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THE EFFECT OF USING RED BETEL LEAVES (Piper crocatum) FOR VAGINAL DISCHARGE AMONG FERTILE AGE WOMEN (FAW)

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ABSTRACT

This study aimed to determine the influence of the use of red betel leaf boiled water to cure vaginal discharge in fertile age women in Surau Gadang Work Area Health Public of Center Nanggalo Padang 2014. This research is a Quasi-Experiment. Research has been conducted in Surau Gadang Work Area Public Health Center of Nanggalo Padang in 2014 from June 3rd to July 2nd, 2014 on 34 samples with purposive sampling. Data collection used observation sheets and litmus paper. The data were analyzed using univariate and bivariate analysis by means of Wilcoxon test techniques. The pH before the use of red betel leaves boiled water showed results as an average of 2.00, SD 0000, Min 2 and Max 2. The pH after the use of red betel leaf boiled water obtained on average 1.21, SD 0410, Min 1 and Max 2. There are significant differences between the pH before and the pH after supplied of red betel leaf decoction to cure vaginal discharge in fertile age women (FAW) (*p-value* = 0.000). There are significant differences between the pH before and the pH after supplied of red betel leaf decoction to cure vaginal discharge. Suggested to the Health Public of Center Nanggalo Padang in order to disseminate and evaluate the implementation of the use of red betel leaf decoction water to cure vaginal discharge in fertile age women.

Keywords : Red betel leaves, Flour albus, Piper crocatum

INTRODUCTION

For a woman, maintaining cleanliness and a shape of the body is very vital, but there are still women who do not really care about the cleanliness of their reproductive organs. Most of the women are complaining about the diseases that disrupt daily activities, like vaginal discharge. Sometimes women who suffer from vaginal discharge would have psychiatric reactions, fear and excessive anxiety. This situation causes the women to feel less confident, so they withdraw themselves from the society which is ultimately dangerous to the individuals (Rozanah, 2003).

Health problem among women all over the world reveals that 33% of the total burden of disease affecting women is due to worst cases in the reproductive age. This number is greater than the reproductive problems in men, which is only 12.3% of men in the same age group as women The incidence of vaginal discharge among women in The world, Europe and in Indonesia is quite high. Vaginal discharge or *Fluor Albus* is women's abnormal vaginal secretion. Vaginal discharge or *Fluor Albus*, women's abnormal vaginal secretion is caused by an infection which is followed by itchiness in the vagina and around the outside of genital lips. As a result of this, she feels uncomfortable in the vaginal area (Yohana and Yovita, 2012).

In general, vaginal discharge can be caused by several factors: the lack of attention to the cleanliness of vaginal organs, washing the organs in the wrong way, tiring physical activity, not replacing the pads

properly during menstruation, less healthy life, under stressful psychiatric conditions, using excess soap to clean the sensitive organs, humid weather, changing partners often for doing sex activity, the condition of hormonal imbalance or often scratching the genital organs.

One of the other causes of the emergence of vaginal discharge is a fungal infection *Candida albican. Candida albicans* fungus is classified as a dimorphic fungus. *Candida albicans* is found in some parts of the body of a healthy person, such as in the mouth, esophagus, intestines, genital tract, feces, under the nails and skin. An infection caused by Candida is called *Candidosis.* Vagina *Candidosis* is vaginitis which is caused by *Candida albican* fungus. The main symptom of this infection is Flour Albus (vaginal discharge), often followed by itching. Typically, these infections occur due to pollution after defecation, from infected nails or water that has been contaminated by the fungus and is used to wash the genital organs (Hamid, 2012).

The effect of this abnormal vaginal discharge, if it is neglected without treatment, may result in the spread of the infection into the uterus, fallopian tubes and also can infect the ovaries. These conditions can damage the reproductive organs inside and can also lead to infertility. Therefore, keeping personal hygiene is important to prevent a vaginal discharge (Hediyani, 2012).

The research data about reproductive health shows that 75% of women in the world get a vaginal discharge and 45% of them may experience vaginal discharge as much as 2 times or more. From a study, it is evident that 3 of every 4 women in the world have experienced vaginal discharge at least once in their life. Every woman can be affected by these disorders without looking at the background and the profession (Bahari, 2012).

According to Muninjaya, Anak Agung Gede (2004) and Solikhah, Marsito, Nurlaila (2010) it is reported that in Indonesia the problem of vaginal discharge increased more than 75% among the women due to the moist weather in Indonesia. They are easily infected with the fungus *Candida albicans*, parasites such as pinworms or bacteria (*Trichomonas vaginalis*). They reported that in 2007 as many as 60% of Indonesian women have experienced vaginal discharge, while in 2008 as many as 70% of Indonesian women have experienced vaginal discharge.

Vaginal discharge has been a problem for women for a long time. Not all of the women know about vaginal discharge and sometimes underestimate this issue. Vaginal discharge cannot be considered as unimportant because the effect can be very fatal if it is late to handle. Not only can it lead to infertility and pregnancy outside the womb, vaginal discharge can also be an early symptom of cervical cancer leading to death. Vaginal discharge also can affect a person's psychology because it tends to relapse and recur so that it can affect a person both physiologically and psychologically (Suhandi, 2012).

Treatment of vaginal discharge can be done only by using the pharmacological treatment methods or using drugs such as Gentian violet 1%, Nitronidazole 2x1 tablet (500 mg) for 10 days, antibiotics like ampicillin 3x1 tablet (500 mg) for 3 days in a row. But if the drug is consumed continuously, there would be side effects including nausea, abdominal pain, diarrhea, headache, irregular menstruation, allergic reactions (skin rash, itching) and can cause liver damage. Besides pharmacological treatment, non-pharmacological treatment or traditional medicine can cure vaginal discharge. One such traditional treatment is the use of red betel leaf to treat vaginal discharge, besides being a natural material is that red betel is very easy to use, easily available and do not require high costs like antibiotics.

Red betel leaf (*Piper crocatum*) is a medicinal plant which is very beneficial. The Anthocyanin content is high, indicating its antioxidant property. The red betel leaf is used to reduce vaginal discharge and keeping vaginal areas clean due to its antiseptic property. It is easy to start using red beetle leaf by boiling seven leaves then using the boiled water to rinse the genital organs (Ismawan, 2012). The taste of red betel leaves is very bitter. It has the strong aroma when compared with green betel. The red betel leaves contain flavonoids, polevenolad compounds, tannins and essential oils. The effect of an active substance in the red betel leaf can stimulate the central nerve and thinking power. The Red betel leaf extract is also capable of exterminating *Candida albican* fungus

causing sprue. Moreover, it can reduce secretions in the vagina, vaginal discharge and itching of the genitals, as well as wound cleansing (antiseptic effect).

Based on UPT Padang City Nanggalo District of Family Planning (2012), it was found that the number of fertile women in Kelurahan Surau Gadang was as many as 6259, in the Kelurahan Kurao Pagang it was 2,592 people and in the Kelurahan Gurun Lawas was as many as 1,236 people. Of the three villages in the district of Padang Nanggalo, Kelurahan Surau Gadang is the village that has maximum fertile age women with 6259 individuals. From the initial survey conducted interviewing 10 women in the fertile age with vaginal discharge in Surau Gadang work area at Health Public of Center Nanggalo Padang, it was found that only 3 (30%) of these fertile women used boiled water of red betel leaves to treat vaginal discharge. All of them agreed that red beetle leaf is a good treatment for vaginal discharge. But 7 (70%) of them did not use the red betel leaf to treat vaginal discharge because they did not agree with the treatment, as they think it is not a big deal.

Based on the information above, the researchers were interested in increasing the awareness regarding the influence of using red betel leaves boiled water for healing vaginal discharge among fertile age women (FAW) in Surau Gadang work area at Health Public of Center Nanggalo Padang.

RESEARCH METHODOLOGY

This research uses a Quasi-Experiment which is structured to determine an indication or effect, as a result of certain treatment. This study uses two groups as both pretest and for posttest design. The pretest is done before the application of boiled water red betel leaves and then after being given red betel leaves boiled water once a day for 7 days, the calculations was done again (post-test) to find healing on the vaginal discharge after the treatment.

Research has been conducted in Surau Gadang work area Public Health Center of Nanggalo Padang from June 3rd to July 2nd, 2014. The individuals in this study consisted of all fertile age women experiencing vaginal discharge. The total number of study group consisted of 107 individuals. Samples are calculated by using estimated proportion formula with formula finite population (Lemeshow, 1997):

$$\square = \frac{(Z_1 - \alpha/2)^2 \cdot P(1-P)N}{d^2(N-1) + (Z^1 - \alpha/2)^2 \cdot P(1-P)}$$

$$= \frac{1{,}96^2 \cdot 0{,}75(1-0{,}75)107}{0{,}1^2(107-1) + 1{,}96^2 \cdot 0{,}75(1-0{,}75)}$$

$$= \frac{76{,}2}{1{,}06 + 0{,}75}$$

$$= 43$$

Description:

$Z_1 - \alpha/\square^2$ = value normal curve

on trusting level 95% = 1,96

P = vaginal discharge case proportion 75% = 0, 75
N = population
d = precision or trusting level 10% = 0,1

So, the total of the samples in this study is 43 individuals.

1. Inclusion Criteria

a. Fertile age women who reside in Kelurahan Surau Gadang at Public Health Center of Nanggalo Padang.

b. Fertile age women who are willing to be respondents

c. Fertile age women who experienced vaginal discharge with a pH of ≥5

d. Fertile age women who were currently in that place where the research was held.

2. Exclusion Criteria

a. Fertile age women who experienced vaginal discharge with a pH ≤5

b. Fertile age women who were not willing to be respondents.

Based on the inclusion and exclusion criteria above, it was found that eligible sample quantitates to as many as 34 people.

The sampling technique used in this research is the purposive sampling technique which means that the researchers during initial screening went to the respondent's houses to conduct a pre-test with litmus paper on fertile age women with vaginal discharge. Then the sample is selected based on the inclusion criteria.

MATERIAL AND METHODS

a. Tools and materials:

1) 7 fresh medium sized red betel leaves

2) 1 liter of clean water

b. Procedure of Preparation and Use:

1) The red betel leaves was washed until they are clean

2) 1 liter of water was boiled

3) After 15 minutes the red betel leaves boiled water was lukewarm

4) This red betel leaves boiled water was then used from the front to backward by flushing on vaginal area

5) This was repeated once every day after a bath or when going to bed at night.

The research instruments are the tools that will be used for collecting data (Notoadmojo, 2010). In collecting data, researchers used observation sheet and litmus paper.

The data processing is done by using computers and the steps as follows: checking the data (Editing), encoding the data (Coding), entering the data (Entry), and data cleaning (Cleaning). The data were analyzed by using univariate and bivariate analysis to determine the average value, mean, median, maximum value, minimum value and standard deviation both in pretest and post-test. Bivariate analysis was used to see the impact of using red betel leaves boiled water for vaginal discharge healing. This study was conducted only on an average of two values by using the bivariate test which is the average of two different tests and test used non-parametric statistical test with Wilcoxon Test, p value > α (0.05).

RESULTS

Result of using red betel leaves boiled water for healing vaginal discharge to Fertile Age Women (FAW) in Surau Gadang Work Area at Health Public of Center Nanggalo Padang 2014:

Univariate Analysis

pH of vaginal discharge before and after the use of red betel leaves boiled water.Table 1.

Table 1.

The Vaginal Discharge pH distribution before and after the use of red betel leaves boiled water to fertile age women (FAW) in Surau Gadang Work Area at Health Public of Center Nanggalo Padang 2014

Variable	Mean	SD	Min	Max	N
pH Before Usage **red betel leaves boiled water.**	2.00	0.000	2	2	34
Vaginal discharge pH after Using **red betel leaves boiled water**	1.21	0.410	1	2	

Bivariate Analysis:

Before analyzing with bivariate analysis, it must be done firstly by the normality test named Kolmogorov - Smirnov test. The p-value for pH will be determined by using red betel leaves boiled water 0.000 and pH after using red betel leaves boiled water 0.000. Thus it can be stated that the pH before and after the application of red betel leaves boiled water is not normal in distribution. Therefore non-parametric statistical test will be conducted, namely Wilcoxon test. The data will be further processed by bivariate analysis to determine whether there is an influence of using red betel leaves boiled water to cure vaginal discharge. The results of the bivariate analysis by the researchers are:

The average pH of vaginal discharge among fertile women age in the first measurement is 2.00 with a standard deviation of 0.000. On the second measurement after the use of red betel leaves decocted water, it can be found that average pH of vaginal discharge among fertile women age is 1.21 with a standard deviation of 0.410. Statistical test results obtained p value = 0.000. It can be concluded that there is a significant difference between the pH before and the pH after using red betel leaves decocted water among the experiment group.

DISCUSSION

Based on the research result on the influence of the use red betel leaves boiled water to cure vaginal discharge in fertile age women (FAW) are as follows:

a. pH of Vaginal Discharge Before:

The use of Red Betel Leaves Boiled Water Based on the research results, it can be concluded that vaginal

discharge pH before being given red betel leaves boiled water was 2.00 on average, SD 0000, Min 2 and Max 2.

According to the theory of Bahari, (2012), one of the causes of vaginal discharge is a *Candida albicans* fungal infection. *Candida albicans* fungus is classified as a dimorphic fungus, which enjoys a wet and humid place. The infection caused by *Candida* is called Candidiasis. Vaginal Candidiasis is vaginitis which is caused by the *Candida albican* fungus. Usually, the infection is caused by contamination after defecation or polluted water used to wash the genital organ. Furthermore, Yohana and Yovita (2012) stated that the discharge caused by the infection is usually accompanied by intense itching in the vagina and outside around the genital lips so that women feel uncomfortable in that area.

According to the researchers' analysis, vaginal discharge in the fertile age women is not only caused by the lack of hygiene of the genital organs but also caused by the *Candida albicans* fungus. From the results of research among the fertile age women who suffered from vaginal discharge, it can be said that the infection is due to bad habit of using damp and tight clothes. This proved that the measurement of pH ≥ 5 leads to vaginal discharge accompanied by itching in the vagina and around the outside of genital lips.

b. pH of Vaginal Discharge After The Use of Red Betel Leaves Boiled Water

Based on the research results it can be concluded that vaginal discharge pH after being given red betel leaves boiled water was 1.21, SD 0410, Min 1 and Max 2.

The results of this study are consistent with Dina (2012) on the use of red betel leaves boiled water to treat vaginal discharge. The results showed that 70% of women are cured after the use of the red betel leaf. The recovery in most of the fertile age women (FAW) after being given red betel leaves boiled water was due to the eugenol present in it that is capable of eradicating the *Candida albicans* fungus. In accordance with the theory of (Waskito, 2008) red betel leaf is widely used to treat various diseases, such as to lower the pH of the vagina and treat vaginal discharge. The eugenol is an analgesic which relieves the pain. There is also tannin content in the leaves which are beneficial to reduce the secretion of fluid in the vagina.

According to Sadewo, (2002), the efficacy of red betel leaf lies in the fact that it reduces vaginal discharge and keep the sensitive organs clean because red betel leaves have one of the advantages of being antiseptic. Boiling 7-10 red betel leaves and then using the boiled water to rinse the genital organs is consequently very effective. The boiled water contains antiseptic property which can be used to cure vaginal discharge and odor around it.

Furthermore Bahari, (2012) stated that in general, vaginal discharge can be caused by several factors, like the apathetic of cleanliness of the vaginal area, flushing it in wrong way, tiring physical activity, not replacing the pads properly during menstruation, less healthy life, under stressful psychiatric conditions, using excess soap to clean the sensitive organs, the weather especially the humid conditions, often changing partners for doing in sexual activity, hormonal imbalance, scratching the genital organs, and wearing tight underwear of synthetic materials.

According to the researcher's analysis after using red betel leaves boiled water, the fertile age women feel happy because the discharge begin to diminish. FAW also stated thar after flushing with the decoction, they no longer experienced itching and discomfort in their genital areas. There is also tannin content in the leaves that are beneficial to reduce the secretion of fluid in the vagina. This proved that red betel leaf boiled water is effective for treating vaginal discharge, which is evident from the measurement results obtained with pH ≤ 5. Therefore, it is recommended to the woman of fertile age (WUS) to use red betel leaves boiled water to treat vaginal discharge.

c. pH of Vaginal Discharge Before and After The Use of Red Betel Leaves Boiled Water

The average pH of vaginal discharge before and after the use of red betel leaves boiled water in the first measurement was 2.00 with a standard deviation of 0.000. On the second measurement or after using red betel leaves boiled water the pH is 1.21 with a standard deviation of 0.410. It can be concluded that there is a significant difference between the pH of vaginal discharge before and after the use of red betel leaves boiled water. Effective use of the red betel leaf boiled water is very beneficial for the fertile age women

(FAW) because they have a partner. Therefore their partners are susceptible to get infected by the vaginal discharge. Therefore, the germ in the discharge can cause venereal disease that may infect their partner. This can cause unfavorable impact on the fertile age women. According to Hediyani, (2012), if vaginal infection remains untreated then the infection might spread into the uterus, fallopian tubes and also can be infect the ovaries. These conditions can damage the reproductive organs inside and can also lead to infertility. Therefore, it is crucial to maintain personal hygiene to prevent vaginal discharge. Therefore, it is highly recommended to fertile age women (FAW) who experience vaginal discharge to use red betel leaves boiled water in healing.

CONCLUSION

This study would help to develop skills in applying knowledge that is already obtained in college and to get more understanding about this matter. It is expected that the nursing education institutions must implement health education, particularly on the use of red betel leaf to cure vaginal discharge. The heads and nurses at Health Public of Center Nanggalo Padang can disseminate, implement and evaluate the implementation of the use of red betel leaf decoction water to cure vaginal discharge in fertile age women. This data can be used as reference material or for comparison in future studies with the same problem with different variables.

REFERENCES

Bahari, H. (2012). Easy Ways To Overcome Whitish. Jogjakarta: Blue Book.

Dina (2012). Water Boiled Red Betel Leaf To Treat Vaginal Discharge. Available at: http://sysidinayasser.blogspot.com.

Hediyani, N. (2012). Vigilant Whitish (Fluor Albus). Available at://www.mydoctor-online.com/index.php/article/51alert-whitish-fluorine-albus.

Ismawan. (2012). Efficacy Red Betel Leaves. Available at: http://www.herbal.web.id/2011/09/efficacy-leaves-betel-red-for-heart.html.

Lemeshow, S., Hosmer, D. W., Klar, J., Lwanga, S. K. & World Health Organization. (1997). Adequacy of Sample Size In Health Studies (Chichester, John Wiley,) published on behalf of the World Health Organization.

Notoadmojo, S. (2010). Health Research Methodology, Jakarta : Rineka Cipta.

Rozanah. (2003). The Whitish. Available at: HYPERLINK "http://www.republika.com"www.republika.com.

Solikhah, R., Marsito. & Nurlaila. (2010). The Relationship of The Whitish Level Knowledge Toward Adolescent Behavior In Maintaining Personal Hygiene In Kebumen – Bandung. Scientific Journal Health Nursing, 6(2), pp 63-70.

Suhandi, S. (2012). Caution Whitish Can Result in Death and Sterility. Available at: http://mymidwifery.com/index.php?/caution-whitish-can-result-death-and-sterility.

Waskito, S. B. (2008). Medicinal Plants. Surakarta: Voice Wealth Media.

Yohana. & Yovita. (2012). Understanding the Disease and Treatment. Jakarta: Garda Media.

Muninjaya, A. A. G. (2004). Health Management 2nd Edition, Jakarta: EGC.

Sadewo, B. (2002). Exterminate Disease With Red Betel Leaves. Available at: http://health.kompas.com/read/2010/03/11/15343935/betel-red-medicine-various-diseases.