

THE EFFECT OF GIVING BOILED WATER OF RED BETEL LEAVES ON FLUOR ALBUS SYMPTOMS IN AGED WOMEN FERTILE

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ABSTRAK : PENGARUH PEMBERIAN AIR RESEP DAUN SIRAH MERAH TERHADAP GEJALA FLUOR ALBUS PADA WANITA USIA SUBUR

Pendahuluan: Keputihan masih menjadi masalah yang dialami sebagian besar wanita di Indonesia. Sebanyak 90% wanita di Indonesia mengalami keputihan dan sebanyak 60% dialami oleh wanita usia subur. Sedangkan berdasarkan dari Poli kebidanan RSUD Jend. Ahmad Yani Kota Metro tahun 2015 terdapat 63 kasus keputihan, 65,1% kasus diantaranya terjadi pada wanita usia subur. Berdasarkan survey yang dilakukan, pada tahun 2021 terdapat 69 kasus keputihan di PMB wilayah Puskesmas Ganjar Agung, diantaranya 73,9% dialami oleh wanita usia subur. Sedangkan pada tahun 2022 terdapat peningkatan WUS yang mengalami keputihan yaitu sebanyak 73 kasus dan 89% keputihan dialami oleh wanita usia subur. Salah satu intervensi yang dapat diberikan oleh wanita yang mengalami keputihan adalah pemberian air rebusan daun sirih merah yang bermanfaat untuk mengurangi keputihan pada wanita usia subur.

Tujuan: Mengetahui pengaruh air rebusan daun sirih merah terhadap penurunan keputihan pada wanita usia subur.

Metode: Jenis penelitian ini kuantitatif, menggunakan pendekatan *one- group pra-post test design*. Pelaksanaan pada bulan Februari sampai Juli 2023 di PMB Wilayah Kerja Puskesmas Ganjar Agung. Penelitian ini menggunakan data primer dan sekunder dengan jumlah sampel 30 orang wanita usia subur. Teknik sampling menggunakan *purposive sampling*. Variabel *independent* yaitu daun sirih merah dan variabel *dependent* yaitu penurunan gejala keputihan. Instrumen penelitian menggunakan SOP, lembar observasi dan kertas lakmus. Analisis data secara univariat dan bivariat uji-t (Wilcoxon).

Hasil: Didapatkan rata-rata skor keputihan sebelum diberikan intervensi adalah 6,83 sedangkan rata-rata skor setelah diberikan intervensi adalah 3,80. Dimana 30 responden (100%) mengalami penurunan gejala keputihan. Hasil uji statistik p value = 0,000 dimana p value < 0,05 berarti H₀ ditolak dan H₁ diterima, yang berarti ada pengaruh air rebusan daun sirih merah terhadap penurunan keputihan.

Kesimpulan: Air rebusan daun sirih merah terbukti menurunkan keputihan yang dialami oleh wanita usia subur. Penelitian ini dapat diberikan air rebusan daun sirih merah pada pasien yang mengalami keputihan.

Kata Kunci : Daun Sirih Merah, Keputihan, Wanita Usia Subur

ABSTRACT

Background :Fluor albus is still a problem experienced by most women in Indonesia. As many as 90% of women in Indonesia experience fluor albus and as much as 60% are experienced by women of childbearing age. Whereas based on the General Hospital Jend Obstetric Poly. Ahmad Yani Metro City in 2015 there were 63 cases of vaginal discharge, 65.1% of cases which occurred in women of childbearing age. Based on a survey conducted, in 2021 there were 69 cases of fluor albus in the PMB of the Great Health Center region, of which 73.9% were experienced by women of childbearing age. Whereas in 2022 there was an increase in WUS that experienced fluor albus, which was as many as 73 cases and 89% of vaginal discharge was experienced by women of childbearing age..

Purpose: To determine the effect of red betel leaf stew water on decreased fluor albus symptoms in women of childbearing age.

Methods: This type of research is quantitative, leaving a one-group pre-post test design approach. Implementation in February to July 2023 in the PMB of the Great Ganjar Agung Puskesmas Work Area. This study uses primary and secondary data with a sample of 30 women of childbearing age. Sampling technique leaves purposive sampling. The independent variable is the red betel leaf and the dependent variable is a decrease in fluor albus symptoms. Research instruments turn on SOP, observation sheets and litmus papers. Univariate data analysis and t-test bivariates (Wilcoxon).

Results: Getting an average of fluor albus scores before being intervened was 6.83 while the average score after being intervened was 3.80. Where 30 respondents (100%) experienced a decrease in fluor albus symptoms. Statistical test results p value = 0.000 where p value < 0.05 with H₀ is rejected and H₁ is accepted, which means that red betel leaf has an effect in fluor albus.

Conclusion: red betel leaves have an effect in fluor albus. It is hoped that they can use non-pharmacological therapies such as red betel leaves to treat fluor albus as a complement to pharmacological therapy.

Keywords: Red Betel Leaf, Fluor Albus, Female Age Fertile

INTRODUCTION

Women's reproductive health problems are very complex. Problems with women's reproductive health occupy 33% of all diseases that affect women worldwide (Hidayanti et al., 2021). Leucorrhoea is a common condition experienced by most women related to reproductive health problems. According to Manuaba (1998) vaginal discharge is the name of a symptom in the form of fluid secreted from the genitals which is not blood and is not a disease but is a manifestation of almost all gynecological diseases (Hana et al, 2018).

Women of childbearing age in Indonesia have the potential to experience vaginal discharge because Indonesia is an area with a tropical climate, so that fungi easily develop which results in many cases of vaginal discharge. Women of Reproductive Age (WUS) are women whose reproductive organs function properly between the ages of 20 and 45 years. Fertility is highest between the ages of 20 and 29 years. At this time, a woman has a 95% chance of getting pregnant (Passe, 2021).

According to WHO (2018), approximately 75% of women worldwide will experience vaginal discharge at least once in their lifetime, and 45% will experience vaginal discharge more than once, while 25% of women in Europe will experience vaginal discharge more than once. A study in India showed that the prevalence of vaginal discharge in teenage female students reached 95% (Prabawati, 2019).

As many as 90% of women in Indonesia experience vaginal discharge and as many as 60% are experienced by women of childbearing age (Prabawati, 2019). Based on the midwifery polyclinic at Jend. Ahmad Yani Metro City in 2015 there were 63 cases of vaginal discharge, 65.1% of cases of which occurred in women of childbearing age. Based on a survey conducted, in 2021 there were 69 cases of vaginal discharge at the PMB in the Ganjar Agung Health Center area, of which 73.9% were experienced by women of childbearing age. Whereas in 2022 there will be an increase in WUS experiencing vaginal discharge, namely as many as 73 cases and 89% of vaginal discharge will be experienced by women of childbearing age.

Leucorrhoea is divided into 2 types, namely physiological leucorrhoea (normal leucorrhoea), namely vaginal discharge that is white or clear, odorless and does not cause itching in the vagina and pathological leucorrhoea (leucorrhoea due to infection which is usually yellow or green in color, smells fishy/stinky and cause itching) (Passe, 2021).

Leucorrhoea cannot be underestimated because the effect can be fatal if it is handled too late. Not only can it cause infertility but can also be an early symptom of cervical cancer which can lead to death. Leucorrhoea can also affect a person's psychology because it tends to recur and recur so that it can affect a person both physiologically and psychologically (Trisnawati, 2017).

Leucorrhoea can be treated in several ways. The first way is to pay attention to personal hygiene, use of cotton or sweat-absorbent underwear, adherence to diet, rest, or pharmacological treatment such as fluconazole and metronidazole. But now the international community and the Indonesian people have started to prioritize the use of natural medicines. Using herbal medicine, red betel leaves (*Piper crocatum*) can be used to treat leucorrhoea (Paskawati, 2021).

According to Trisnawati, (2017) red betel contains tannins in its leaves which are useful for reducing fluid secretion in the vagina. This proves that red betel leaf boiled water is effective for treating leucorrhoea, as evidenced by the measurement results obtained with a pH <5. Therefore, it is recommended for women of childbearing age (WUS) to use red betel leaf boiled water to treat leucorrhoea.

A preliminary study conducted by researchers at the PMB in the working area of the Ganjar Agung Public Health Center in March, obtained 9 WUS who experienced vaginal discharge after being interviewed and carried out a pH test using litmus paper, it was found that 6 WUS experienced pathological vaginal discharge with a pH > 5 which was due to a lack of knowledge about leucorrhoea treatment. and do not pay attention to personal hygiene.

In several research journals, red betel leaf is effective in reducing leucorrhoea, for this reason

researchers have an innovation in providing non-pharmacological therapy in the form of red betel leaf boiled water to reduce vaginal discharge in women of childbearing age.

In accordance with the above, researchers are interested in researching the effect of giving red betel leaf boiled water on vaginal discharge in women of childbearing age (WUS) in the PMB working area of the Ganjar Agung Public Health Center in 2023.

The purpose of this study was to find out the effect of giving red betel leaf boiled water on vaginal discharge in women of childbearing age (WUS) in the PMB working area of the Ganjar Agung Health Center in 2023

LITERATURE REVIEW

Vaginal discharge

Whitish (leukorrhea, flour albus, vaginal discharge) is an excessive discharge from the vagina other than menstrual blood, and is not caused by a neoplasm or systemic disease. According to Sarwono (2010) leucorrhoea is abnormal vaginal secretions in women accompanied by itching in the vagina and around the outer vaginal lips (Sulistiyowati, 2016). Leucorrhoea is discharge from the genitals that is not blood. Discharge is a sign that ovulation is happening in your body. In addition, vaginal discharge is also a sign of disease (Marhaeni, 2016). Leucorrhoea can be physiological (normal) and pathological (abnormal). Leucorrhoea is caused by microbial infections, which can cause genital inflammation and hormone imbalance (Sukamto et al, 2018).

Physiological vaginal discharge occurs in women before menstruation, in the middle of the menstrual cycle, and after menstruation. The amount is not too much, the color is clear, white (sometimes leaves a yellowish tint on underwear), odorless and not accompanied by itching, pain, swelling of the genitals, burning and burning when urinating (urinating) on the lower body. Physiological vaginal discharge is generally caused by hormonal processes in the body (Sholihah, 2020).

Meanwhile, pathological leucorrhoea is an exudate fluid and this fluid contains many leukocytes. Exudate occurs due to the body's reaction to the presence of injury (wound). Abnormal vaginal discharge can occur with any genital infection (infections of the labia, genital openings, cervix, supporting tissues, and sexually transmitted infections). If vaginal discharge is abnormal, it may change color, turn yellow or gray, or smell fishy or foul. Increased amount of vaginal discharge, which

can cause discomfort such as itching and burning in the genitals (Hanipah, 2021)

According to Marhaeni (2011) the impact that may arise in women who experience vaginal discharge, namely physiological and pathological vaginal discharge affects women. Excessive secretions can cause discomfort to a woman and affect her self-confidence. Pathological vaginal discharge that persists can affect the function of the female reproductive organs, especially the fallopian tubes, and cause infertility. Pregnant women can experience miscarriage, fetal death in the womb, birth defects, and premature birth.

Pharmacologically, leucorrhoea can be overcome by taking a single dose of oral medicine (one time consumption) at a doctor's reception, for example a single dose drug for leucorrhoea, namely diflucan with a dose of 150 mg. Fluconazole can also be used to treat infections caused by *Candida albicans* (metronidazole class of drugs used to treat bacterial and parasitic infections), but patients should be advised to avoid alcohol while taking metronidazole. Other drugs such as Vaginal Betadine, Dettol are also used to remove vaginal discharge from the vaginal canal, but do not kill the bacteria that cause it. Other drugs that can be used are vaccination, tetracycline, penicillin, thiamphenicol, doxycycline, and erythromycin. Gentian violet 1%, nitronidazole 2x1 tablet (500 mg) for 10 days, antibiotics for 3 days in a row, for example ampicillin 3 x 1 tablet (500 mg), this is a drug used to treat leucorrhoea, and continuous use of this drug can cause nausea, stomach pain, diarrhea, headaches, irregular menstruation, allergic reactions (rash, itching), and liver damage. Apart from using drugs (pharmacology), efforts to deal with vaginal discharge can also be done by destroying warts that grow on the cervix, vaginal opening, and labia. Warts can also be removed by surgery on some cervical tissue. If vaginal discharge occurs as a result of sexual intercourse, therapy should be given to sexual partners and sex should be avoided during treatment (Varney, 2009). and continuous use of this drug can cause nausea, stomach pain, diarrhea, headache, irregular menstruation, allergic reactions (rash, itching), and liver damage. Apart from using drugs (pharmacology), efforts to deal with vaginal discharge can also be done by destroying warts that grow on the cervix, vaginal opening, and labia. Warts can also be removed by surgery on some cervical tissue. If vaginal discharge occurs as a result of sexual intercourse, therapy should be given to sexual partners and sex should be avoided during treatment (Varney, 2009). and continuous use of this drug can cause nausea, stomach pain, diarrhea, headache,

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Apart from keeping the genitals clean and treating them with drugs, vaginal discharge can also be treated non-pharmacologically by utilizing the plants around us, including red betel leaf (*Piper crocatum*). Red betel leaves contain phytochemicals, namely essential oils, alkaloids, saponins, tannins and flavonoids which are thought to have potential as antibacterial agents.

Women of childbearing age

Women of childbearing age are women who are still in their productive age, namely between the ages of 15-49 years with unmarried and married status (Depkes RI, 2016). Meanwhile, according to Hidayati et al. (2020), Women of Reproductive Age (WUS) are women with normal reproductive organs between the ages of 20 and 45 years. Meanwhile, according to BKKBN (2011), women of childbearing age (women of working age) are women aged between 20 to 45 years who are not married or married.

There are several diseases in women of childbearing age, namely:

1. Leucorrhoea, vaginal discharge is discharge other than blood from the vaginal canal out of habit, whether smelly or not, and accompanied by local itching.
2. Vaginal infections, such as trichomonas vaginalis and candidiasis vaginitis
3. Vaginal infection Common symptoms of vaginal infection (vaginitis) include external infection

(lips), discharge (pus), itching and burning sensation. The surface of the external genitalia appears red and swollen with red spots.

4. Condyloma acuminata, shaped like a cauliflower with connective tissue and covered with hyperkeratotic epithelium (thickening of the stratum corneum).
5. Bartholin's gland infection, caused by gonorrhoea, readyolokokus or streptococcus bacteria. Examination found swollen glands, tight, red, painful, and hot.

Red Betel Leaf

Red betel leaf (*Piper crocatum* Ruiv & Pav) is a plant that belongs to the Piperaceae family. Betel is a shrub with stems and segments like tendrils, 5-10 cm apart, with roots growing from each segment. Stemmed leaves, elliptical, tapering, subacute at base and tapering at tip, flat edge, shiny or glabrous. 9-12 cm long and 4-5 cm wide. Pinnatus leaf veins from the lower half, leaf veins 4-5 x 2, bullulatus-lacunosa. Petiolus, 10 mm long, spike 90-110 mm long, 5 mm thick. The upper leaves are dark green, with silvery areas around the veins, and the undersides are purple. The upper leaves are dark green with silvery areas around the veins and purple below. Slimy leaves, less bitter taste, less distinctive smell.

According to Sudewo (2010) in Hidayat (2019) from the chromatogram results it is known that red betel leaves contain flavonoids, polevenolad compounds, tannins and essential oils. Other chemical constituents contained in red betel leaves are essential oils, hydroxycavicol, kavi-col, cavibetol, allylprocatekol, car-vacrol, eugenol, p-cymene, cineole, caryofelen, kadimen estragol, ter-penene, and phenylpropanate. Because of the many substances / chemical compounds that are useful, red betel leaf has very broad benefits as a medicinal ingredient. Carvacrol has disinfectant and anti-fungal properties, so it can be used as an antiseptic for bad breath and vaginal discharge. Eugenol can be used to reduce pain, while tannins can be used to treat stomach pain (Hidayat, 2019).

According to traditional medicine, red betel leaves can tighten the intimate organs and overcome dryness in the intimate area. In addition, red betel leaves can overcome the smell of female organs which cause itching and overcome the bacteria that cause vaginal discharge. Therefore, the use of red betel leaves is more widely used to wash or clean the female organs (Manoi, 2007).

Based on the background description of the problem above, this is the author's basis for formulating the problem: "Is there any effect of giving

red betel leaf boiled water on vaginal discharge in women of childbearing age (WUS) in the PMB working area of the Ganjar Agung Health Center in 2023?"

RESEARCH METHODS

This study used a quasi-experimental approach with a one-group pretest-posttest design. In this study, 32 women were used as the population of women of childbearing age who experienced vaginal discharge with a vaginal pH > 5, based on data from January to March 2023. The sampling technique in this study was purposive sampling. With a sample of 30 people.

The research instrument is the tools that will be used in measuring the results of the variables. In this study, researchers used litmus paper and observation sheets. The data analysis used in this

study was univariate using the frequency distribution and bivariate analysis using the Wilcoxon test (because the data is not normally distributed).

RESEARCH RESULTS

In this study, data were taken directly by measuring the vaginal secret pH of 30 respondents before and after the intervention with the following analysis results.

Univariate Test Results

Based on table 1 below, the average vaginal discharge score in women of childbearing age (WUS) before being given red betel leaf boiled water is 6.83, for a standard deviation of 0.379 with a minimum value of 6 and a maximum value of 7.

Table 1

The Average Score of Leucorrhoea in Women of Reproductive Age (WUS) Before Giving Water Stewed Red Betel Leaves in the PMB Working Area of the Ganjar Agung Health Center

Characteristics	N	Means	SD	Min	Max
Pretest	30	6,83	0.379	6	7

Based on table 2 below, the average vaginal discharge score in women of childbearing age (WUS) after being given red betel leaf boiled water is 3.80,

for a standard deviation of 0.610 with a minimum value of 3 and a maximum value of 5.

Table 2

The Average Score of Leucorrhoea in Women of Reproductive Age (WUS) After Being Given Red Betel Leaf Boiled Water in the PMB Working Area of the Ganjar Agung Health Center

Characteristics	N	Means	SD	Min	Max
Posttest	30	3.80	0.610	3	5

Bivariate Test Results

Based on table 3 below it is known that the data before being given boiled water of red betel leaves obtained a p value of 0.000 and after being

given boiled water of red betel leaves obtained a p value of 0.000 so it can be said that the data is not normally distributed, so the effect test uses the Wilcoxon Sign Rank.

Table 3

Normality Test of Leucorrhoea Before and After Giving Red Betel Leaf Boiled Water to Women of Reproductive Age in the Working Area of the Ganjar Agung Public Health Center

Characteristics	Statistics	df	Sigs (p)
Pre Test	0.452	30	0.000
Posttest	0.765	30	0.000

Based on table 4 below, the statistical test found that all respondents, totaling 30 respondents,

experienced a decrease in vaginal discharge values (negative ranks) during the post test.

Table 4
Pre Test and Post Test Using Red Betel Leaf Water Using the Wilcoxon Test

Intervention	rank	N	MeanRanking	Sum Of Ranks
Pre Test – Post Test	Negative	30	15.50	465.00
	positive	0	0.00	0.00
	ties	0		

Based on table 5 below, the results of the influence test using the Wilcoxon test found that the p value is 0.000 which is smaller than alpha (0.05), then H0 is rejected and H1 is accepted, meaning that there is an effect of giving red betel leaf boiled water

on symptoms of vaginal discharge in women of childbearing age (WUS) in the PMB Working Area of the Ganjar Agung Health Center. A Z score of 5.063 was obtained, where the farther the Z score was from 0, the more significant the effect would be.

Table 5
The Effect of Red Betel Leaf Boiled Water on Symptoms of Leucorrhoea in Women of Reproductive Age (WUS) in the Working Area of the Ganjar Agung Public Health Center

Intervention	Z	P-value
Pre Test – Post Test	5,063	0.000

DISCUSSIONS

The Average Score of Leucorrhoea in Women of Reproductive Age (Wus) Before Giving Red Betel Leaf Decoction Water in the Working Area of the Ganjar Agung Public Health Center

Based on the data obtained from the research results, the average vaginal discharge score in women of childbearing age (WUS) before being given red betel leaf boiled water was 6.83, for a standard deviation of 0.379 with a minimum value of 6 and a maximum value of 7.

Age is one of the factors that can affect knowledge, namely with increasing age there will be changes in a person's physical aspects which in turn can affect one's knowledge. Sufficient knowledge, then will be able to change attitudes and behavior. However, at the age of women of childbearing age, they are prone to experiencing vaginal discharge problems in women. This can be proven that women of childbearing age aged 20-45 years are prone to vaginal discharge, because it can be triggered by psychological tension which can increase the burden on the mind from conditions that are unpleasant or difficult to pass.

According to research (Syahlani, et al, 2013) one of the causes of leucorrhoea is due to the use of contraceptives containing hormones, in the use of hormonal contraceptives vaginal discharge increases by about 50% compared to non-users of hormonal contraception, vaginal discharge occurs more frequently with higher levels of estrogen. The genital organs contain the body's defense mechanisms in the form of bacteria which become the acidity level of the vaginal pH. Normally the

acidity rate in the vagina ranges from 3.8-4.2, most of which 95% are Lactobacillus bacteria and the rest are pathogenic bacteria. Leucorrhoea will appear when the acidic conditions drop, the Lactobacillus bacteria break down glycogen into lactic acid, causing an acidic environment in the vagina causing Candida albicans to thrive in the vaginal area.

Information is needed as a source of knowledge from cadres and local health workers. In the current era, the availability of information and access to information has made it easier for respondents to seek knowledge. Interpersonal and environmental factors also influence a person's ability to obtain and disseminate information. Women of childbearing age will experience vaginal discharge which is a factor in personal hygiene. A person must have awareness regarding the lifestyle that is lived and also have knowledge regarding the problems and consequences that can be caused by the disease. Respondents with low levels of education will find it difficult to digest the information they get. Respondents who have good knowledge regarding problems that can arise, then the respondent will try to prevent problems that will arise. Respondents must understand the problems that will arise if they are not handled properly, one of which is the problem of vaginal discharge in female respondents of childbearing age which often occurs (Ernawati, 2018).

From the description above, the researchers argue that women who experience vaginal discharge are caused by a lack of information so that respondents do not have the awareness to maintain

vaginal hygiene so that women of childbearing age easily experience vaginal discharge.

The Average Score of Leucorrhoea in Women of Reproductive Age (Wus) After Being Given Red Betel Leaf Boiled Water in the Working Area of the Ganjar Agung Public Health Center

Based on the results of the study, the average vaginal discharge score in women of childbearing age (WUS) after being given red betel leaf boiled water was 3.80, for a standard deviation of 0.610 with a minimum value of 3 and a maximum value of 5. There was a decrease in the average vaginal discharge score before and after being given red betel leaf boiled water, before being given red betel leaf boiled water the average score was 6.83 and the average vaginal discharge score after being given red betel leaf boiled water was 3.80.

This study proves that there is an effect of using red betel solution on reducing vaginal discharge complaints in women of childbearing age. There is a decrease in symptoms of vaginal discharge in women, due to the content of red betel which has been clinically tested to treat leucorrhoea. According to Trisnawati, (2017) red betel contains tannins in its leaves which are useful for reducing fluid secretion in the vagina.

This proves that red betel leaf boiled water is effective for treating leucorrhoea, as evidenced by the measurement results obtained with a pH <5. According to Sadewo (2010) betel leaves contain active compounds such as essential oils with high phenol content. Essential oils act as antibacterial by interfering with the process of forming membranes or cell walls so that they are not formed or formed imperfectly.

The benefits of betel leaf are not only as a cure for vaginal discharge but can also be used as a medicine for canker sores, coughs, irregular menstruation, relieving itching, bad breath. Betel leaves are also used to wash the vagina and reduce leucorrhoea because they contain karvakol which is a disinfectant and anti-fungal so it can be used as an antiseptic drug to reduce leucorrhoea (Saparinto, 2016).

Betel leaves contain chemicals such as essential oils, hydroxychavicol, kavi-col, cavibetol, allylprocatekol, car-vacrol, eugenol, p-cymene, cineole, caryofelen, kadimen estragol, ter-penene, and phenylpropanate. Because of the many substances / chemical compounds that are useful, red betel leaf has very broad benefits as a medicinal ingredient. Carvacrol has disinfectant and anti-fungal properties, so it can be used as an antiseptic for bad breath and vaginal discharge. Eugenol can be used

to reduce pain, while tannins can be used to treat stomach pain (Hidayat, 2019).

The Effect of Red Betel Leaf Boiled Water on Symptoms of Leucorrhoea in Women of Reproductive Age (Wus) in the Working Area of the Ganjar Agung Public Health Center

Based on the results of the study using the Wilcoxon test, it was found that the p value was 0.000 which was smaller than alpha (0.05), meaning that there was an effect of giving red betel leaf boiled water on symptoms of vaginal discharge in women of childbearing age (WUS) in the PMB Working Area of the Ganjar Agung Health Center. A Z score of 5.063 was obtained, where the farther the Z score was from 0, the more significant the effect would be.

The results of this study are in line with those conducted at Dayah Daruzzahidin and Darul Hikmah, Kuta Baro District, Aceh Besar District in 2022 showing that there is a significant effect of giving red betel leaf boiled water on the incidence of pathological vaginal discharge. The results of the statistical analysis showed that there was a significant difference between the group given red betel leaf boiled water and the control group, with a pvalue of 0.001. This indicates that giving red betel leaf boiled water has a positive effect in reducing the incidence of pathological vaginal discharge in young women. This is also in accordance with Novemi's research (2020), it is known that betel leaf is effective in treating leucorrhoea, this is because closing the genitals (vagina) using boiled water of betel leaves regularly with clean and warm water can overcome vaginal discharge on the genitals. According to research results in Indonesia, there is evidence showing that betel leaf is effective in treating vaginal discharge in women.

Research conducted by Ernawati (2018) concluded that giving red betel leaf boiled water had a significant effect on reducing vaginal discharge symptoms in women of childbearing age, with a p value of 0.000. This shows that betel leaf has potential as an effective treatment for leucorrhoea. In addition, research conducted by Firmalia (2016) also found that the use of red betel leaf boiled water had an effect on treating vaginal discharge in women of childbearing age, with a p-value of 0.011. These results indicate that betel leaf can be used as an effective alternative treatment for leucorrhoea. Based on several studies in Indonesia, results were found showing that betel leaf is effective in treating leucorrhoea.

Research conducted by Ernawati (2018) and Firmanlia (2016) shows that regular administration of red betel leaf boiled water can reduce symptoms of

vaginal discharge in women of childbearing age. This supports the use of red betel leaves as an alternative method of treating leucorrhoea. According to Sadewo (2010) betel leaves contain active compounds such as essential oils with high phenol content. Essential oils act as antibacterial by interfering with the process of forming membranes or cell walls so that they are not formed or formed imperfectly. The benefits of betel leaf are not only as a cure for vaginal discharge but can also be used as a medicine for canker sores, coughs, irregular menstruation, relieving itching, bad breath.

CONCLUSION

The average vaginal discharge score in women of childbearing age (WUS) in the PMB Working Area of the Ganjar Agung Public Health Center before being given red betel leaf boiled water obtained a value of 6.83.

The average vaginal discharge score in women of childbearing age (WUS) in the PMB Working Area of the Ganjar Agung Health Center after being given red betel leaf boiled water obtained a value of 3.80.

There is an effect of giving red betel leaf boiled water on symptoms of vaginal discharge in women of childbearing age (WUS) in the PMB Working Area of the Ganjar Agung Health Center with a p value of 0.000 (p value <0.05).

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