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Vaginal cleansing soap causes pathological vaginal discharge: a case study

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ABSTRACT

Introduction: Vaginal discharge or another name is flour albus or leukorrhea, which occurs in women who are teenagers or of childbearing age. 75% of women will experience vaginal discharge at least once in their lives. Abnormal vaginal discharge is caused by infection from various microorganisms. In Indonesia alone, 90% of women are at risk of experiencing pathological vaginal discharge due to the tropical climate. Women often do vaginal cleaning or vaginal douching. Usually, this activity uses vaginal cleansing fluid.

Objective: This study aims to dig deeper into the relationship between the use of vaginal cleansing soaps and pathological vaginal discharge in women, hoping to provide better insight into the effects of using these products and provide appropriate health recommendations.

Method: The research design uses a descriptive case study method which aims to describe the relationship between two things experienced by the patient, namely vaginal discharge and the habit of cleaning the vagina with vaginal cleansing soap.

Results: A 30-year-old woman came to the clinic with complaints of vaginal discharge coming out of her vagina. The vaginal discharge also feels thick, smells fishy, and feels very itchy in the vaginal area. On physical examination, mucopurulent vaginal discharge with a fishy odor was found. The labia majora looks swollen and red. By using a speculum, the cervix appears reddish. No abrasions or blood spots were found on the cervical neck.

Conclusion: There is a relationship between the use of vaginal cleansing soap and the emergence of pathological vaginal discharge. Changes in the acidity of the vagina influence the emergence of pathological flora. There is a need to increase Knowledge of how to maintain vaginal cleanliness, not just using vaginal cleansing fluids. With this study, it is further proven that the use of vaginal cleansing soap can cause pathological vaginal discharge. It is necessary to have good education for women with pathological vaginal discharge so that there is no recurrence of similar cases. In the case study above, it is essential to carry out additional examinations to find out the cause of the vaginal discharge, whether it is fungus, bacteria, or protozoa so that it can speed up the healing of the patient. With this research, it is also hoped that it can be an example of health care about pathological vaginal discharge and increase women's Knowledge of what kind of good vaginal cleaning behavior.

Keywords: vaginal discharge, vaginal cleansing soap, vaginal douching, women.

INTRODUCTION

Vaginal discharge, or another name *flour albus* or *Leukorea,* occurs in women who are teenagers or at childbearing age. Women in adolescence are very vulnerable to being affected, although it is possible that people older than them can also be affected (Armini and Lestari, 2022). Statistics say that 75% of women will experience vaginal discharge at least once in their lives, and 45% will experience a recurrence and be affected twice or even more (Maysaroh and Mariza, 2021). The vaginal discharge itself can be normal or abnormal (pathological). Normal vaginal discharge occurs every month during the fertile period, that is, before and after a woman's menstrual period (Putinah *et al.*, 2021). Abnormal vaginal discharge is caused by infection from various microorganisms, such as specific bacteria or fungi, and is often associated with sexually transmitted diseases (Lin *et al.*, 2021). In Indonesia alone, 90% of women are at risk of experiencing pathological vaginal discharge due to the tropical climate, which can cause the growth of fungi that cause *leukorrhea*. Abnormal vaginal discharge is often characterized by a thick white secret, sometimes smelling fishy; the color can be slightly yellowish or greenish, itching and redness in the vaginal area. The color of the secretions that come out of the vagina is affected by the cause of the infection (Lin *et al.*, 2021).

Vulvovaginal irritation and discharge are symptoms of commonly diagnosed gynecological conditions in this age group. As such, primary care nurse practitioners should be equipped to evaluate, analyze, and manage these patients. A comprehensive history and physical examination are necessary to differentiate between nonspecific and pathogenic causes (Starks, 2020). Vaginal discharge is a common gynecological condition among women of childbearing age that frequently requires care, affecting about one-third of all women and half of pregnant women. Pregnant women commonly develop increased vaginal discharge, which in many instances is not pathological, which may lead to pregnancy complications like abortions, premature birth, low birth weight, and other morbidities (Khadawardi, F.R.C.S., 2020). Bacterial vaginosis (BV) is characterized by changes in the vaginal flora caused by an elevated pH, resulting in symptoms of vaginal discharge, odor, and irritation. BV affects all women, including Dominican women who have specific cultural beliefs regarding vaginal health hygiene (Maldonado, 2024).

Genital tract infections can cause a variety of harmful health outcomes, including endometritis, bacterial vaginosis, and pelvic inflammatory disease, in addition to infertility (Saleh *et al.*, 2024). Worldwide, women perform a variety of vaginal practices to enhance their intimate hygiene and sexual health. Contraception and family planning services are essential to reproductive health (Yuliyanti, Kristiarini and Suryantara, 2024). Medicinal plants and their extracts have been used for prophylactic and therapeutic disease management since ancient times. Vaginal and rectal routes have been extensively investigated for phytotherapy of local conditions, including genital infections, inflammatory conditions, cancer of the reproductive and lower gastrointestinal tract, neoplasia, menstrual disorders, and contraception (Deshkar and Mahore, 2022). Vaginal discharge and menstrual pain are problems that women often face. Women should be able to distinguish between physiological and pathological vaginal discharge and physiological and pathological menstrual pain (Wantini, Zakiya and Styaningrum, 2021).

Women often do vaginal cleaning or vaginal douching. There are many reasons why women often do this activity. Vaginal cleaning activities are believed to clean the vagina after menstruation is complete or remove odor from the vagina after sexual intercourse (Yıldırım, Vural and Koçoğlu, 2020). Usually, this activity uses vaginal cleaning liquids in the form of soap or other types of liquids (Wireko *et al.*, 2024). The use of vaginal cleaning fluids is believed to disrupt the pH balance in the vagina. It can result in the growth of pathogenic bacteria that can result in vaginal infections (Sari, Riski and Nati Indriani, 2022). Because there are still high cases of vaginal discharge in Indonesia and one of the factors causing it is the bad habit of cleaning the vagina, we made a case study about it.

RESEARCH METHODOLOGY

The research design uses a descriptive case study method that aims to describe the relationship between two things experienced by patients, namely vaginal discharge, and the habit of cleaning the vagina with vaginal cleansing soap. The number of samples is one person. The data collection method uses the interview method and physical presentation examination in narrative texts, where case studies are assembled in sentences that tell events. Previously, the patient was asked for consent by signing an *informed consent sheet.*

RESULTS

A 30-year-old woman came to the clinic with complaints of vaginal discharge that came out of her vagina. Vaginal discharge is also felt thick, smells fishy, and feels very itchy in the vaginal area. This complaint has been felt for more than a week. When having intercourse with her husband, the patient felt very intense pain and sometimes bleeding, even though the blood that came out was not much. Patients said that they often use vaginal cleansing soap made from betel soap once a day every afternoon when taking a shower. According to the patient, this is done so that her vagina is clean, especially when she finishes menstruation or after having sex with her husband. There is no history of drug allergy in the patient. A history of promiscuous sexual behavior was not found either in the patient or in the patient's husband. The patient's husband works as a private employee. On physical examination, mucopurulent vaginal discharge and fishy smell were found. Labia majora appears swollen and reddish. By using a speculum, the cervix appears reddish. No abrasions and blood spots were found on the cervical neck.

Figure 1. Mukopurulen vaginal discharge and fishy smell

DISCUSSION

Based on the symptoms experienced by the patient above, such as a lot of vaginal discharge, thick, fishy smell, and itching in the vagina, it can be confirmed that the patient has pathological vaginal discharge. On physical examination, it was found that there was a reddish labia majora, mucopurulent white fluid, and a reddish service where it could be said that this condition led to *Vulvovaginitis*. This case is in line with previous research that there is a correlation between vaginal discharge and the use of vaginal cleansing soap (Sugawara and Nikaido, 2014). The use

of soap can affect the acid-base balance in the vaginal area. Usually, there is normal flora in the vagina. The balance between normal flora and pathogens maintains the acidity of the vaginal area that does not require "help" from the outside, for example, soap. Usually, the pH of the vagina is at the level of 3.5-5.5, which means that it is acidic. If the pH changes, it will spur the onset of smelly and itchy vaginal discharge. If you use antiseptics continuously, in this case, vaginal cleansing soap, it will further erode the *borderline* bacteria, and other bacteria will enter the vagina more easily.

In this case study, the forgotten thing was asking the patient about using panty liners daily. Panty liners are feminine products such as sanitary napkins in smaller and thinner sizes (Gao and Kannan, 2020). In the previous study, it was found that the use of *panty liners* was at risk of experiencing vaginal discharge 18,500 times compared to respondents who did not use *panty liners*. In the following research, the author hopes to be asked about the habit of using this *panty liner*. In another study (Van Der Veer *et al.*, 2019), excessive use of vaginal cleaning soap can cause the growth of *Candida Albicans* bacteria which is included in pathogenic bacteria that can cause *vulvovaginitis candidiasis*. The normal flora of the vagina, namely *Lactobacillus Sp.* She experienced a change in amount when a woman used vaginal cleansing soap. Although these changes are not too significant, there is still a change that can be a risk factor for the growth of pathogenic germs (Baker *et al.*, 2022).

The use of vaginal cleansing soap also triggers the death of vaginal epithelial cells and results in provoking inflammatory cells to come. If done frequently, the risk of an inflammatory process will occur more regularly. This can cause diseases such as *Vulvovaginitis*, *bacterial vaginosis*, and pelvic *inflammatory disease*. In previous studies (Hesham *et al.*, 2021), the results were obtained that the use of vaginal cleaning soap does kill the *E.Coli pathogen* germ. However, this activity makes the vaginal epithelial cells die, and the inflammatory process increases in the vaginal area (Starks, 2020). Previous research revealed that there is a relationship between vaginal *douching* behavior and the onset of vaginal discharge by the case study above (Deshkar and Mahore, 2022). According to other studies, vaginal *douching* is more common in illiterate women than in schools, which also means that vaginal douching will be more common in populations that are less educated about the dangers of excessive *vaginal douching* (Dolan, Hill and Valea, 2022). The type of job and income level are other factors that can be asked in the following case study. These three factors also turn out to be influential in terms of cases of vaginal discharge related to vaginal cleaning (Yıldırım, Vural and Koçoğlu, 2020). Counseling with the lecture method is the easiest way to increase knowledge about something. Poor behavior and Knowledge of poor vaginal discharge can be improved in this way (Michael *et al.*, 2020).

Women often have the habit of cleaning the vagina (*vaginal douching*) to maintain vaginal hygiene (Velji *et al.*, 2022). Previous research has indeed said that there is a relationship between poor *vaginal hygiene* and the onset of pathological vaginal discharge (Zougira and Shintya, 2024). However, according to previous research, maintaining *vaginal hygiene* is not only enough by using vaginal cleansing soap. Washing properly after urinating using running water and from front to back is also included. Keeping the vagina in a dry condition is not humid is included in maintaining *vaginal hygiene.* How often you change your underwear also affects vaginal *hygiene*. Panties must be changed at least two times a day; if they are not changed, the vagina will be moist so that it is easy to grow fungi and bacteria (Cahyaningtyas, 2019). Women with gynecologic cancers often experience complications associated with their primary disease process or from the cancer-directed treatment. In addition, many women have medical comorbidities, are obese, or are elderly, all of which may further complicate treatment decisions and therapy (Tucker and Clarke-Pearson, 2023).

CONCLUSION

With this study, it is further proven that the use of vaginal cleansing soap can cause pathological vaginal discharge. It is necessary to have good education for women with

pathological vaginal discharge so that there is no recurrence of similar cases. In the case study above, it is essential to carry out additional examinations to find out the cause of the vaginal discharge, whether it is fungus, bacteria, or protozoa, so that it can speed up the healing of the patient. With this research, it is also hoped that it can be an example of a health case about pathological vaginal discharge and increase women's Knowledge of what kind of good vaginal cleaning behavior.

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Conflict of Interest

There is no conflict of interest in this study.

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