
Reduce the Incidence of Flour Albus Using the Betel Leaves Extract

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ABSTRACT

Vaginal discharge is often not taken seriously by the teens when it could be an indication of disease. Vaginal discharge is a second problem after menstrual disorders. It is very uncomfortable, itchy, smelly and sometimes sore. Betel leaves boiled water to wash the vagina can reduce vaginal discharge because it contains essential oils that consist of betlephenol, kavicol, sidquiterpan, hydroxycicvicol, cavibetol, estragol, eugenol, and carvacol. The objective of this research is to describe the effect of betel leaves extract on the occurrence of flour albus on teenagers of SMA 3 west Seram western Seram regency 2015. It is a quantitative research by using quasy-experiment design to determine the existence of vaginal discharge (pre-test) and examine the effectiveness of the betel leaves extract after treatment (post-test). The sample were 18 respondents with observation sheet given. Research result shows that 13 of 18 respondents who experienced vaginal discharge cured after being treated in the form of betel leaves extract. It can be concluded that vaginal discharge before and after the treatment is given for the provision of betel leaves extract is different or experience the healing significantly.

Keywords: betel leaves extract; vaginal discharge

INTRODUCTION

Vaginal discharge in medical language is known as leukorea, fluor albus. Leukorea is a fluid that comes out of a woman's genitals that are not blood but in the form of vaginal discharge that many women experience in productive age but do not rule out the possibility of an infant and old age ⁽¹⁾.

Reproductive problems are a common concern, especially for women because it is very important and its broad impact covers a variety of lives and becomes a parameter of the reproductive community. According to the replication of the ICPD (International Commission on Population and Development) health reproduction is a state of physical, mental, social health, which is intact and not only there is no disease or weakness in all matters related to the reproductive system and its function and process ⁽²⁾.

Leucorrhoea is a symptom that is very often experienced by most women. This disorder is the second problem after menstrual disorders. It is very uncomfortable, itchy, smelly even sometimes painful. Leucorrhoea is often not taken seriously by teenagers. However, vaginal discharge can be an indication of disease. Almost all women have experienced vaginal discharge. In general, people consider vaginal discharge as normal. This opinion is not entirely true, because there are various causes that can lead to vaginal discharge, not just about the cleanliness of the intimate area but also how to clean it. Normal vaginal discharge is a natural thing. However, abnormal vaginal discharge can be an indication of a disease that must be treated ⁽³⁾.

Maintaining the health of reproductive organs in women begins by maintaining the cleanliness of the female organs. Cleansing the vagina is by carefully washing the vulva part carefully using clean water. What should be noted again is cleaning the sweat marks around the vaginal lips ⁽⁴⁾.

The cleanliness of the reproductive organs, especially the outside, is part of personal hygiene. This habit needs to be planted since childhood, starting from the right cleansing method, which is from front to back. This is done to prevent the transfer of germs from the anus to the vagina. In addition the vaginal area must always be kept dry, because moisture can cause germs, bacteria and fungi to thrive, so that it often continues to cause leucorrhoea complaints ⁽⁵⁾.

Some diseases of the female reproductive organs can be trichomoniasis, bacterial vaginosis, candidiasis, vulvovaginitis, gonorrhoea, chlamydia, and syphilis. One of the symptoms and signs of infectious diseases of the female reproductive organs is vaginal discharge. For this reason, adolescents really need to get special attention in maintaining their health, especially their reproductive health ⁽⁴⁾.

Knowledge and better understanding and recognizing the causes of vaginal discharge problems can affect the way to prevent vaginal discharge so that vaginal discharge can be overcome ⁽⁴⁾.

According to Elistiawaty ⁽⁶⁾, 75% of Indonesian women have experienced vaginal discharge and definitely experience it at least once in their lives. This is different from European countries where only 25% of European women are affected by vaginal discharge. Many Indonesian women experience leucorrhoea because the air in the soil is moist, so it's easy to get *Candida albicans* fungus infection, while in Europe it is dry. Every woman

is usually affected by this disorder regardless of age group, background and type of work.

In the vagina there is a defense mechanism against foreign objects. Glands in the vagina and cervix produce a secret that functions as a natural protector to experience friction on the vaginal wall when walking and during sexual intercourse. 95% of cases of cervical cancer in Indonesian women are marked by vaginal discharge ⁽⁷⁾.

Research data on reproductive health shows that 75% of women in the world experience vaginal discharge and 45% can experience it 2 times or more. In 2002, as many as 50% of Indonesian women experienced vaginal discharge, In 2003, as many as 60% of women experienced vaginal discharge, and in 2004 70% of women experienced vaginal discharge at least once in their lifetime ⁽⁸⁾. From the data obtained throughout 2011 to 2012, Dr. Boyke noted that 70% of women in Indonesia still experience vaginal discharge problems ⁽⁹⁾.

Related to the case of vaginal discharge, data from the Maluku provincial health office has no official data regarding the case. This may be due to the lack of special attention regarding cases of vaginal discharge and the lack of awareness from the community itself to conduct examinations or treatment at the nearest health care facility.

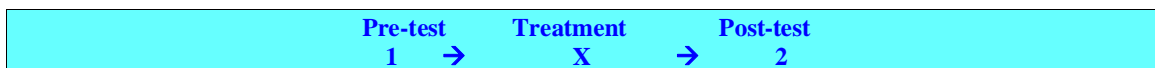
Based on a preliminary study conducted at State Senior High School 3, West Seram, of 67 female students found 63 female students had experienced vaginal discharge and as many as 14 (20.9%) female students who were doing initial data retrieval were experiencing physiological vaginal discharge namely expenditure clear liquid that is odorless and 18 (26.9%) female students experience pathological vaginal discharge, which is the removal of smelling liquid and milky white to brass.

Various attempts are made to reduce the good vaginal discharge by using antiseptic soap or using herbal ingredients such as betel leaves. Water decoction of betel leaves to wash the vagina can reduce vaginal discharge, because betel leaves contain essential oils consisting of betlephenol, cavicol, sidquiterpan, hidroxikavicol, cavibetol, estragol, eugenol, and carvacol. Some literature states that betel leaves also contain diastase enzymes, sugars and tannins. Usually, young betel leaves contain diastase, more sugar and essential oils compared to old betel leaves. While the core content of tannin is relatively the same. Eugenol compounds in betel leaves, proven to kill *Candida albicans* fungus that cause vaginal discharge, while tannin, isan astrigent that reduces fluid secretion inthe vagina ⁽¹⁰⁾.

Based on these descriptions, the authors are interested in conducting researchon the effect of "giving betel leaves extract to albus flour occurrences on teenagers in State High School 3, West Seram".

METHODS

The type of research used was quantitative research. The design of this study was quasi-experiment with knowing the presence of vaginal discharge (pretest) and checking the effectiveness of the betel leaves extract after treatment (post-test).



Information:

1: Teenagers who experienced vaginal discharge before being treated (pre-test)

2: Teenagers who experienced vaginal discharge after being treated (post-test)

X: Treatment in the form of giving betelleaves extract

Figure 1. Research design

This study was conducted at State High School 3, West Seram, on July 30 to August 4, 2015. The population were all teenage girls who experienced leucorrhoea. The sample were 18 teenagers of class X and XII students.

Data collection was carried out by distributing questionnaires to find out which students experienced vaginal discharge. Then they were given an observation sheet to find out the development of Albus's Flour after intervention. Intervention in the form of betel leaves extract, where it was boiled with ingredients; fresh betel leaves 7-10 sheets, use; Betel leaves are boiled in 2.5 liters of water, and in mildly cold or warm nails. The boiled water was used to wash the vagina twice a day and was used for 5 consecutive days. Each student was given 1 x dose of betel leaves extract every morning and evening, and continues until the fifthday. The provision of betel leaf extract with clean water, a way to cut from front to back, using underwear that is not tight and madeof materials that absorb sweat.

Data were analyzed using electronically using paired samples t-test.

RESULTS

Table 1 shows that of the 18 respondents there were 17 respondents (94.4%) who had symptoms of vaginal discharge and only 1 respondent (5.6%) who did not have symptoms of vaginal discharge.

Table 1. Symptoms of vaginal discharge on teenagers before treatment

Smell of vaginal discharge	Frequency	Percentage
No	1	5.6
Yes	17	94.4

Table 2. Distribution of volume vaginal discharge symptoms on teenagers before treatment

Volume of vaginal discharge	Frequency	Percentage
No	3	16.7
Yes	15	83.3

Based on table 2, the number of respondents who experiences vaginal discharge volume or number of vaginal discharge was 15 respondents (83.3%) and only 3 respondents (16.7%) did not experience this.

Table 3. Distribution of itchy vaginal discharge symptoms on teenagers before treatment

Itchy of vaginal discharge	Frequency	Percentage
No	3	16.7
Yes	15	83.3

Table 3 shows that out of 18 respondents there were 15 respondents (83.3%) who experience symptoms of vaginal itching and only 3 respondents (16.7%) of respondents who did not experience symptoms of vaginal itching.

Table 4. Distribution of color vaginal discharge symptoms on teenagers before treatment

Color of vaginal discharge	Frequency	Percentage
No	2	11.1
Yes	16	88.9

Table 4 shows that out of 18 respondents there were 16 respondents(88.9%) who experience color vaginal discharge symptoms and only 2 respondents (11.1%) who did not experience color vaginal discharge symptoms.

Table 5. Distribution of symptoms of vaginal discharge on teenagers after treatment

Smell of vaginal discharge	Frequency	Percentage
No	17	94.4
Yes	1	5.6

Table 5 shows that of the 18 respondents there were 17 respondents (94.4%) who experience healing symptoms of vaginal discharge and only 1 respondent (5.6%) of respondents who did not experience healing.

Table 6. Distribution of volume vaginal discharge symptoms on teenagers after treatment

Volume of vaginal discharge	Frequency	Percentage
No	15	83.3
Yes	3	16.7

Based on table 6, from 18 respondents there were 15 respondents (83.3%) who experience healing of vaginal discharge symptoms and only 3 respondents (16.7%) of respondents who did not experience healing.

Table 7. Distribution of itchy vaginal discharge symptoms on teenagers after treatment

Itchy of vaginal discharge	Frequency	Percentage
No	18	100

Based on table 7, from 18 respondents overall respondents experienced changes in the form of itching symptom healing.

Table 8. Distribution of color vaginal discharge symptoms on teenagers after treatment

Color of vaginal discharge	Frequency	Percentage
No	16	88.9
Yes	2	11.1

Based on table 8, from 18 respondents there were 16 respondents (88.9%) who experience healing of color vaginal symptoms and only 2 respondents (11.1%) of respondents who did not experience healing.

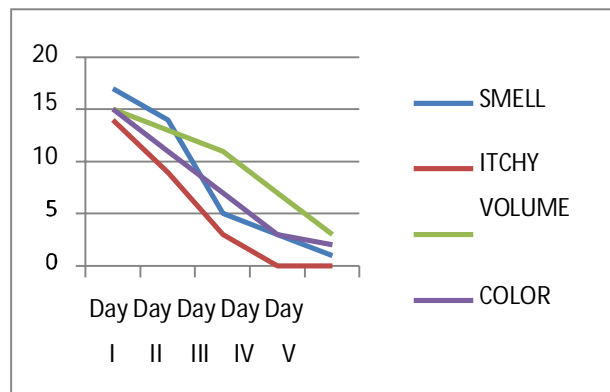


Figure 2. The vaginal discharge occurred on the first day until the fifth day

Figure 2 shows that the smell of vaginal discharge on the first day: 17 respondents, the second day: 14 respondents, the third day: 5 respondents, the fourth day: 3 respondents, and the fifth day: 1 respondent. In the itchy, the first day: 14 respondents, the second day: 9 respondents, the third day: 3 respondents, the fourth day and the fifth day all respondents said recovered. In the volume, the first day: 15 respondents, the second day: 13 respondents, the third day: 11 respondents, the fourth day: 7 respondents, the fifth day: 3 respondents. In color, the first day: 15 respondents, second day: 11 respondents, third day: 7 respondents, fourth day: 3 respondents, and fifth day: 2 respondents.

Table 9. The result of hypothesis testing (paired samples t-test)

Symptoms	t-count	t-table
Smell	11.662	2.110
Volume	5.831	2.110
Itchy	9.220	2.110
Color	7.714	2.110

Based on table 9, if the t-count is greater than t-table, then Ho is rejected. T-count of t-test were 11.662 (smell): Ho was rejected, 5.831 (volume): Ho was rejected, 9.220 (itching): Ho was rejected and 7.714 (color): Ho was rejected. Thus, there are differences smell, volume, itching and color between before and after giving the intervention.

Table 10. Differences in the incidence of vaginal discharge before and after treatment

Leucorrhoea occurrence	Before	After	p
Leucorrhoea occurrence 18	18	13	0.000

Table 10 shows the occurrence of vaginal discharge before and after being treated in the form of giving betel leaves extract, where before treatment were 18 respondents (100%) and after treatment 13 respondents (72.2%). The results of the paired samples t-test showed a significant change between the incidence of vaginal discharge before and after being treated with p-value of 0.000 ($p < 0.05$).

DISCUSSION

The Occurrence of Vaginal Discharge Before Treatment

The results show that from the four leucorrhoea symptoms studied, in the form of smell, volume, itching and color, the highest percentage experienced by respondents was smell symptoms, namely from 18 respondents there are 17 respondents (94.4%), then color symptoms are 16 respondents (88.9%), symptoms of volume and itching are 15 respondents (83.3%) respectively.

Leucorrhoea is the name of a female reproductive disease symptom, which is a white discharge from her vagina, in the form of mucus. Sometimes the mucus that comes out of the vagina smells bad, but sometimes it doesn't smell very much ⁽¹¹⁾.

The liquid that comes out of the vagina is often called vaginal discharge. The discharge may be due to a disturbance in the vaginal ecosystem, resulting in excessive mucus or a considerable amount ⁽¹¹⁾.

Flour albus (leucorrhoea), although harmless (except for uterine cervical carcinoma), is enough to disturb the patient, both physically and mentally. The nature and amount of vaginal discharge can provide clues to the etiology. It should be asked how long the complaint is, continuously or at certain times, the amount, color, smell, accompanied by itching / pain or not ⁽¹⁰⁾.

The Occurrence of Vaginal Discharge After Treatment

After doing the research the results show that 15 of 18 respondents experience healing, and of the four symptoms of vaginal discharge studied are the form of smell, volume, itching and color. Of the 18 respondents, all experienced healing on the symptoms of itching, 17 respondents (94.4%) who experience healing symptoms of smell, 16 respondents (88.9%) who experience healing of color symptoms, and 15 respondents (83.3%) who experience healing volume symptoms.

Data shows the occurrence of vaginal discharge in women is high, but because it is considered a symptom of premenstrual syndrome, very few women realize that vaginal discharge is a health disorder that needs to be treated and the cause is sought. For people with vaginal discharge, the impression from the outside is not visible, but this will interfere with the appearance and will unconsciously reduce confidence.

Provision of water boiled or betel to wash the vagina can reduce vaginal discharge. Where eugenol compounds in betel leaves, proven to kill *Candida albicans* fungi cause vaginal discharge, while tannin is an astringent that reduces fluid secretion in the vaginal opening ⁽¹⁰⁾.

Differences in the Occurrence of Vaginal Discharge Before and After Treatment

The results show that the occurrence of leucorrhoea before and after being treated in the form of betel leaves extract have a significant difference, which means that the treatment of betel leaf extract for leucorrhoea is significantly successful.

Research on 20 students of Denpasar poltekkes (health polytechnic) young women majoring in nursing who suffered from vaginal discharge, only a small percentage of 1 person (5%) who have no change and most experienced a change of 19 people (95%) ⁽¹⁰⁾.

The results of this study support the theory of compounds contained in betel leaves such as eugenol which can kill *Candida albicans* as a cause of leucorrhoea and tannin, in the form of astringents that can reduce fluid secretion in the vagina and immune suppressants.

CONCLUSION

Based on the results of the study, there is an effect of giving betel leaves extract to the occurrence of vaginal discharge on teenagers of state Senior High School 3 West Seram.

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