

Vaginal Discharge in females.A Review

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Abstract

During the female reproductive cycle, vaginal discharge, also referred to as leucorrhea, is a physiological condition. Throughout their lives, about 75% of women will encounter leucorrhea, with 45% of those cases being recurrent. These days, leucorrhea affects a far higher proportion of young individuals, impeding their capacity to reach their full potential in terms of growth and development. Many people are still not aware of the prevention of leucorrhea, which poses a threat to their health both now and in the future.(17)Among women of all ages, vaginal discharge is a common issue.This article primarily addresses the primary source of vaginal discharge in women who are of reproductive age.Trichomonas vaginalis, candidiasis, and bacterial variolosis. Atrophic vaginitis with secondary bacterial infection, foreign bodies with secondary infections, and idiopathic vulvo-vaginal ulcerations are some of the unusual infectious causes.In order to treat vaginal discharge in accordance with its aetiology, doctors must be knowledgeable about the many clinical presentations of the condition, the epidemiological data that is developing, and how to manage them. Only by providing appropriate counselling and education to every patient can these illnesses be avoided. It is necessary to demonstrate and encourage the use of condoms. Each spouse must get a notice sheet, and partner treatment must be prioritised. In addition to all of these variables, HIV testing is required in every situation.(19)

Keywords: *Vagina,Vaginal discharge, Bacterial Vaginosis, vulva vaginal candidiasis, Trichomonas vaginalis, Syndromic methodology.*

INTRODUCTION:

Vaginal discharge is normally white, but oxidation causes it to turn yellowish when it comes into touch with air. Mid-cycle pregnant women and those on oral contraceptives have elevated mucus production from the cervix, which causes a spike in physiological discharge. Cervices brought on by chlamydia and gonococci infection and bacterial vaginosis are the causes of vaginal discharge. One of the most prevalent and bothersome issues that women deal with is vaginal discharge.Leucorrhea and vaginal discharge are the main complaints made by 20–25% of women who visit the gynaecology outpatient department (OPD). While discharge may occasionally be physiological and increase regular vaginal secretions, in other circumstances.More than 60% of the time, it is the result of cervical or vaginal infections brought on by bacteria, fungus, or parasite agents. Women visiting general practitioner (GP), sexual health, and gynaecology clinics frequently arrive with vaginal discharge as a presenting . (24). Physiological discharge that is normal and the reasons behind aberrant discharge must be well understood for management to be implemented.(17)Pregnancy-related physiological changes result in increased discharge production and a higher vulnerability to infection and colonisation.3- The majority of pregnant women have increased vaginal discharge, and since pathological disorders .(18)Hormonal levels have an impact on leucorrhoea; infection is not always induced spontaneously. Leucorrhoea is a prevalent condition in developing nations, encompassing infections resulting from a variety of physiologic and pathologic causes . Numerous community-based research conducted in developing nations have shown that women suffer from morbidity and general ill health in silence because of a lack of awareness. Leucorrhoea is a condition that has been researched in Indonesia from a variety of angles, with an emphasis on women's views in addition to the medical and clinical aspects (17) The fluid secreted by your body to maintain your vagina clean, moist, and free of infections is called vaginal discharge.More vaginal discharge is typical during pregnancy, but it should still resemble your regular flow.Vaginal thrush and bacterial vaginosis, which can result in an odd vaginal discharge, are conditions you are more likely to have when pregnant.(12)A frequent

vaginal infection that causes discharge, odour, and irritation is called bacterial vaginosis. Women may be more vulnerable to HIV and other STIs as a result of it. Treatment for recurrent bacterial vaginosis may need to be prolonged in order to restore the normal, lactobacilli-dominated milieu of the vaginal flora.(20)

Vagina :

In many ancient cultures, including India, the yoni is thought to be the oldest spiritual icon. It has been used as a holy symbol since ancient times.(16)The creative power that permeates the entire universe, Shakti and Devi, are thought to be abstractly represented by the yoni. Yoni is the source of life according to tantra.(15)



Fig.No 1(25)

Vaginal Discharge :

Definition: a mix of fluid and cells from the vagina that varies from whitish and sticky to clear and watery, possibly associated with an odour.

- It is important to good understanding of normal physiological discharge and the causes for abnormal discharge.
- Normal physiological vaginal discharge: white or clear
- Abnormal or offensive discharge: over time or long time period

White discharge is frequently seen at the start and finish of the menstrual cycle. It should not be accompanied by irritation or an odour, and it is typically thin and elastic (8).White discharge is healthy discharge . Sometimes possibility of yeast infection.

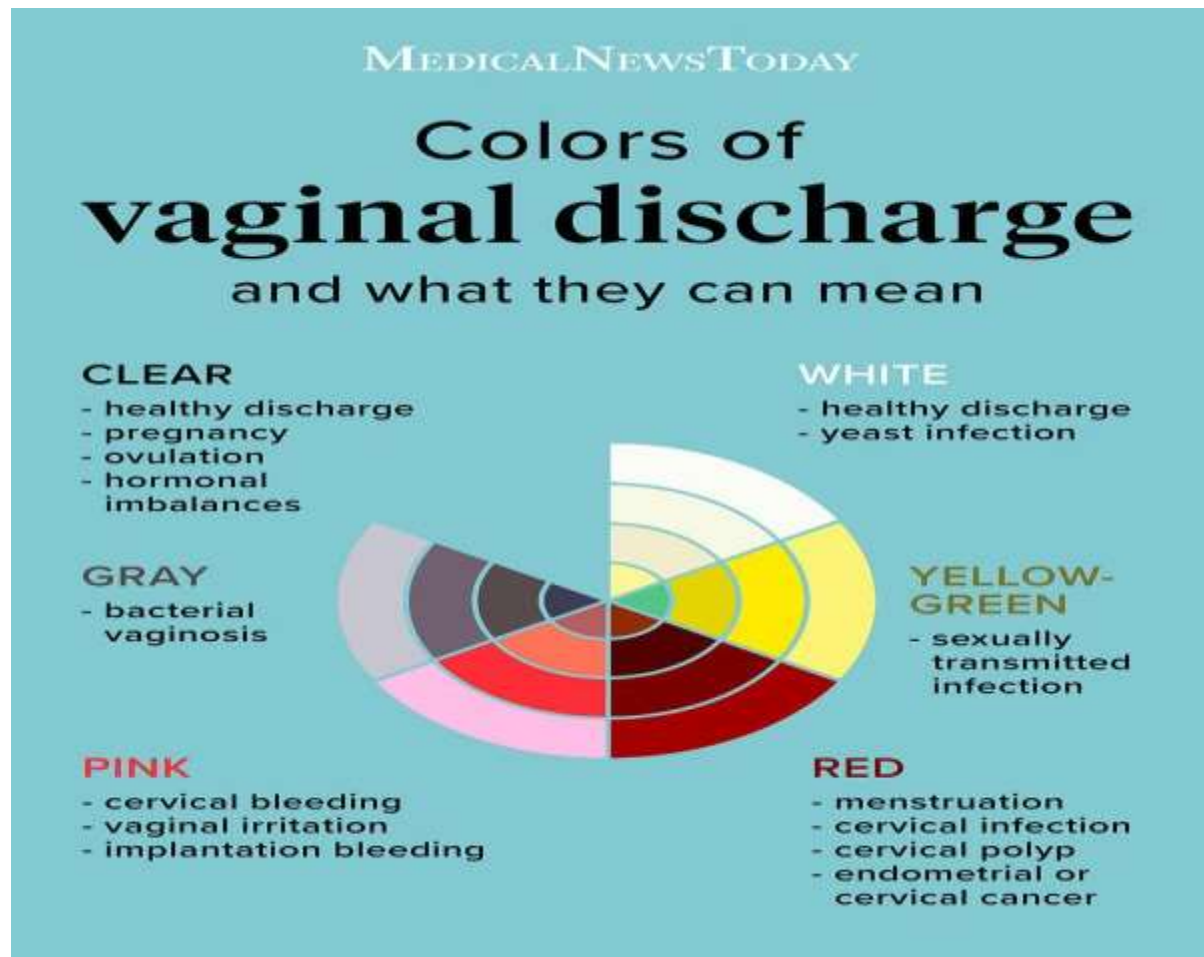


Fig No.2(1)

[You might have an infection if you have a lot of watery discharge along with pain, itching, and an unpleasant odour. The following are a few common infections that result in watery discharge.]

Table 1: Causes of vaginal discharge

Physiological	Pathological infectious	Pathological non infectious
Sexual arousal	Trichomoniasis	Detergents (Nonoxynol)
Pregnancy	Candidiasis	Foreign body (cervical caps)
Pre menstrual	Bacterial vaginosis	Herbal
	<i>Neisseria gonorrhoea</i> *	
	<i>Chlamydia</i> infections*	
	<i>Herpes simplex</i> virus*	

Bacterial Vaginosis:

Bacterial vaginosis is a common reason for vaginal discharge, irritation and bad smell . Bacterial vaginosis is also called as Gardnerella vaginitis.(7)Bacterial vaginosis is the most common cause of abnormal leukorrhea(vaginal discharge). Prevalence varies between 5 to 50% in half cases there is no symptoms observed. These infection increase in the normally acidic vaginal fluid pH from <4.5to 4.5-6.0(2) overall in 29% women bacterial Vaginosis is most common cause of vaginal discharge and odour.(7)

Bacteria include in BV Gardnerella vaginalis, prevotella spp , Mycoplasma hominis, Mobiluncus spp, Atopobium vaginalis, clostridiales spp ,leptotrichia spp.

- Risk factors BV include:
- Vaginal douching
- Receptive oral intercourse(2)
- Sex without condom (7)

In this there is simultaneous loss of the normal resident lactobacilli of the vagina . the bacterial overgrowth in BV result in production of amines by anaerobes and when potassium hydroxide is added to the vaginal fluid , a typical fishy odour is produced.(3) lifestyle changes: menstrual hygiene practices , such as using pads instead of tampons, also has not affected the incidence of recurrent bacterial Vaginosis.(9)

TREATMENT:

When administered at 500 mg twice day for seven days, metronidazole has been shown to cure 87% of BV cases. Treatment lasting seven days yielded higher cure rates than a single oral dose of 2 g. Intravaginal treatments have

been investigated as a way to reduce the systemic negative effects of oral medications. 76% of patients responded well to 500 mg intravaginally administered daily for seven days. Likewise, 94% of patients showed clinical benefit from 300 mg of oral clindamycin taken twice daily for seven days. Pregnant women responded well to oral clindamycin as well. Studies on intravaginal clindamycin have also been conducted with different strengths. The most successful dose was 2%, one full applicator (5g) given intravaginally at bedtime for seven days. (21,22)

VULVOVAGINAL CANDIDIASIS :

The symptomatic inflammation of the vagina and vulva that results from a superficial fungal infection is known as vulvovaginal candidiasis (vvc) or genital thrush. *Candida albicans* is responsible for 80-89% of VVC cases; non-*albicans* species such as *Candida glabrata*, *Candida tropicalis*, *Candida Krusei*, *Candida parapsilosis*, and *Saccharomyces cerevisiae* are responsible for the remaining VVC.(2) Symptoms of vulvo-vagina include painful vulva condition (vulvodynia), pruritis, and vaginal discharge.(4)Yeast infection ranks second in terms of frequency of vaginal infections, according to prevalence studies conducted in developed nations.Vulva itchiness and discomfort are typical initial symptoms.Sourness, vulva burning, dyspareunia, and dysuria are possible symptoms as well.

Treatment:

Fluconazole (150 mg single dose), intraconazole (200 mg bd for 1 day), and ketoconazole (400 mg for 5 days) are the total agents for the treatment of vulvovaginal candidiasis.(3)Topical azoles are used in treatment. As lotions, ointments, and vaginal pessaries, azoles are used in a range of combinations. In 32.33% The preferred course of treatment for pregnancies is a vaginal tablet of nystatin, 100,000 units, taken once day for fourteen days. Alternative azoles such as butaconazole 2% cream 5 gm intravaginally for 3 days, clotrimazole 1% cream 5 gm intravaginally for 7-14 days, clotrimazole 100 mg vaginal tablet for 7 days, miconazole 2% cream 5 g intravaginally for 7 days, or Tioconazole 6.5% ointment 5 g intravaginally in one application have all been suggested. Eighty to ninety percent of cases are cured. A slight increase in cure rates has been observed with oral systemic azole medications. (19)

TRICHOMONAS VAGINALIS :

Trichomonas vaginalis is a flagellated protozoan that causes trichomoniasis. The organism is present in the paraurethral, urethral, and vaginal glands of women. Vaginal discharge, vulval irritation, dysuria, or an unpleasant odour are typical symptoms that are not unique to TV (2) .A sexually transmitted infection is trichomoniasis. Pregnant women appear to have a higher prevalence. *Trichomonas* usually coexists with gonorrhoea and chlamydia since it is a STI.(3)While male genital tract infections are mostly asymptomatic, female genital tract infections can cause a variety of symptoms, such as vaginitis and cervicitis. Due to its comparatively mild symptoms and lack of evidence for any major side effects, this condition has previously received inadequate research and diagnosis.(10)The vaginalis specimen travels at a speed of 19 $\mu\text{m/s}$. The propulsive forces required to produce the movement are the outcome of flagellar beating, as demonstrated by observations of *T. Vaginalis* motions, which reveal the cell body to be stiff while swimming.(11)

Treatment:

The traditional clinical findings serve as the basis for diagnosis. However, only a small percentage of patients have them, or the symptoms are similar to those of other STDs. Ten percent of patients have foamy discharge, and only 2% of patients have strawberry cervix. The inquiry that has stood the test of time is the presentation of the parasite in a moist mount obtained from vaginal discharge. The size ($10 \times 7 \mu\text{m}$), shape, and twitching motility of the organism allow for identification. The specimen needs to be processed right away because of this. However, depending on the microbiologist's skill level, this process only finds 35-85% of instances. An further drawback is that, in wet mount, a minimum concentration of 10 organisms must be present for identification.(23)

vaginal discharge in pregnancy:

- Does vaginal discharge during pregnancy seem normal?

Sure. When you are pregnant, you may notice more vaginal discharge than usual. Leucorrhoea is the term used for this. It typically has a faint scent and a clear or white appearance. It results from elevated oestrogen and progesterone levels during pregnancy(12). Unusual vaginal discharge may be the result of an illness called thrush. Consult your midwife or doctor if you get thrush throughout your pregnancy; treatment options are straightforward.

- Thrush may lead to: Increased vaginal discharge, which is typically white (similar to cottage cheese) and odourless, as well as discomfort and itching around the vagina(13)

**Women's knowledge about vaginal discharge:**

Women are not well-informed about the problems that might arise from vaginal discharge. While most women consider thrush to be an illness of the reproductive system, Hardly any recognise Trichomonas, Bacterial, and Chlamydia infections More about vaginosis Described by women as an illness, vaginal discharge is Widespread but not the same as STIs. In certain Research show that women do not perceive vaginal discharge as a health issue.

Home remedies for vaginal discharge Yeast infection:

- **Diet modification:**

Consistent vaginal yeast infections have been linked to the eating of yeast-made bread, according to research. Consuming refined sugars may heighten the flare-up of vaginal yeast infection symptoms, according to a different study. One possible way to manage vaginal yeast infections is to follow a diet low in refined carbohydrates and yeast. To substantiate these assertions, more study is needed.

- **Garlic:**

Garlic may possess antifungal properties. Research has indicated that garlic may be able to treat yeast infections in the vagina. Allicin, the chemical that makes garlic active, may inhibit the growth of fungi. Nevertheless, further studies on humans and animals are needed to demonstrate its efficacy. Additionally, it could result in allergic responses or chemical burns. Consequently, before using, please see a physician.

- **Coriander seeds:**

Coriander seeds may be useful in treating vaginal yeast infections, according to the Indian national health portal. You must soak a few coriander seeds in water for the entire night in order to use them. It could be beneficial to strain the water and consume it without food. Before utilising this cure, though, you should speak with a physician.

- **Cranberry juice:**

It may also be possible to prevent vaginal yeast infections by consuming cranberry juice. It could be even better to sip unsweetened fresh cranberry juice. To confirm cranberry juice's potential benefits against vaginal infections, more research is necessary.

- Eating ladyfinger raw or very lightly heated could be beneficial.
- Eating ripe bananas may also be advantageous.
- Using freshly squeezed lemon juice and water to clean the vaginal area may help treat vaginal yeast infections.

Syndromic methodology :

In environments where resources are limited, the World Health Organisation advises treating patients who appear for primary care with symptoms suggestive of STIs syndromically utilising clinical flow charts or algorithms. Syndromic STI treatment is currently the main national HIV STI prevention and control method in many nations. Fast symptom relief, successful treatment of all infections, avoiding harm and needless medication, and preventing future STIs in both individual patients and communities are the goals of syndromic STI care. Regretfully, not every STI-related condition responds well to syndromic therapeutic approaches. For instance, using algorithms to treat female vaginal discharge syndrome can be extremely challenging. Nevertheless, the vaginal discharge algorithm is not very sensitive.(19)

Conclusion :

There is a lack of understanding regarding the causes of vaginal discharge as well as a poor capacity to distinguish between pathological and normal vaginal discharge. There is a delay in seeking appropriate treatment for pathological vaginal discharge, which can have catastrophic effects, because of various home cures and cultural practises. The majority of them are embarrassed to admit to their intimate partners that they have vaginal discharge and feel guilty and ashamed about it. Women should be made aware of the significance of identifying pathological vaginal discharge early on in order to avoid major issues and to advance the health of women. Therefore, the leucorrhoea education programme should be provided as the primary source of knowledge regarding leucorrhoea, not only to school-age girls but also to teachers and parents. In order to promote leucorrhoea knowledge, attitude, and practise, more research is required to determine the most effective educational approach. In clinical practise, vaginal discharge is the most frequently observed syndrome. Only by appropriate counselling and education can these infections be avoided in all patients. Propaganda and demonstration of condom use are required. It is necessary to emphasise partner treatment and provide notice slips to each spouse. HIV testing is required in every situation, regardless of these other considerations.

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