 Bacterial vaginosis

Having BV during pregnancy is associated with adverse events and in particular an increased risk of preterm birth. Treatment of BV before 20 weeks’ gestation and treatment of women with a previous preterm birth may reduce adverse pregnancy outcomes but there is currently little evidence that screening and treating all women with asymptomatic BV will prevent preterm birth. In the UK, routine screening for BV in pregnant women is not currently recommended but if BV is identified as a cause of vaginal discharge or as an incidental finding it should be treated.

Although current evidence suggests that metronidazole is safe in pregnancy and is not teratogenic, single stat doses should be avoided (Appendix 3).

Women with BV who are pregnant or breastfeeding may use metronidazole 400 mg twice daily for 5–7 days or intravaginal therapies. A 2 g stat dose of metronidazole is not recommended in pregnancy or breastfeeding women.

6.1.2 Vulvovaginal candidiasis

VVC is common during pregnancy. There is no evidence of any adverse effect on pregnancy. Topical imidazoles (e.g. clotrimazole, econazole, miconazole, fenticonazole) have been found to be effective in pregnant women with VVC but a longer treatment regimen may be required (Appendix 3).

Oral antifungals should be avoided during pregnancy because of a lack of teratogenicity data.

---

**Box 1 Indications for referral to genitourinary medicine**

- Partner notification not available in clinic/service
- Gonorrhoea culture required (gonorrhoea contact or positive nucleic acid amplification test)
- Trichomonas infection suspected
- Failure to respond to treatment
- Diagnostic uncertainty
- Pelvic inflammatory disease suspected

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Women with VVC in pregnancy should avoid oral antifungals.

Women with VVC in pregnancy can be treated with topical imidazoles. Single-dose treatment is less effective than longer regimens of up to 7 days.

6.1.3 Trichomonas vaginalis
TV may be associated with preterm delivery and low birth weight. A Cochrane review investigated the effects of different treatments for TV in pregnancy. Over 90% of women were cleared of vaginal TV after treatment with metronidazole but it is not clear if this has any impact on pregnancy outcomes. As with treatment of BV in pregnancy, single stat doses of metronidazole should be avoided (Appendix 3).

6.2 Vaginal discharge in women with HIV
When prescribing for women with HIV using antiretroviral medication, practitioners can refer to the Liverpool Pharmacology Group drug interactions website (www.hiv-druginteractions.org), the BNF (www.bnf.org) or Summary of Product Characteristics (SPC) (www.medicines.org.uk/emc/) for advice on potential interactions (Appendix 3).

6.2.1 Bacterial vaginosis
A longitudinal analysis found that BV appears to be more prevalent and persistent among women diagnosed with HIV, particularly women who are immunocompromised. Treatment is as for all other women.

6.2.2 Trichomonas vaginalis
TV may increase the risk of HIV transmission via increased genital shedding of the virus. Treatment of TV has been shown to reduce viral shedding.

Treatment with metronidazole over 7 days appears to be more effective in women with HIV than a single dose. A study found that although rates of treatment failure were similar among HIV-positive and HIV-negative women, HIV-positive women were more likely to have sexual re-exposure. Retesting 3 months after treatment completion may be warranted. For HIV-positive women with TV, longer treatment regimens with oral metronidazole may be more effective than a single dose.

6.2.3 Vulvovaginal candidiasis
Among women diagnosed as HIV-positive, VVC has been shown to occur more commonly and with greater persistence than amongst those who are not HIV-positive; clinical severity of VVC is comparable.

6.3 Recurrent vaginal discharge
If symptoms recur, the history should be revisited and other causes considered. Referral to a specialist clinic (e.g. GUM, vulval clinic) should be considered.

6.3.1 Recurrent BV
There is no specifically agreed definition of recurrent BV. Despite high initial cure rates, recurrence of BV is high. A cohort study reported a median recurrence rate of 58% after treatment with metronidazole.

Cited risk factors for recurrence include female, new or multiple sexual partners, oral sex, and copper-bearing intrauterine device (Cu-IUD) use. Optimal treatment for recurrent BV has not been established. Evidence from an RCT comparing twice-weekly metronidazole vaginal gel to placebo for 16 weeks showed that women receiving maintenance therapy were more likely to remain disease-free during treatment, and for 12 weeks after, than those treated with placebo. However, even with metronidazole maintenance therapy only 35% of patients remained recurrence-free 12 weeks after stopping the treatment. Those receiving vaginal metronidazole gel had a higher rate of symptomatic VVC than placebo users.

A Cochrane review has suggested that there is currently insufficient evidence to recommend the use of probiotics either before, during or after antibiotic treatment as a means of reducing recurrence.
Evidence on the use of acidifying gels is mixed. The studies are small but there is evidence to suggest that acidifying gels may help to reduce relapse rates\(^{77,78}\) and can maintain acidic vaginal pH at 1 month follow-up.\(^{78}\) Compared to clindamycin vaginal cream 5 g per night for 7 nights, acidic vaginal gel used for 3 weeks following tinidazole 2 g stat dose resulted in a higher percentage of women ‘clinically cured’ and with vaginal pH <4.5.\(^{78}\) However, findings from another RCT in which individuals were randomised to either a placebo gel or 5 ml acetic acidic gel twice daily for 7 days failed to demonstrate that this treatment was effective.\(^{79}\) Two lactic acid vaginal gel products are currently available for prescription and OTC sale in the UK (see BNF\(^{46}\) and Appendix 3).

For women with recurrent BV, suppressive treatment with metronidazole vaginal gel may be considered. Evidence to support other regimens is limited.

Women using acidifying gels for recurrent BV can be advised to use them alternate evenings for 1 month or longer if required.

6.3.2 Recurrent VVC

Recurrent VVC is usually defined as four or more episodes of symptomatic mycologically proven VVC in 1 year. The pathogenesis is poorly understood. Recurrent VVC occurs in less than 5% of women. Suppression and maintenance treatment is often recommended.\(^{80}\) An RCT\(^{81}\) showed that women receiving a maintenance period of fluconazole were more likely to remain disease-free during and for 6 months after than those treated with placebo, although most women who received the maintenance regimen had a relapse within a year.

Non-conventional management regimens such as dietary changes, use of probiotics, tea tree oil and not wearing tight clothing have been studied. There is currently insufficient evidence to support their recommendation in treatment.\(^{80,82}\)

For women with recurrent VVC, an induction and maintenance regimen may be used for 6 months.

6.3.3 Recurrent TV

Recurrent TV is usually due to re-infection, although resistance to treatment can also be a cause. Treatment, advice on avoidance of sex or use of condoms and partner notification are required. Health professionals should consider involvement of GUM services.

Recurrent TV is usually due to re-infection, but consideration should be given to the possibility of drug resistance.

7 Contraception and Vaginal Discharge

7.1 Is the efficacy of contraception affected by vaginal discharge treatments?

Guidance on the concomitant use of antibiotics and hormonal contraception changed in 2010.\(^{46,83}\) In women using CHC additional contraceptive precautions are no longer required when using antibiotics that do not induce liver enzymes. Enzyme-inducing antibiotics (e.g. rifampicin) are the only antibiotics that potentially interact with hormonal contraceptives and this type of antibiotic is not usually used in the management of vaginal discharge.

The BNF (www.bnf.org) and the SPC (www.medicines.org.uk/emc/) for vaginal and topical preparations containing econazole, miconazole, isoconazole, fenticonazole or clotrimazole warn that these products may damage latex contraceptives. Clindamycin cream may also weaken condoms.\(^{84}\) Alternative precautions such non-latex barrier methods or avoidance of sex should be advised during use and pragmatically for several days after stopping.

Additional contraceptive precautions are not required when using antibiotics that do not induce liver enzymes.

Women and male partners should be advised that latex contraceptives may be damaged by some vaginal/vulval antifungal treatments.

7.2 Does contraception affect vaginal discharge?

7.2.1 Vulvovaginal candidiasis

VVC occurs most commonly when the vagina is exposed to estrogen. However, there is no clear
evidence as to whether the use of hormonal contraception increases the risk of VVC. One study has suggested that the progestogen-only injectable may reduce a woman’s susceptibility to recurrent VVC, possibly because of its anovulatory effect and relative hypoestrogenism. Women using CHC who have recurrent VVC may wish to consider alternative contraception but there is a lack of evidence to show whether there is any benefit from switching to a lower dose combined preparation or a progestogen-only method, other than the injectable.

The Cu-IUD has been identified as a possible risk factor for acute or recurrent VVC but there is no consistent evidence of an association. There is some evidence to demonstrate that yeasts adhere to IUDs and the combined vaginal ring (CVR). CVR users have been reported as experiencing more vaginal irritation and discharge compared with combined pill users. However, a study of the effect of CVR use on vaginal flora showed no increase in numbers of inflammatory cells or pathogenic bacteria.

Although cervical cytology slides from levonorgestrel-releasing intrauterine system (LNG-IUS) users have shown increased presence of candida with time from insertion, rates of symptomatic infection did not change significantly.

7.2.2 Bacterial vaginosis

Oral combined contraception and condoms have been associated with a reduced risk of BV, whilst BV is more common in users of the Cu-IUD. The association between BV and use of the LNG-IUS is unclear. The progestogen-only implant and injectable may be associated with a decreased risk of BV.

Women using CHC who experience recurrent VVC may wish to consider switching to an alternative method of contraception.

Women with a Cu-IUD who experience recurrent BV may wish to consider switching to an alternative method of contraception.

8 Personal Hygiene and Vaginal Discharge

Personal hygiene measures can be advised for women who are prone to vaginal discharge and/or pruritis (e.g. regular changing of sanitary protection, avoidance of douching and of potentially irritant chemicals in toiletries, antiseptics, wipes, so-called ‘feminine hygiene’ products, washing powders, fabric dyes, and so on). RCOG guidance contains patient information on general care of the vulval skin, including use of emollients and soap substitutes which prevent dryness and loss of the skin’s natural barrier functions.

Women experiencing vaginal discharge can be advised to avoid douching and local irritants as part of general management.

References

1 Faculty of Family Planning and Reproductive Health Care Clinical Effectiveness Unit. The management of women of reproductive age attending non-genitourinary medicine settings complaining of vaginal discharge. J Fam Plann Reprod Health Care 2006; 32: 33–41.


British Association for Sexual Health and HIV Clinical Effectiveness Group. Sexually Transmitted Infections: UK National
CEU GUIDANCE


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APPENDIX 1: DEVELOPMENT OF CEU GUIDANCE

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Declared Interests
No significant interests were declared.

Patient Involvement
The BASHH public patient involvement (PPI) group reviewed this document.

Clinical Effectiveness Unit (CEU) guidance is developed in collaboration with the Clinical Effectiveness Committee (CEC) of the Faculty of Sexual and Reproductive Healthcare (FSRH). This guidance document was developed in collaboration with the British Association for Sexual Health & HIV (BASHH). The CEU guidance development process employs standard methodology and makes use of systematic literature review and a multidisciplinary group of professionals. The multidisciplinary group is identified by the CEU for their expertise in the topic area and typically includes clinicians working in family planning, sexual and reproductive health care, general practice, other allied specialties, and user representation. In addition, the aim is to include a representative from the FSRH CEC, the FSRH Meetings Committee and FSRH Council in the multidisciplinary group.

Evidence is identified using a systematic literature review and electronic searches are performed for: MEDLINE (CD Ovid version) (1996–2012); EMBASE (1996–2012); PubMed (1996–2012); The Cochrane Library (to 2012) and the US National Guideline Clearing House. The searches are performed using relevant medical subject headings (MeSH), terms and text words. The Cochrane Library is searched for relevant systematic reviews, meta-analyses and controlled trials relevant to vaginal discharge. Previously existing guidelines from the FSRH (formerly the Faculty of Family Planning and Reproductive Health Care), the Royal College of Obstetricians and Gynaecologists (RCOG), the World Health Organization (WHO) and the British Association for Sexual Health and HIV (BASHH), and reference lists of identified publications, are also searched. All papers are graded according to the Grades of Recommendations Assessment, Development and Evaluation (GRADE) system. Recommendations are graded as in the table included on the inside front cover of this document using a scheme similar to that adopted by the RCOG and other guideline development organisations. The clinical recommendations within this guidance are based on evidence whenever possible. Summary evidence tables are available on request from the CEU. The process for the development of CEU guidance is outlined on the inside back cover of this document and is detailed on the FSRH website (www.fsrh.org). The methods used in the development of this guidance have been accredited by NHS Evidence.
## APPENDIX 2: SUMMARY OF LABORATORY PROCESSING OF SPECIMENS FROM WOMEN WITH VAGINAL DISCHARGE

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Preparation of samples in the laboratory</th>
<th>Samples prepared to detect:</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>High vaginal swab</td>
<td>Microscopy and Gram stain</td>
<td>Bacterial vaginosis (BV) • Clue cells (epithelial cell coated with small bacteria) • Gram-positive and -negative cocci • Reduced lactobacilli</td>
<td>Criteria for reporting BV may vary. Growth of <em>Gardnerella vaginalis</em> not diagnostic of BV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Candida (spores and pseudohyphae)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Saline wet microscopy Trichomonas vaginalis (TV) (flagellate organism)</td>
<td>Wet microscopy not routinely performed in all laboratories unless TV testing requested</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Culture Candida</td>
<td>Candida cultured on Sabouraud agar. Request candida species and antifungal sensitivities in cases of treatment failure/recurrence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trichomonas vaginalis</td>
<td>Culture for TV not routinely performed in all laboratories</td>
</tr>
<tr>
<td>Endocervical swab</td>
<td>Nucleic acid amplification test (NAAT)</td>
<td>Chlamydia and gonorrhoea</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Culture Gonorrhoea</td>
<td>If NAAT test for <em>Neisseria gonorrhoeae</em> is positive, culture should also be performed for sensitivity testing</td>
</tr>
<tr>
<td>Vulvovaginal swab (VVS)</td>
<td>NAAT</td>
<td>Chlamydia and gonorrhoea</td>
<td>Self-taken VVS acceptable to most women. More sensitive than urine for chlamydia and gonorrhoea testing in women</td>
</tr>
<tr>
<td>Urine</td>
<td>NAAT</td>
<td>Chlamydia</td>
<td>While urine can be tested for gonorrhoea and chlamydia, it is less sensitive than endocervical or VVS for testing in women</td>
</tr>
<tr>
<td>Blood</td>
<td>Fourth-generation assays (combined antibody and antigen detection)</td>
<td>HIV</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Treponema pallidum</em> enzyme immunoassay (EIA) or syphilis serology</td>
<td>Syphilis</td>
<td></td>
</tr>
</tbody>
</table>

BV, bacterial vaginosis; EIA, enzyme immunoassay; NAAT, nucleic acid amplification test; TV, *Trichomonas vaginalis*; VVS, vulvovaginal swab.
### APPENDIX 3: RECOMMENDED TREATMENT REGIMENS FOR BACTERIAL VAGINOSIS, VULVOVAGINAL CANDIDIASIS AND TRICHOMONAS

<table>
<thead>
<tr>
<th>Treatment regimen</th>
<th>BV</th>
<th>VVC</th>
<th>TV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended regimen</strong></td>
<td>Metronidazole 400 mg twice daily for 5–7 days or 2 g single dose</td>
<td>Oral Fluconazole 150 mg stat dose</td>
<td>Oral Metronidazole: single 2 g oral dose or 400 mg twice daily for 5–7 days</td>
</tr>
<tr>
<td><strong>Vaginal</strong></td>
<td>Clotrimazole 500 mg pessary stat</td>
<td>Itraconazole 200 mg bd for 1 day</td>
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</tr>
<tr>
<td></td>
<td>Clotrimazole cream (10%) 5 g stat at night</td>
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<tr>
<td></td>
<td>Clotrimazole pessary 100 mg x 6 nights</td>
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<tr>
<td></td>
<td>Clotrimazole pessary 200 mg x 3 nights</td>
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<tr>
<td></td>
<td>Miconazole nitrate 2% 78 g cream with applicators once daily for 10–14 days or twice daily for 7 days</td>
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<tr>
<td></td>
<td>Miconazole nitrate 1.2 g ovule stat dose at night</td>
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<tr>
<td></td>
<td>Econazole nitrate 150 g pessary x 3 nights</td>
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<tr>
<td></td>
<td>Econazole nitrate 150 g pessary stat dose</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fenticonazole nitrate cream 2% insert 5 g twice daily for 3 days</td>
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</tr>
<tr>
<td></td>
<td>Fenticonazole nitrate 200 mg capsule x 3 nights</td>
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</tr>
<tr>
<td></td>
<td>Fenticonazole nitrate 600 mg capsule stat dose at night</td>
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<tr>
<td><strong>Combined</strong></td>
<td>Clotrimazole (10%) vaginal cream with applicator and 2% topical cream</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Clotrimazole 500 g pessary and 2% topical cream</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Topical (in addition to oral or vaginal for vulval symptoms)</strong></td>
<td>Clotrimazole cream (1%) 20 g 2–3 times daily</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Clotrimazole cream (2%) 20 g 2–3 times daily</td>
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<tr>
<td></td>
<td>Econazole nitrate 1% 15 g cream 14 nights</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ketoconazole cream 2% once or twice daily</td>
<td></td>
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</tr>
</tbody>
</table>

| Alternative regimen | Intravaginal metronidazole gel (0.75%) once daily for 5 days or intravaginal clindamycin cream (2%) once daily for 7 days or Clindamycin* 300 mg capsule twice daily for 7 days or Tinidazole tablet 2 g single dose | Antifungals can be applied to the vulval area | Tinidazole 2 g orally in a single dose |

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*Note: Lapsed Guidance Document.*
### APPENDIX 3: RECOMMENDED TREATMENT REGIMENS FOR BACTERIAL VAGINOSIS, VULVOVAGINAL CANDIDIASIS AND TRICHOMONAS (continued)

<table>
<thead>
<tr>
<th>Treatment regimen</th>
<th>BV</th>
<th>VVC</th>
<th>TV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recurrent infection</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suppressive therapy</td>
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</tr>
<tr>
<td>Oral Metronidazole 400 mg twice daily for 3 days at the beginning and end of menstruation</td>
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<tr>
<td>Metronidazole 2 g stat dose monthly</td>
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</tr>
<tr>
<td>Intravaginal Metronidazole (0.75%): 5 g applicator twice weekly for 4–6 months after an initial 10-day course (outside product licence)</td>
<td></td>
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</tr>
<tr>
<td>Lactic acid gel (4.5%) 5 ml tube at night for 2–3 nights after menstruation</td>
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<td></td>
</tr>
<tr>
<td>Lactic acid gel (4.9%) 5 ml tube once or twice weekly.</td>
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<td></td>
</tr>
<tr>
<td>[See also Good Practice Point for recurrent BV on page 11]</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partner treatment</th>
<th>Routine screening and treatment of sexual partners is not recommended</th>
<th>Routine screening and treatment of sexual partners is not recommended</th>
<th>Partner notification and treatment is recommended. Test for other STIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment in pregnancy and breastfeeding women</td>
<td>Symptomatic women should be treated as above but single stat doses should be avoided</td>
<td>Treatment with topical azoles as above but longer duration of treatment (7 days) may be required. Avoid oral regimens due to potential teratogenicity</td>
<td>No evidence of teratogenicity of metronidazole but single stat doses should be avoided</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diabetes</th>
<th>As for non-diabetic patients</th>
<th>Candida albicans As for non-diabetic patients</th>
<th>As for non-diabetic patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candida glabrata Nystatin pessary 200,000 units for 14 days (not readily available in the UK; refer to service with GUM)</td>
<td></td>
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</tr>
</tbody>
</table>

| HIV (check for drug interactions with concomitant medication) | Women should be treated as above but longer treatment may be required | Women should be treated as above but longer treatment may be required | Treatment with oral metronidazole but longer treatment may be required (7 days) |
|-----------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|

Exclude vomiting with metronidazole and repeat standard regimen as above

Check risk of re-infection, partner notification and compliance

If drug resistance suspected seek specialist advice.
# Appendix 3: Recommended Treatment Regimens for Bacterial Vaginosis, Vulvovaginal Candidiasis and Trichomonas

(continued)

<table>
<thead>
<tr>
<th>Treatment regiment</th>
<th>BV</th>
<th>VVC</th>
<th>TV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special notes</td>
<td></td>
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<tr>
<td>Alcohol should be avoided for the duration of treatment with nitroimidazole drugs (e.g. metronidazole and tinidazole) and for 48 hours afterwards because of the possibility of a disulfiram-like (Antabuse® effect) reaction(^{46,57,97})</td>
<td></td>
<td>Latex condoms and diaphragms may be damaged by vaginal or topical preparations containing econazole, miconazole, isoconazole, fenticonazole clotrimazole</td>
<td>Alcohol should be avoided for the duration of treatment with nitroimidazole drugs (e.g. metronidazole and tinidazole) and for 48 hours afterwards because of the possibility of a disulfiram-like (Antabuse® effect) reaction(^{46,57,97})</td>
</tr>
<tr>
<td>Clindamycin intravaginal cream can damage latex condoms</td>
<td></td>
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</tr>
</tbody>
</table>

*Associated with pseudomembranous colitis – seek local advice.*

BV, bacterial vaginosis; GUM, genitourinary medicine; STI, sexually transmitted infection; TV, Trichomonas vaginalis; VVC, vulvovaginal candidiasis.
Discussion Point for Management of Vaginal Discharge in Non-Genitourinary Medicine Settings

The following discussion point has been developed by the FSRH Meetings Committee.

**Discussion Point**

1. Consider how you would talk to a young woman presenting with a history of vaginal discharge and odour, worse after intercourse. She finds this embarrassing.

Questions for Management of Vaginal Discharge in Non-Genitourinary Medicine Settings

The following questions and answers have been developed by the FSRH Meetings Committee.

**Indicate your answer by ticking the appropriate box for each question**

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
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<tbody>
<tr>
<td>1</td>
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<td>10</td>
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</tbody>
</table>

**Answers**

- 10 True
- 9 False
- 8 True
- 7 False
- 6 True
- 5 False
- 4 True
- 3 False
- 2 True
- 1 False

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Auditable Outcomes from Management of Vaginal Discharge in Non-Genitourinary Medicine Settings

The following auditable outcomes have been developed by the FSRH Clinical Standards Committee.

<table>
<thead>
<tr>
<th>Auditable Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Proportion of women with vaginal discharge who have a sexually transmitted infection (STI) risk assessment recorded [Target 100%]</td>
</tr>
<tr>
<td>2  Proportion of women with vaginal discharge who have an enquiry of upper reproductive tract symptoms documented [Target 100%]</td>
</tr>
<tr>
<td>3  In settings where women present with vaginal discharge there should be availability of the locally recommended swabs to detect STIs, with onward transport to a laboratory for testing [Target 100%]</td>
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<tr>
<td>4  Where an STI is the cause of vaginal discharge, appropriate partner notification and treatment is advised and recorded [Target 100%]</td>
</tr>
</tbody>
</table>
Lapsed Guidance Document
### STEPS INVOLVED IN THE DEVELOPMENT OF THIS GUIDANCE DOCUMENT

- Appointment of a multidisciplinary group by invitation to main stakeholders.
- Revision of key questions by the Clinical Effectiveness Unit (CEU) and multidisciplinary group.
- Systematic literature review, critical appraisal and development of evidence tables by the CEU researcher.
- Draft one guidance document is written by the CEU.
- Peer review by multidisciplinary group (MDG) (written feedback and one-day meeting).
- Preparation of draft two by the MDG, the Faculty of Sexual and Reproductive Healthcare (FSRH) Clinical Effectiveness Committee (CEC) and two independent peer reviewers.
- Preparation of draft three based on written feedback.
- The MDG is asked to review the guidance and recommendations using a formal consensus process.
- Preparation of draft four.
- Draft four document is published on the Faculty website for 1 month for public consultation. Stakeholders are informed of this consultation process.
- All feedback comments are reviewed by the CEU, MDG, FSRH CEC and peer reviewers.
- The final draft is prepared and the CEU’s response to consultation comments is posted on the FSRH website.
- The final document is published by the FSRH.
- Printed copies are mailed to members and an electronic version is available on the FSRH website.
- Post-publication feedback is reviewed by the CEC and the web version is amended as and when necessary.

### COMMENTS AND FEEDBACK ON PUBLISHED GUIDANCE

All comments on published guidance can be sent directly to the Clinical Effectiveness Unit (CEU) at ceu.members@ggc.scot.nhs.uk. You will receive an automated acknowledgment on receipt of your comments. If you do not receive this automated response please contact the CEU by telephone [+44 (0) 141 232 8459/8460] or e-mail (ceu.members@ggc.scot.nhs.uk).

The CEU is unable to respond individually to all feedback. However, the CEU will review all comments and provide an anonymised summary of comments and responses, which are reviewed by the Clinical Effectiveness Committee and any necessary amendments made.