

Vaginal Discharge in Adolescent Girls

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Abstract

Adolescence is a transition phase with physiological and psychosocial development. Excessive vaginal discharge is a common symptom in adolescent girls. It is challenging to differentiate between physiological and pathological leucorrhoea. Counselling plays a key role in treatment modalities. Reproductive health education is necessary for those who stand on the threshold between childhood and womanhood. Vaginal discharge is a symptom and not disease.

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Introduction

Adolescence is a time of psychosomatic and sociological adjustment with growth and development, physiologically and psychologically. In this sensitive phase of their life, adolescent girls suffer from many gynecological problems. Excessive vaginal discharge is a common symptom in adolescent girls [1].

It is a symptom and not a disease. It is an expression of some underlying disorder, either functional or organic [2]. In this review article, we discuss and differentiate physiological vaginal discharge from pathological. We highlight pathological vaginal discharge due to non sexually transmitted infections like candida, trichomonas, bacterial vaginosis. Infective vaginal discharge in adolescent girls due to STI's like Chlamydia and gonococci will be discussed in the next article.

It is challenging to differentiate between physiological and pathological causes.

Physiological discharge is caused by:

- Sloughing epithelial cells
- Normal bacteria
- Vaginal transudate [3].

Physiological Leucorrhea

It implies that only the amount of secretion is increased and there are no changes in physical characteristics. It commonly occurs in adolescent girls due to:

- Hormonal imbalance during puberty
- Sexual excitement
- At the time of ovulation.

On examination of secretions no pathological organisms or pus cells are seen [4].

History

- Patient has no associated complaints like: Itching, Pain in abdomen, foul smell, frequency of micturition.
- Discharge may be translucent or whitish in colour [3].
- No need to use pad.
- No history of sexual contact.
- Amount of discharge may vary in different phases of menstrual cycle [3].

Examination

Reveals normal genitals with minimal odorless transparent vaginal discharge.

Principles of management of physiological leucorrhoea:

- Patient does not need any medical treatment.
- Only assurance and counselling is required. Gynecologist must explain to her that it is normal physiological process, secretions protect the skin or mucous membranes to keep them moist and prevent infection by making the medium acidic.

Infection is the commonest cause of pathological vaginal discharge. Vaginal discharge can be due to STI's like Chlamydia and gonococci or more commonly due to non sexually transmitted infections like:

- Candida
- Trichomonas
- Bacterial vaginosis [4]

*Vaginal infections:**Etiology*

- ❖ Infections: *Candida albicans*
 - *Trichomonas vaginalis*
 - Hemolytic streptococci
- ❖ Poor hygiene
- ❖ Foreign bodies
- ❖ Sexual abuse
- ❖ Impaired immunity [5]

Leucorrhoea may occur because of unhealthy lifestyle:

- Improper hygiene.
- Stress.
- Dirty environmental sanitation.
- In underprivileged people due to poverty.

Pathological vaginal discharge

- Causes significant distress and irritation.
- May be associated with itching.
- May be foul smelling.
- Amount of discharge does not vary in different phases of menstrual cycle.
- Discharge is usually adherent to vaginal walls.
- Colour may vary from dirty white to yellowish green [2].

Candidiasis

Candidal organisms are the part of normal vaginal flora. However overgrowth of the organisms can cause penetration of the superficial epithelial cells, resulting in vulvovaginitis. Infecting agent is mainly the yeast *Candida albicans*.

Clinical presentation

- ❖ Discharge is usually white and thick with no odour and normal pH.
- ❖ Pruritis vulva is a cardinal feature.
- ❖ Dysuria.
- ❖ Symptoms may often worsen in premenstrual phase.
- ❖ Vulvar candidiasis may produce erythema and oedema.

Risk factors

- ❖ Administration of broad spectrum antibiotics.
- ❖ Oral contraceptives.
- ❖ Diabetes.
- ❖ Immunodeficiency.
- ❖ Tight fitting synthetic undergarments.
- ❖ Previous episode of vulvo vaginal candidiasis.

Diagnosis

Microscopic examination of wet mount and KOH preparations are positive in 50-70% of patients with candidiasis.

Culture using Nickerson's medium or Sabouraud's agar.

Treatment

- Clotrimazole/ miconazole cream.
- Single dose of fluconazole (150 mg).
- Recurrent candidiasis: 150 mg/ every week.
- Topical nystatin.
- Symptomatic relief- topical corticosteroid.
- Underlying predisposing factor must be corrected to provide long term relief [3].

Trichomoniasis

Trichomonas vaginalis is a flagellated protozoan which is a parasite of the genital tract.

Malodorous vaginal discharge, pruritis.

Discharge is profuse, thin, creamy or slightly green in colour.

Pruritis and inflammation of the vulva present.

Associated symptoms like dysuria, lower abdominal pain and backache may also be present [6].

Secondary infections may occur with E-coli or other organisms [4].

Direct observation of the organisms by a wet smear (normal saline) is done. Actively motile flagellates of trichomonas vaginalis is diagnostic.

Treatment

- Metronidazole 400 mg BD for 7 days
Or
- Metronidazole 2 gm orally in a single dose
Or
- Tinidazole 2 gm orally in a single dose.

Bacterial Vaginosis

Bacterial vaginosis produces a disturbance of normal vaginal flora. It is characterized by over growth of mixed anaerobic organisms that replace normal lactobacilli leading to increase in vaginal pH.

- ❖ Gardenella vaginalis.
- ❖ Ureaplasma.
- ❖ Bacteroids and other anaerobe.

Diagnosis

- ❖ Homogenous grey white discharge.
- ❖ pH of vaginal fluid >4.5.

❖ Fishy odour with use of few drops of 10% KOH.

❖ Clue cells present on wet mount microscopy.

Treatment

- Metronidazole 400 mg BD for 7 days.
- Clindamycin 300 mg BD for 7 days [6].

Foreign body

A foreign body in the vagina can present with bleeding or foul malodorous discharge. In the adolescent population the most common foreign body is tampon. Many patients will present with recurrent vaginal discharge. To rule out foreign body, a careful clinical examination must be performed with possible need of:

- Examination under anesthesia.
- Vaginal irrigation.
- Vaginoscopy [7].

Discussion

It is painful historical fact that health issues of women have traditionally been overlooked by medical science. It is time we realize that good reproductive health really begins in adolescent [8].

Very small proportion of adolescent girls come to hospital for health related issues. There are many factors which cause barriers preventing adolescents from visiting a health facility:

- Embarrassment, privacy
- Confidentiality concern
- Cultural factors
- Fear of medical procedures
- Judgmental attitude of provider.

Majority of adolescent health challenges are interlinked and preventable. Gynecological problems of adolescent girls occupy a special space in the spectrum of gynecological disorders of all ages, because physical nature of the problems are unique, specific for the age group. Associated psychological factors are important in transition between childhood and womanhood [9].

Due to various social taboos, ignorance and misconceptions about sex and sexuality, conception and contraception, adolescents form a special vulnerable group which needs nutritional, social,

psychological and emotional support.

Empowerment of the adolescent girl is necessary to help her cope with the changes and promote awareness of health, hygiene and nutrition so as to break the intergenerational life cycle of nutritional and gender disadvantage and provide an enabling and supporting environment for self development.

It is essential to correct dietary habits and ensure proper sleep, exercise, fresh air and sunshine.

Leucorrhoea is the normal defense that vagina uses to maintain its chemical balance, as well as to preserve the flexibility of the vaginal tissue.

Unfortunately main cause of unsatisfactory sanitary conditions in poor adolescent girls include:

- Use of foul public toilets.
- Less maintenance of vaginal hygiene.
- Use of clothes instead of sanitary napkins.

Adolescents may be exposed to sexual content in the media during a developmental period when gender roles, sexual attitudes and sexual behaviors are being shaped [2]. Despite the fact that nothing more than regular washing is necessary for the hygienic purpose, women's magazines and those that advertise them now advocate deodorant powders to be spread on vulva. They have opposite effect if they destroy the natural odour. They are unnecessary. Apart from causing a wrong mental outlook among the girls, they are likely to promote gross and painful reactions, ulceration of vulva, vagina [10]. Health education regarding physiology, various gynecological problems, importance of nutrition and exercise for adolescents is important [9]. Providing services for adolescents should be based on knowledge of the behavioral and medical health risks that place their future health at risk, including substance use and abuse, sexual behavior that increases the risk of unwanted pregnancy and STD's and impaired mental health [11].

Conclusion

Gynecological problems in adolescent girls should be dealt with sensitivity. Counselling plays a key role in treatment modalities. Good communication skills by gynecologist will go a long way in giving care to the adolescent girl when adolescent girl attends gynecology OPD with problem of vaginal discharge, prompt diagnosis and treatment is required. Chronic infection may lead to congestion of pelvic organs and heavy menstrual flow. It is

vital to differentiate physiological leucorrhoea from pathological vaginal discharge. Reproductive health education is necessary in adolescent girls who stand on the threshold between childhood and womanhood.

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