Diagnosis and Treatment of Fungal and Non-Specific Vaginitis

by Isabel Stabile *MD MRCP MRCS MRCOG PhD*
Faculty of Medicine and Surgery
University of Malta

Vaginal symptoms are a common and recurring problem affecting about 10% of women in general practice. There is an increase in vaginal discharge with puberty, sexual activity and the oral contraceptive pill. The most common infective causes are Candida, bacterial vaginosis, Trichomonas, Gonorrhoea and Chlamydia. Symptoms are of little diagnostic value. A detailed sexual history and examination followed by vaginal pH, saline/10% KOH wet mount, cervical cytology and microbiological examination will guide appropriate treatment.

Vaginal symptoms are a common and recurring problem that affect about one in 10 women who present to a general practitioner[1]. The diagnosis of vaginitis is based on the presence of symptoms of abnormal discharge, vulvovaginal discomfort or both. The presence of lower abdominal pain, cervical excitation or adnexal tenderness raises the possibility of pe lvic inflammatory disease. Discharge flows from the vagina daily as the body's way of maintaining a healthy environment. The composition of vaginal flora changes with age, stress, hormonal influence and sexual activity. Over-zealous douching washes away lactobacilli which maintain acidic vaginal pH. Normal discharge is usually odourless, clear or milky. There is a physiological increase in vaginal discharge with puberty, sexual activity and being on the oral contraceptive pill. A change in the amount, colour and smell of vaginal discharge and symptoms of irritation, itching or burning could be due to an imbalance of healthy bacteria in the vagina, leading to vaginitis. Non-infective vaginitis may be due to ectropion, polyps, neoplasm, irritants (soaps, antiseptics, detergents), retained tampons and condoms. In post-menopausal women with chronic vaginitis, atrophic vaginitis (often blood stained) must be considered. The aetiology of vaginitis is not always easy to establish, primarily because the symptoms or subjective description are of little value. A detailed sexual history, followed by a full physical examination (including that of the husband, partner or both), should ideally be followed by vaginal pH, saline/10% KOH wet mount, cervical cytology and microbiological examination of cervical, anal and penile areas. These investigations are often not undertaken in family practice[2]. The most common infective causes of vaginitis include Candida, bacterial vaginosis (mostly due to Gardnerella), Trichomonas, Gonorrhoea, and Chlamydia[3]. Threadworm should also be considered in kids. Gonorrhoea and Chlamydia will not be considered in this article.

Candidiasis is a fungal infection common in women of childbearing age that causes pruritus, with a thick, white vaginal discharge. The Gram positive yeast is a normal commensal in the mouth, GI tract and vagina[4]. Candidiasis is not necessarily sexually transmitted: there is often a history of recurrent yeast infections or recent antibiotic treatment. Symptoms often begin just before menses. Precipitating factors include steroids, diabetes mellitus and pregnancy. Partners are often asymptomatic. The vaginal pH is 4.5-4.8 and hyphae are seen on 10% KOH wet mount. Candida is treated using pessaries (and cream for the partners) containing nystatin, clotrimazole, miconazole alone or using oral fluconazole or itraconazole. Sexual intercourse should be avoided until both partners have been treated. Miconazole and econazole have an adverse effect on latex condoms.

In a randomized study, Lactobacillus preparations taken orally or vaginally during and for four days after short term antibiotics for non-gynaecological infections were not effective in preventing post-antibiotic vulvovaginitis[5].

Many women self-diagnose and self-treat episodes of vaginal infections with over-the-counter treatment, and later present with a history of recurrent thrush, never having had the diagnosis confirmed microbiologically. 5% of healthy women have four or more infections annually necessitating maintenance treatment regimens for six months[6]. Apart from excluding predisposing causes, simple approaches such as avoiding chemicals around the vulva (bath salts etc), front-to-back wiping and wearing double-rinsed cotton underwear (or even better, no underwear in hot humid climates) may be helpful in minimizing recurrences.

Trichomoniasis is often associated with risk factors for other sexually transmitted diseases (STDs), especially a history of multiple sexual partners. The discharge is usually copious, greenish, frothy and smelly, resulting in local pain, irritation and occasionally pruritus. Symptoms often peak just after menses. External genital examination may be normal in men and women. Vulvar and vaginal wall erythema may be present; the "strawberry cervix" appearance caused by inflammatory punctate haemorrhage is uncommon. Infection during pregnancy has been associated with preterm deliveries and low birth weight infants. The pH is usually between 5.0-6.0 and motile trichomonads are visible on saline mount. Both partners should be treated with Metronidazole (400mg bd or a single dose of 2 g). A test of cure should be done after one week with microscopy and culture.

Vaginal symptoms are often assumed to be due to thrush, but bacterial vaginosis has been found to be associated with up to half of patients with vaginal symptoms[7]. Bacterial vaginosis has a polymicrobial aetiology including the gram negative anaerobe Gardnerella vaginalis. It is often asymptomatic except in the pre- and post-menstrual period[8]. Three out of four of the following criteria should be present to diagnose bacterial vaginosis: Vaginal pH 4.5; homogeneous grey discharge; fishy odour with 10% KOH; clue cells on wet mount (epithelial cells with bacilli attached to their surface).

Bacterial vaginosis has been associated with pelvic inflammatory disease after abortion, endometritis after caesarean section, amniotic fluid infections, and preterm or low birth weight delivery[9]. Treatment is with oral (400mg bd for 5 days, or 2 g single dose) or topical metronidazole (0.75% gel for 5 days) or clindamycin (2% cream for 7 days, 100mg ovules daily for 3 days, or 300 mg orally bd for 7 days). Treatment regimens have similar cure rates of 70-80% after four weeks, but 60% of women relapse in three months[6]. Recurrent symptoms may result in psychosexual problems. It is essential to review intimate hygiene practices and to avoid douching as this removes the healthy lactobacilli in the vagina.

In conclusion, although many women with vaginal discharge often seek medical advice, this common condition is poorly predictive of sexually transmitted diseases. The advantage of managing this common condition in a genitourinary clinic is that microbiological tests are readily available to establish an accurate diagnosis. If a sexually transmitted disease is diagnosed, contact tracing through a genitourinary clinic is mandatory (One may contact Dr Carabot at Boffa Hospital on 22987115).

References

1. Schmidt H, Hansen JG. Bacterial vaginosis in a family practice population. *Acta Obstet Gynecol Scand* 2000; 79: 999-1005.
2. Amsel, R, Torres PA, Spiegel CA et al. Non-specific vaginitis: Diagnostic criteria and microbial and epidemiological associations. *American Journal of Medicine* 1983; 74:4-22.
3. Sobel JD. Vaginitis: Current concepts. *N Eng J Med* 1997; 337:896-903.
4. Kent HL. Epidemiology of vaginitis. *Am J Obstet Gynecol* 1991; 165:68-76.
5. Pirotta M, Gunn J, Chondros C et al. Effect of lactobacillus in preventing post-antibiotic vulvovaginal candidiasis: a randomised controlled trial. *BMJ* 2004; 329:548.
6. Mitchell H. Vaginal discharge-causes, diagnosis, and treatment. *BMJ* 2004; 328:1306-8.
7. O'Dowd T, West RR, Ribeiro CD, Smail JE, Munro JE. Contribution of Gardnerella vaginalis to vaginitis in general practice. *BMJ* 1988; 292:1640-2.
8. Eschenbach DA, Hillier S, Critchlow C. Diagnosis and clinical manifestations of bacterial vaginosis. *Am J Obstet Gynecol* 1988; 158: 819-26.
9. O'Dowd T, Bourne N. Inventing a new diagnostic test for vaginal infection. *BMJ* 1994; 309:40-2.