



Article

Henna leaves (*impatiens balsamina l*) on pathological leukorrhea in premarital women

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A B S T R A C T

Leucorrhoea is fluid that produced by vagina. Maintaining the cleanliness of genital devices is crucial to prevent leukorrhea, and reproductive diseases, especially cervical cancer. One of the non-pharmacological treatment of leukorrhea is the use of water henna leaves. It is expected to overcome pathological leukorrhea. The purpose of this study was to determine the effect of the use of henna on leukorrhea pathological in premarital women. This was *quasy experimental* with *one group pre-post test design* with a population of women who were premarital age in the working area of the Bukittinggi Guguk Panjang Public Health Center. by using a *simple random sampling* technique, a sample of 9 respondents was obtained and data collection using structured observation and interview sheets. Then the normality statistical test was performed *Shapiro Wilk* with the results of the data normally distributed and using the *Paired T Test* with a significance level of $p < 0.05$ in bivariate analysis. The results showed that there is an influence of the influence of the use of henna leaves on leukorrhea pathological. a reduction in the symptoms of leukorrhea is due to the influence of the water content of henna leaves, namely active compounds such as flavonoids and saponins that function as antimicrobials and antifungal. It is expected that the use of water henna leaves can be used as an alternative to overcome leukorrhea and efforts to prevent reproductive diseases, especially cervical cancer.

I. INTRODUCTION

Reproductive health has become a concern of the government and is a serious problem throughout life. The target of the reproductive health program in Indonesia is for all women and their families to have responsible behavior. As part of their reproductive rights, the government has supported the widest possible provision of information, counseling and reproductive health services. However, there are still many reproductive health issues that are of concern in the health sector, namely vaginal discharge. (Werdiyani et al, 2012).

Leucorrhoea or also called white discharge or vaginal discharge, or leukorrhea or flour albus. Leucorrhoea that occurs in women can be normal and abnormal. Normal vaginal discharge occurs in accordance with the menstrual process. Symptoms of normal vaginal discharge are odorless, clear, not itchy, and not sore. Leucorrhoea that can interfere with women's health is abnormal vaginal discharge that occurs due to infection from various microorganisms, including bacteria, fungi, and parasites. Abnormal vaginal discharge is characterized by the amount that comes out a lot, white like stale milk, yellow or greenish, itchy, sore, and accompanied by a fishy or foul odor. The color and discharge from the vagina will differ according to the cause of vaginal discharge. (Marhaeni,G,A. 2016)

Women who experience abnormal vaginal discharge are indicative of various diseases such as vaginitis, candidiasis, and trichomoniasis which are one of the symptoms of Sexually Transmitted Diseases (STD) especially in women with poor personal hygiene, excessive use of vaginal cleansers, use of tight underwear and made from which is not easy to absorb sweat. (Marheni, G. A, 2016).

Research on reproductive health shows that around 75% of global women will experience vaginal discharge at least once in their lifetime, and as many as 45% will experience 2 or more times. (Medika holistik, 2011).

According to WHO, women rarely pay attention to cleanliness in their external genital organs. Infections of the vagina each year attack women around the world 10-15% of 100 million women, for example women affected by candida bacterial infection about 15% and experience vaginal discharge. The incident was due to adolescents not knowing the problems surrounding the reproductive organs. (Utami et al, 2014). Poor attitudes and knowledge in performing external genitalia (external genitalia) hygiene care, as well as bad behavior triggers vaginal discharge. (Azizah, 2015).

In Indonesia, around 90% of women have the potential to experience vaginal discharge due to tropical climate, so the fungus is easily developed which results in many cases of vaginal discharge. Symptoms of vaginal discharge are also experienced by unmarried women aged 15-24

years, which is around 31.8%. This shows that unmarried women are at risk of vaginal discharge. (Azizah, 2015).

According Suliastiningsih, et al (2012) Women can not distinguish normal vaginal discharge (physiological) and vaginal discharge that is not normal (pathological) makes the woman feel anxious herself suffering from a venereal disease or vice versa, the woman ignores her vaginal discharge so that it gets worse. If not treated immediately it will cause cases of sexually transmitted infections (STIs). The principle of managing leukorrhea is to keep genitalia clean properly, and must be kept dry, because in a humid or wet condition can accelerate the growth of fungi and bacteria.

Broadly speaking, there are two ways to deal with leukorrhea, namely pharmacologically and nonpharmacologically. The pharmacological treatment of leukorrhea is usually treated with a type of antifungal drug, and which is often used is Imidazole or ketoconazole at a dose of 200 mg tablets 2x1 days for 5 days. Fluconazole 150 mg single-dose tablets, Intraconazole 100 mg tablets 2 tab X 3 days. While the non-pharmacological use of betel leaves, water henna leaves and aloe vera.

Water henna (*Impatiens balsamina* L) belongs to the family balsaminaceae which generally grows wild in the garden. However, some of them are also used as ornamental plants. Indonesian people have used this plant as medicine for cuts, swelling, ulceration, heartburn medication and difficult urinary for young children, besides that this henna water plant is also used to lighten nails.

As for the research from Adfa (2007) from preliminary tests of secondary metabolites, it is known that the leaf content of water henna (*Impatiens balsamina* L) can reduce complaints of pathological vaginal discharge caused by candida albican fungus. This henna leaf contains coumarin, flavonoids, quinones, steroid saponins and glycosides which are active compounds. Saponin function in leucorrhoea can kill germs, bacteria and fungi in the vagina. While the function of flavonoids in vaginal discharge is as an antimicrobial, antibacterial so that it can inhibit the growth of bacteria in the vagina.

According to the research conducted by Yuanita Syaiful (2015), with the research title "Giving a Decomposition of Leaves Pacar Air (*Impatiens balsamina* L) to Adolescent Leukorrhea in Gresik Regency" with the Chi Square calculation method, the result of H0 is rejected and the work hypothesis is accepted at the 5% significance level or equal to 0.05. Means there is an effect of giving boiled water henna leaves on leukorea in young women.

As for the research conducted by researchers using only henna leaf water mixed with water, boiled, and drinking water. the same as the above study of yuanita by drinking, the

purpose of the study was to test henna leaves of water without the addition of other ingredients to test the effect of purity of henna leaves on pathological leukorrhoea at premarital age. As for the side effects of the leaves of henna this water if consumed for more than 1 week can cause dry taste in the mouth, nausea, and no appetite. This disorder will disappear if you reduce the dose of use or stop using it for 2-3 days.

II. METHODS

It was an experiment with a one group pre-test and post-test research design, all of the sample of this study was given intervention. This study was carried out from September to October 2019. The population in this study were all women of pre-marital age who experienced pathological leukorrhea in the working area of Guguk Panjang Public Health Center in 2019 for the last 4 months. sample of 16 pre-marital women taken by purposive sampling technique.

Data was collected by using observation sheets and structured interviews. Data analysis by t-test with SPSS program to see the difference between the pretest and post-test scores with $\alpha = 0.05$ and 95% confidence interval (CI). Before using a paired sample t-test it is assured that the data is normally distributed. To see the normality of the data using the Shapirowilk test ($\leq 50\%$).

III. RESULT

Table 1. Effects of the use of henna leaves water on pathological leukorrhoea in premarital age.

Variabe	N	Mean	SD	SE	P- Value
Pre test		7.44	1.130	0.377	
	9				0.003
Post test		5.89	1.453	0.484	

Average of pathological leukorrhoea before intervention is 7,44 with a standard deviation 1.130 while the average of pathological leukorrhoea production after intervention is 5.89 with a standard deviation of 1.453, Dependent T-test results p value of 0.03 <0.05 indicates that there was henna leaves water intervention effect on reducing pathological leukorrhoea in premarital age.

IV. DISCUSSION

According to Alston and Hagen in Lim (2014), henna plants contain many substances and chemical compounds such as saponin, balsaminasterol, evaporated oil, parinaric acid, quercetin, kaempfenol, derivat, γ -spinasterol, b-ergosterol, and naphtaquinone, cyanidin, malvidin, pelargonidin, anthocyanins, delphinidin, quercetin, kaemferol, and cyanidin mono-glycoside.

The leaves contain active compounds such as saponins and flavonoids that function as antimicrobial, antifungal, kill germs, bacteria and fungi in the vagina.

Flavonoids are a typical content of green plants except in algae. Flavonoids are found in all parts of the plant including leaves, roots, wood, flowers, fruits and seeds. Generally flavonoid compounds in plants are bound to sugar so they are referred to as different glycoside and flavonoid aglycones. flavonoid functions in plants include plant growth regulator, photosynthesis regulator, as an antimicrobial, antiviral, and as an antiseptic. The mechanism of action of flavonoids in inhibiting fungal growth is by causing disruption of fungal cell membrane permeability. Hydroxyl groups found in flavonoid compounds cause changes in organic components and nutrient transport which will eventually lead to toxic effects on the fungus. (Jupriadi, 2011).

Whereas saponin is a structural component consisting of hexose sugars with a number of carbon, hydrogen and oxygen atoms characterized by a bitter taste, forming a stable foam in a liquid solution has the ability to kill germs (Hidayat, 2008).

This is in line with Zahid Fikri's research, et al (2015) on the provision of betel leaf and turmeric decoction to pathological vaginal discharge in young women. The results showed that before being given a betel leaf decoction and turmeric, 100% experienced pathological vaginal discharge. Meanwhile, after being given 15% experienced pathological vaginal discharge and 85% physiological vaginal discharge. Chi-square statistical test results obtained $p = 0.02$ where $p < 0.05$ then H_0 is rejected.

In accordance with the theory of Bahari (2012), that the cause of leukorrhea symptoms one of which is a *Candida Albican* fungal infection. This *Candida Albican* mushroom is classified as a dimorphic fungus, where the fungus is happy with moist and wet places. The infection caused by *Candida Albican* is called Candidiasis. Usually the infection occurs due to pollution after defecation or water that has been contaminated by this fungus and is used to wash the female organs.

According to the researchers assumptions, the emergence of this leukorea in addition to the fungus that occurs premarital age women can also be caused by lack of hygiene care of female organs that can make the *Candida Albican* fungus develop. So that it can be seen from the use of henna water leaves which is very influential in decreasing the symptoms of pathological leukorrhea.

V. CONCLUSION

The leaves contain active compounds such as saponins and flavonoids that function as antimicrobial, antifungal, kill germs, bacteria and fungi in the vagina. Henna leaf could be one of non pharmacologic treatment for pathological leucorrhea which easily founded everywhere.

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