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A REVIEW LITERATURE ON VAGINITIS

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INTRODUCTION

A healthy woman is a potential of a sound family. Due to alteration in lifestyle, faulty food habits, use of junk foods, inability to follow the guidelines of Dincharya (daily routine), rules and regulation onset and during menstruation, and Sutikaparicharya (post-natal period routine explained in the literature for the wellbeing of women's health. Because of such reasons, she is prone to cause various vaginal disorders. Yonigat Shewta-Picchil strava, Yonikandu, Yonigata Alpa vedana, which are the features of Kaphaja yonivyapada, and most of the women neglect such minor sign and symptoms which may lead to significant diseases. Kaphaja yonivyapada is very common nowadays in women due to faulty diet regimens.

Vaginitis is defined as any condition with symptoms of abnormal vaginal discharge, odour, irritation, itching, or burning. The most common causes of vaginitis are bacterial vaginosis, vulvovaginal candidiasis, and trichomoniasis. Bacterial vaginosis is implicated in 40% to 50% of cases when a cause is identified, with vulvovaginal candidiasis accounting for 20% to 25% and trichomoniasis for 15% to 20% of cases. Non-infectious causes, including atrophic, irritant, allergic, and inflammatory vaginitis, are less common and account for 5% to 10% of vaginitis cases. Diagnosis is made using a combination of symptoms, physical examination findings, and office-based or laboratory testing. Bacterial vaginitis is traditionally diagnosed with Amsel criteria, although Gram stain is the diagnostic standard. Newer laboratory tests that detect *Gardnerella vaginalis* DNA or vaginal fluid

slides activity have similar sensitivity and specificity to Gram stain. Bacterial vaginitis is treated with oral metronidazole, intravaginal metronidazole, or intravaginal clindamycin. The diagnosis of vulvovaginal candidiasis is made using a combination of clinical signs and symptoms with potassium hydroxide microscopy; DNA probe testing is also available. Culture can be helpful for the diagnosis of complicated vulvovaginal candidiasis by identifying nonalbicans strains of *Candida*. Treatment of vulvovaginal candidiasis involves oral fluconazole or topical azoles, although only topical azoles are recommended during pregnancy. The Centers for Disease Control and Prevention recommends nucleic acid amplification testing for the diagnosis of trichomoniasis in symptomatic or high-risk women. Trichomoniasis is treated with oral metronidazole or tinidazole, and patients' sex partners should be treated as well. Treatment of noninfectious vaginitis should be directed at the underlying cause. Atrophic vaginitis is treated with hormonal and nonhormonal therapies. Inflammatory vaginitis may improve with topical clindamycin as well as steroid application.

Etiology

Specific etiologies mentioned are, Abhishyandi Ahara3 Kapha prakopaka ahara Abhishyanda Ahara is defined as Ahara which increases Srava Those products that have picchila guna, and Guru guna able to vitiate the Rasavaha Strotas and cause avarodha, leading to Gouravam are called Abhishyandi Dravyas. Eg, curd.

As they have Guna Sadharmyata with Sleshma, it causes Sleshma Prakopa. Vata prakopaka ahara also plays important role in manifestation of disease.

- **Vata prakopaka ahara:** Katu, tikta, ruksha, laghu ahara, sheeta virya, Sushka shaka, Valluraka, Uddalaka, Koradushaka, Shyamaka, Nivara, Mudga, Masoora, Aadaki, Harenuka, Kalaya, Nishpava
- **Vataprakopaka vihara:** Ativyayam, Prajagarana (night awakening), Langhana, Plavana, Atiadhva, vyayama, Krodha, Vegadharana, Dhukha shayyasana, Rogatikarshana, Abhighata, Marmabhighata, Gajoshtrashva shigrayana apatamsanat, Atisamshadhana
- **Kapha prakopaka ahara:** Hayanaka, Yavaka, Naishada, Masha, Mahamasha, Godhuma, Tilapishta vikruti, Dadhi, Dugdha, Krushara, Payasa, Ikshuvikara, Anupamamsa, Vasa, Visamrunala, Kaseruka, Shrungataka, Madhuravalliphal
- Infection is the most common cause of vaginitis, including candidiasis, bacterial vaginosis, and trichomoniasis. After puberty, infectious vaginitis accounts for 90 percent of cases.

- Less commonly, vaginitis may also be caused by gonorrhea, Chlamydia, mycoplasma, herpes, campylobacter, some parasites, and poor hygiene.
- Vaginitis can occur before puberty, but different types of bacteria may be involved. Before puberty, *Streptococcus spp* is a more likely cause, sometimes because improper hygiene practices spread bacteria from the anal area to the genitals.
- The proximity of the vagina to the anus, lack of estrogen, lack of pubic hair, and lack of labial fat pads may increase the risk of vulvovaginitis in before puberty Trusted Source. Vulvovaginitis is an inflammation of the vagina and vulva. It can affect women of all ages.
- After puberty, infection is most often due to *Gardnerella*.
- Sometimes, vaginitis can stem from an allergic reaction, for example, to condoms, spermicides, certain soaps and perfumes, douches, topical medications, lubricants, and even semen.

Factors that increase the risk of vaginitis include

- Pregnancy
- Douching and Using vaginal products, such as sprays, spermicides, and birth control devices
- Using antibiotics
- Wearing tight pants or damp underwear
- Low estrogen levels during menopause

Women with diabetes are particularly prone to vaginitis.

Vaginal pH

The composition of the vaginal flora is responsible for the pH of the vagina. With estrogen comes the production of glycogen from the vaginal mucosa. The glycogen is the nutrient necessary for many vaginal ecosystem species seen in reproductive age women, including *Lactobacilli*. The glycogen is metabolized to lactic acid contributing to the normal vaginal pH of 3.8-4.2. This acidity suppresses the overgrowth of infectious organisms such as *Mobiluncus*, *Prevotella*, and *Gardnerella vaginalis*.

In pre-pubertal girls and post-menopausal women, the lack of estrogen leads to a deficiency of glycogen and thus a paucity of lactic acid-producing flora. The normal pre-pubertal and post-menopausal vaginal pH is 6 to 7.5. Females can be more prone to infections at these

times when the only commensal flora is mainly of skin origin, but infections are still more common in reproductive years.

Changing any element of the vaginal ecology can alter the population characteristics of the vaginal bacteria. Changes in hormonal status, as previously mentioned with estrogen, can greatly shift the makeup of the flora. Menses can act as a nutrient base for some bacterial species leading to their overgrowth, but there is no clear evidence that this is associated with pathogens or infection. Broad-spectrum antibiotic use can lead to alteration of the vaginal bacterial flora leading to *Candida* species overgrowth. Douching and unprotected vaginal intercourse can increase pH as well.

Types of vaginitis

There are several types of vaginitis, depending on the cause.

The most common are

- **Atrophic vaginitis:** The endothelium, or lining of the vagina, gets thinner when estrogen levels decrease during the menopause, making it more prone to irritation and inflammation.
- **Bacterial vaginosis:** This results from an overgrowth of normal bacteria in the vagina. Patients usually have low levels of a normal vaginal bacteria called *lactobacilli*.
- **Trichomonas vaginalis:** Sometimes referred to as trichTrusted Source, it is caused by a sexually transmitted, single-celled protozoan parasite, *Trichomonas vaginalis*. It may infect other parts of the urogenital tract, including the urethra, where urine leaves the body.
- **Candida albicans:** A yeast that causes a fungal infection, known as vaginal thrush. Candida exists in small amounts in the gut and is normally kept in check by normal gut bacteria.

Symtoms of vaginitis

- Irritation of the genital area
- Discharge that may be white, gray, watery, or foamy
- Inflammation, leading to redness and swelling of the labia majora, labia minora, and perineal area, mainly due to an excess of immune cells
- Dysuria, which is pain or discomfort when urinating
- Painful sexual intercourse, known as dyspareunia

- Foul or fishy vaginal odor

Differential diagnosis

- Lichen sclerosis
- Cervicitis
- Herpes simplex
- Pinworms
- Sexual assault
- UTI

Management

Bacterial vaginosis

First-line diagnostics for bacterial vaginosis should include a physical exam, pH testing, and a wet prep. Amsel's Diagnostic Criteria for BV has a 95% PPV. You must have three of the four criteria for the diagnosis of BV. The criteria are a thin, white, homogeneous vaginal discharge, a pH greater than 4.5

Uncomplicated

A short course (single dose; 1-day or 3-day course) of over-the-counter topical antifungals will result in cure rates of 80% to 90% for uncomplicated vulvovaginal candidiasis (clotrimazole, miconazole, tioconazole, butoconazole, itraconazole). A single dose by mouth of fluconazole 150 mg by mouth is also effective. No follow-up is needed if the symptoms resolve.

Complicated disease

Recurrent candidiasis: 7 to 14 days of topical therapy or a 100-mg, 150-mg, or 200-mg oral dose of fluconazole every third day for a total of 3 doses [day 1, 4, and 7) can be used. Oral fluconazole (i.e., 100-mg, 150-mg, or 200-mg dose) weekly for 6 months is the first line maintenance regimen. 30% to 50% of women will have recurrent disease after maintenance therapy is discontinued.

Severe candidiasis: 7 to 14 days of topical azole or 150 mg of fluconazole in two sequential oral doses 72 hours apart.

Nonalbicans candidiasis: 7 to 14 days of a non-fluconazole azole regimen (oral or topical) as first-line therapy. If recurrence occurs, 600 mg of boric acid in a gelatin capsule is recommended, administered vaginally once daily for 2 weeks.

Prevention

The following best practices may help prevent vaginitis:

- Having good overall hygiene
- Using mild soaps without irritants or scents
- Wearing cotton underwear
- Avoiding douching and irritating agents, such as those present in hygiene sprays, soaps, and other feminine products
- Wiping from front to back to avoid spreading bacteria from the anus to the vagina
- Wearing loose-fitting clothing
- Practicing sex with a condom
- Using antibiotics only when necessary

REFERENCES

1. Leeper C, Lutzkanin A. Infections During Pregnancy. Prim Care, 2018; 45(3): 567-586. [PubMed]
2. Amabebe E, Anumba DOC. The Vaginal Microenvironment: The Physiologic Role of *Lactobacilli*. Front Med (Lausanne), 2018; 5: 181. [PMC free article] [PubMed]
3. Kaambo E, Africa C, Chambuso R, Passmore JS. Vaginal Microbiomes Associated With Aerobic Vaginitis and Bacterial Vaginosis. Front Public Health, 2018; 6: 78. [PMC free article] [PubMed]
4. Kaambo E, Africa CWJ. The Threat of Aerobic Vaginitis to Pregnancy and Neonatal Morbidity. Afr J Reprod Health, 2017; 21(2): 108-118. [PubMed]
5. Anahtar MN, Gootenberg DB, Mitchell CM, Kwon DS. Cervicovaginal Microbiota and Reproductive Health: The Virtue of Simplicity. Cell Host Microbe, 2018; 14, 23(2): 159-168. [PubMed]
6. Bagnall P, Rizzolo D. Bacterial vaginosis: A practical review. JAAPA, 2017; 30(12): 15-21. [PubMed]
7. Abdool Karim SS, Passmore JS, Baxter C. The microbiome and HIV prevention strategies in women. Curr Opin HIV AIDS, 2018; 13(1): 81-87. [PubMed]

8. Chen Y, Bruning E, Rubino J, Eder SE. Role of female intimate hygiene in vulvovaginal health: Global hygiene practices and product usage. Womens Health (Lond), 2017; 13(3): 58-67. [PMC free article] [PubMed]
9. Blostein F, Levin-Sparenberg E, Wagner J, Foxman B. Recurrent vulvovaginal candidiasis. Ann Epidemiol, 2017; 27(9): 575-582.e3. [PubMed]
10. Sherrard J, Wilson J, Donders G, Mendling W, Jensen JS. 2018 European (IUSTI/WHO) International Union against sexually transmitted infections (IUSTI) World Health Organisation (WHO) guideline on the management of vaginal discharge. Int J STD AIDS, 2018; 29(13): 1258-1272. [PubMed]
11. Sobel JD, Sobel R. Current treatment options for vulvovaginal candidiasis caused by azole-resistant Candida species. Expert Opin Pharmacother, 2018; 19(9): 971-977. [PubMed]
12. Paladine HL, Desai UA. Vaginitis: Diagnosis and Treatment. Am Fam Physician, 2018; 01, 97(5): 321-329. [PubMed]
13. Zuckerman A, Romano M. Clinical Recommendation: Vulvovaginitis. J Pediatr Adolesc Gynecol, 2016; 29(6): 673-679. [PubMed]
14. Baery N, Ghasemi Nejad A, Amin M, Mahroozade S, Mokaberinejad R, Bioos S, Anushiravani M, Aliasl J, Karimi Darmiyan M, Amin G. Effect of vaginal suppository on bacterial vaginitis based on Persian medicine (Iranian traditional medicine): a randomised double blind clinical study. J Obstet Gynaecol, 2018; 38(8): 1110-1114. [PubMed]
15. Yarbrough ML, Burnham CA. The ABCs of STIs: An Update on Sexually Transmitted Infections. Clin Chem, 2016; 62(6): 811-23. [PubMed]