Women’s Health

Vaginal thrush

Emergency hormonal contraception

Vaginal thrush

- Women often seek to buy products for feminine itching and may be embarrassed to seek advice or answer what they see as intrusive questions from the pharmacist.

- Vaginal pessaries, intravaginal creams containing *imidazole* antifungals and oral *fluconazole* are effective treatments.

- Before making any recommendation it is vital to question the patient to identify the probable cause of the symptoms.

- Advertising of these treatments direct to the public means that a request for a named product may be made. It is important to confirm its appropriateness.

What you need to know

- Age
  - Child, adult, elderly
- Duration
- Symptoms
  - Itch
  - Soreness
  - Discharge (colour, consistency, odour)
  - Dysuria
  - Dyspareunia
  - Threadworms
- Previous history
- Medication

Age

- Vaginal candidiasis (thrush) is common in women of childbearing age, and pregnancy and diabetes are strong predisposing factors.

- This infection is rare in children and in postmenopausal women because of the different environment in the vagina.

- In contrast to women of childbearing age, where vaginal pH is generally acidic (low pH) and contains glycogen, the vaginal environment of children and menopausal women tends to be alkaline (high pH) and does not contain large amounts of glycogen.

- Oestrogen, present between adolescence and the menopause, leads to the availability of glycogen in the vagina and also contributes to the development of a protective barrier layer on the walls of the vagina.

- The lack of oestrogen in children and postmenopausal women means this protective barrier is not present, with a consequent increased tendency to bacterial (but not fungal) infection.

- In the United Kingdom, the Commission on Human Medicines (CHM) recommends that women under 16 or over 60 years complaining of symptoms of vaginal thrush should be referred to their doctor.

- Child abuse may be the source of vaginal infection in girls, making referral even more important. Vaginal thrush is rare in older women and other causes of the symptoms need to be excluded.

Duration

- Some women delay seeking advice from the pharmacist or doctor because of the embarrassment about their symptoms.

- They may have tried an OTC product or a prescription medicine already

Symptoms

- *Itch (pruritus)*
  - *Dermatitis* Allergic or irritant dermatitis may be responsible for vaginal itch. It is worth asking whether the patient has recently used any new toiletries (e.g. soaps, bath or shower products). Vaginal deodorants are sometimes the source of allergic reactions. Women sometimes use harsh soaps, antiseptics and vaginal douches in an overenthusiastic cleansing of the vagina. Regular washing with warm water is all that is required to keep the vagina clean and maintain a healthy vaginal environment.

  - *Candidiasis (thrush)* The itch associated with thrush is often intense and burning in nature. Sometimes the skin may be excoriated and raw from scratching when the itch is severe.

- *Discharge*
- In women of childbearing age, the vagina naturally produces a watery discharge and cervical mucus is also produced, which changes consistency at particular times of the menstrual cycle.

- Such fluids may be watery or slightly thicker, with no associated odour.

- Some women worry about these natural secretions and think they have an infection.

- The most common infective cause of vaginal discharge is candidiasis.
- Vaginal candidiasis may be (but is not always) associated with a discharge.
- The discharge is classically cream-coloured, thick and curdy in appearance but, alternatively, may be thin and rather watery.

- Other vaginal infections may be responsible for producing discharge but a remarkedly different from that caused by thrush.

- The discharge associated with candidal infection does not usually produce an unpleasant odour, in contrast to that produced by bacterial infection.

- Infection leading to discharge described as yellow or greenish is more likely to be bacterial in origin, for example, bacterial vaginosis, chlamydia or gonorrhoea.

- *Partner's symptoms*
- Men may be infected with *Candida* without showing any symptoms.
- Typical symptoms for men are an irritating rash on the penis, particularly on the glans.

- *Dysuria*
- Dysuria may be present and scratching the skin in response to itching might be responsible, although dysuria may occur without scratching.

- Sometimes the pain on passing urine may be mistaken for cystitis by the patient.

- The CHM advises that lower abdominal pain and dysuria are indications for referral because of their possible link with kidney infections.

- *Dyspareunia (painful intercourse)*
- Painful intercourse may be associated with infection or a sensitivity reaction where the vulval and vaginal areas are involved.

- *Threadworms*
- Occasionally, threadworm infestation can lead to vaginal pruritus and this has sometimes occurred in children. The patient would also be experiencing anal itching in such a case.
- The pharmacist should refer girls under the age of 16 years to the doctor in any case of vaginal symptoms.

Previous history

- Recurrent thrush is a problem for some women, often following antibiotic treatment.

- Recurrent infections are defined as ‘four or more episodes of symptomatic candidosis annually’. The CHM advice is that any woman who has experienced more than two attacks of thrush during the previous 6 months should be referred to the doctor.

- Repeated thrush infections may indicate an underlying problem or altered immunity and further investigation is needed.

- *Pregnancy*
- During pregnancy almost one in five women will have an episode of vaginal candidiasis. This high incidence has been attributed to hormonal changes with a consequent alteration in the vaginal environment leading to the presence of increased quantities of glycogen.

- Any pregnant woman with thrush should be referred to the doctor.

- *Diabetes*
- It is thought that *Candida* is able to grow more easily in diabetic patients because of the higher glucose levels in blood and tissues.

- Sometimes recurrent vaginal thrush can be a sign of undiagnosed diabetes or, in a patient who has been diagnosed, of poor diabetic control.

- *Sexually transmitted diseases*
- In the United Kingdom, the CHM insists that women who have previously had a sexually transmitted infection should not be sold OTC treatments for thrush.

- The thinking behind this ruling is that with a previous history of sexually transmitted disease (STD), the current condition may not be thrush or may include a dual infection with another organism.

- Pharmacists may be concerned about how patients will respond to personal questions.

- However, it should be possible to enquire about previous episodes of these or similar symptoms in a tactful way, for example, by asking ‘Have you ever had anything like this before?’ and if ‘Yes’, ‘Tell me about the symptoms.
- Were they exactly the same as this time?’ and about the partner, ‘Has your partner mentioned any symptoms recently?’

- *Oral steroids*
- Patients taking oral steroids may be at increased risk of candidal infection.

- *Immunocompromised patients*
- Patients with HIV or AIDS are prone to recurrent thrush infection
- because the immune system is unable to combat them. Patients undergoing cancer chemotherapy are also at risk of infection.

Medication

- *Oral contraceptives*
- It has been suggested that the OCP is linked to the incidence of vaginal candidiasis; however, oral contraceptives are no longer considered a significant precipitating factor.

- *Antibiotics*
- Broad-spectrum antibiotics wipe out the natural bacterial flora (lactobacilli) in the vagina and can predispose to candidal overgrowth.

- Some women find that an episode of thrush follows every course of antibiotics they take. The doctor may prescribe an antifungal at the same time as the antibiotic in such cases.

- *Local anaesthetics*
- Vaginal pruritus may actually be caused by some of the products used to relieve the symptom.

- Creams and ointments advertised for ‘feminine’ itching often contain local anaesthetics – a well-known cause of sensitivity reactions. It is important to check what, if any, treatment the patient has tried before seeking your advice.

When to refer

The UK CHM list:

- First occurrence of symptoms
- Known hypersensitivity to imidazoles or other vaginal antifungal products
- Pregnancy or suspected pregnancy
- More than two attacks in the previous 6 months
- Previous history of STD
- Exposure to partner with STD
- Patient under 16 or over 60 years
- Abnormal or irregular vaginal bleeding
- Any blood staining of vaginal discharge
- Vulval or vaginal sores, ulcers or blisters
- Associated lower abdominal pain or dysuria
- Adverse effects (redness, irritation or swelling associated with treatment)
- No improvement within 7 days of treatment

Management

- Single-dose intravaginal and oral *azole* preparations are effective in treating vaginal candidiasis and give 80–95% clinical and mycological cure rates.
- A Cochrane review found them to be equally effective.
- Topical preparations give quicker initial relief, probably due to the vehicle.
- They may sometimes exacerbate burning sensations initially, and oral treatment may be preferred if the vulva is very inflamed.

- Oral therapies are effective, but it may be 12–24 h before symptoms improve.
- Some women find oral treatment more convenient.
- Patients find single-dose products very convenient and compliance is higher than with treatments involving several days' use.
- The patient can be asked whether she prefers a pessary, vaginal cream or oral formulation.
- Some experts argue that oral antifungals should be reserved for resistant cases. Pharmacists will use their professional judgement together with patient preference in making the decision on treatment.

- The pharmacist should make sure that the patient knows how to use the product.
- An effective way to do this is to show the patient the manufacturer's leaflet instructions.
- Where external symptoms are also a problem, an *azole* cream *(miconazole* or *clotrimazole)* can be useful in addition to the intravaginal or oral product.
- The cream should be applied twice daily, morning and night.

- The azoles can cause sensitivity reactions but these seem to be rare.

- Oral *fluconazole* interacts with some drugs:
  - anticoagulants,
  - oral sulphonylureas,
  - ciclosporin (cyclosporin),
  - phenytoin,
  - rifampicin
  - theophylline.

- Reported side-effects from oral *fluconazole* occur in some 10% of patients and are usually mild and transient.

- They include nausea, abdominal discomfort, flatulence and diarrhoea.

- Oral *fluconazole* should not be recommended during pregnancy or for nursing mothers because it is excreted in breast milk.

Treatment of partner

- Men may be infected with *Candida* without showing any symptoms.
- Typical symptoms for men are an irritating rash on the penis, particularly on the glans.
- Symptomatic males with candidal balanitis (penile thrush) and whose female partner has vaginal thrush should be treated.
- An azole cream can be used twice daily on the glans of the penis, applied under the foreskin for 6 days. Oral *fluconazole* can also be used.

'Live' yoghurt

- Live yoghurt contains lactobacilli, which are said to alter the vaginal environment, making it more difficult for *Candida* to grow.

- It has been suggested that women prone to thrush should regularly eat live yoghurt to increase the level of lactobacilli in the gut.

- However, data are inconclusive as to the effectiveness of *Lactobacillus*-containing yoghurt, administered either orally or vaginally, in either treating or preventing thrush.

- Direct application of live yoghurt onto the vulval skin and into the vagina on a tampon has been recommended as a treatment for thrush.

- This process is messy and some women have reported stinging on application, which is not surprising if the skin is excoriated and sore.

- It is otherwise harmless, although evidence of effectiveness is lacking.

Prevention

- Thrush thrives in a warm environment.
- Women who are prone to attacks of thrush may find that avoiding nylon underwear and tights and using cotton underwear instead may help to prevent future attacks.
- The protective lining of the vagina is stripped away by foam baths, soaps and douches and these are best avoided.
- Vaginal deodorants can themselves cause allergic reactions and should not be used.
- If the patient wants to use a soap or cleanser, an unperfumed, mild variety is best.
- Since *Candida* can be transferred from the bowel when wiping the anus after a bowel movement, wiping from front to back should help to prevent this.

Case

- Helen Simpson is a student at the local university. She asks one of your assistants for something to treat thrush and is referred to you. You walk with Helen to a quiet area of the shop where your conversation will not be overheard. Initially, Helen is resistant to your involvement, asking why you need to ask all these personal questions. After you have explained that you are required to obtain information before selling these products and that, in any case, you need to be sure that the problem is thrush and not a different infection, she seems happier. She has not had thrush or any similar symptoms before but described her symptoms to a flatmate who made the diagnosis. The worst symptom is itching, which was particularly severe last night. Helen has noticed small quantities of a cream-coloured discharge. The vulval skin is sore and red. Helen has a boyfriend, but he hasn’t had any symptoms. She is not taking any medicines and does not have any existing illnesses or conditions. Since arriving at the university a few months ago she has not registered with the university’s health centre and has therefore come to the pharmacy hoping to buy a treatment.

- **Emergency hormonal contraception**

Emergency hormonal contraception

- Dealing with requests for emergency hormonal contraception (EHC) requires sensitive interpersonal skills from the pharmacist.
- Enabling privacy for the consultation is essential and the wider availability of consultation areas and rooms has improved this.
- Careful thought needs to be given to the wording of questions.
- Some 20% of women will go to a pharmacy other than their regular one because they want to remain anonymous.

What you need to know

Age

Why EHC is needed – confirmation that unprotected sex or contraceptive failure has occurred

When unprotected sex/contraceptive failure occurred

Could the woman already be pregnant?

Other medicines being taken

Age

- EHC can be supplied OTC as a P medicine for women aged 16 years and over.

- For women under 16 years the pharmacist can refer to the doctor or family planning service.

Why EHC is needed

- The most common reasons for EHC to be requested are
  - failure of a barrier contraceptive method (e.g. condom that splits),
  - missed contraceptive pill(s)
  - unprotected sexual intercourse (UPSI).

- In the case of missed pills the pharmacist should follow the guidance of the Faculty of Family Planning and Reproductive Health Care Clinical Effectiveness Unit

Recommendations for use of EHC (FFPRHC 2012)	
Combined pills	If *two or more* active ethinyloestradiol pills have been missed in the first week of pill taking (i.e. days 1–7) and UPSI occurred in week 1 or the pill-free week
Progestogen-only pills (POPs)	If *one or more* POPs have been missed or taken >3 h late (>12 h late for desogestrel) *and* UPSI has occurred in the 2 days following this
Progestogen-only injectable	If the contraceptive injection is late (>14 weeks from the previous injection for medroxyprogesterone acetate or >10 weeks for norethisterone enantate) *and* UPSI has occurred
Barrier methods	If there has been failure of a barrier method

When unprotected sex/contraceptive failure occurred

- EHC needs to be started within 72 h of unprotected intercourse.
- The sooner it is started, the higher is its efficacy.
- If unprotected sex took place between 72 h and 5 days ago, the woman can be referred to have an intrauterine device (IUD) fitted as a method of emergency contraception.

Could the woman already be pregnant?

- Any other episodes of unprotected sex in the current cycle are important.
- Ask whether the last menstrual period was lighter or later than usual.
- If in doubt, the pharmacist can suggest that the woman has a pregnancy test.
- EHC will not work if the woman is pregnant. There is no evidence that EHC is harmful to the pregnancy.

Other medicines being taken

- Medicines that induce specific liver enzymes have the potential to increase the metabolism of *levonorgestrel* and thus to reduce its efficacy.

- Women taking the following medicines should be referred :
  - Anticonvulsants *(carbamazepine, phenytoin, primidone, phenobarbital*
  - *Rifampicin* and *rifabutin*
  - *Griseofulvin*
  - *Ritonavir*
  - St John’s wort

- There is an interaction between *ciclosporin* and *levonorgestrel.*
- Here, the progestogen inhibits the metabolism of *ciclosporin* and increases levels of the latter.
- A woman requesting EHC who is taking *ciclosporin* should be referred.

Treatment timescale

- EHC must be started within 72 h of unprotected intercourse.

When to refer
Age under 16 years
Longer than 72 h since unprotected sex
Taking a medicine that interacts with EHC
Requests for future use

Management

- **Dosage**
- *Levonorgestrel* EHC is taken as a dose of one 1.5-mg table as soon as possible after unprotected intercourse.

- ***Side-effects***
- The most likely side effect is nausea, which occurred in about 14% of women during clinical trials of *levonorgestrel* EHC.

- Although the likelihood of vomiting is small, absorption of *levonorgestrel* could be affected if vomiting occurs within 3 h of taking the tablet.

- Another dose is needed as soon as possible.

- ***Women who should not take EHC***
- The product licence for the P medicine states that it should not be taken by a woman who is
  - pregnant (because it will not work),
  - has severe hepatic dysfunction
  - severe malabsorption (e.g. Crohn's disease).

Advice to give when supplying EHC

- **1** Take the tablet as soon as possible.
- **2** About one in seven women feels sick after taking *levonorgestrel* EHC but only one in every hundred is actually sick.
- **3** If the woman is sick within 3 h of taking the tablet, she should obtain a further supply.

- **4** The next period may start earlier, on time or later than usual. If it is lighter, shorter or more than 3 days later than usual, the woman should see her doctor or family planning adviser to have a pregnancy test.

- **5** If the woman takes the combined oral contraceptive (COC), she and her partner should use condoms in addition to continuing the pill, until she has taken it for 7 consecutive days.

- **6** EHC does not equate to ongoing contraception, nor does it offer protection against STD.

- EHC can be used on more than one occasion within the same menstrual cycle but this is likely to disrupt the cycle.

- There are no safety concerns about repeated use of EHC but a woman doing so would find it difficult to keep track of her cycle because of the changes EHC can cause.

- Some women may believe that repeated courses of EHC are a substitute for other contraceptive methods. EHC used in this way is less effective than other methods of contraception and the risk of becoming pregnant is higher.