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Article

THE INFLUENCE OF PAPAYA LEAVES (CARICA PAPAYA) ON BREAST MILK VOLUME OF POSTPARTUM WOMEN

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A B S T R A C T

According to WHO, coverage of exclusive breastfeeding in infants aged 0-6 months in the world was only 36% in 2007-2013 (WHO, 2015). The impact of inadequate breastmilk volume makes mothers think that their baby will not get enough milk so that mothers decided to stop breastfeeding and replace it with formula milk. This study aims to determine the effect of papaya leaf on the volume of breast milk in post prtum women in BPM "F" in the laweh agam. The design of this study was pre-test pre-test and post-test using one group pre-test post-test design. Samples taken in this study were 10 post partum women through non-probalitiy sampling technique using purposive sampling technique. Data collection using observation sheet. The measurement of breast milk volume is done twice, that is before consuming papaya leaf decoction on day 8 after papaya leaf consumpsing. In the T-Test the results show that the value of p = 0.001. This shows that there is an effect of papaya leaf on breast milk volume in postpartum women. Papaya leaves is contain many substances which needed by the body and various kinds of vitamin content, one of them is vitamin A which can help the hypophise of prolactin in in the epithelium of the brain so that prolactin will increase. It is crucial to educate postpartum mother to consumpt papaya leaf to increase their breastmilk

I. INTRODUCTION

Growth and development of infants and toddlers is determined by the amount of breast milk production. Breast Milk is a nutritious food which contain of fat in a solution of protein, lactose, and organic salt which is selected by the two glands of the mother's breast is the best food for babies and the most crucial, composition of breast milk easily digested and absorbed directly by infants. So that the babies under six months does not require additional. (Kristianasari, 2009).

According to RISKESDAS data on 2013, the coverage of breast milk in Indonesia is only 42%, this figure is clearly below the WHO target which requires breast milk coverage to 50%. Data from Indonesia's health profile, there was significant decrease of indonesia covegare of breast feeding during 2015-2016, from 55.7% in 2015 to 29.55% in 2016 RI Health Profile, 2016)

According to data from the Health Office of West Sumatra, the coverage of exclusive breastfeeding in the province of West Sumatra in the last three years has tended to increase. In 2013 the coverage of exclusive breastfeeding was 67.4% with a target of 75.0%. In 2014 the coverage was 72.5% with target of 80.0%. (Ministry of Health Republic of Indonesia, 2017).

The leaves of the *Carica papaya*fruit is known to have a variety of chemical properties that have medicinal properties. Among other enzymes are bromelin, alkaloids, glycosides, saponins, calcium and many contain vitamin A, vitamin B and vitamin C. Papaya leaves are believed to contain many substances needed by the body and various kinds of vitamin content, one of them is vitamin A which can help the hypophise of prolactin in in the epithelium of the brain so that prolactin will increase and activate epithelial cells in the alveoli to collect milk in the breast and cause increased milk supply. So that it can increase maternal confidence in increasing maternal confidence in assisting the adequacy of breast milk (Ritawati, 2012).

The chemical content of papaya leaves is known to have a variety of chemical properties. Among others bromelin enzymes, alkaloids, karpaina, papain enzymes, pseudocarpain, carposid, glycoside saponin, calcium and many contain vitamin B, vitamin B, vitamin C. By consuming 200 grams of papaya leaves we have received 23.8 grams of carbohydrates, 16 grams of protein, 4 grams of fat, 158 kcal of energy, 706 mg, calcium, 126 mg of phosphorus, 2 mg of iron, 36,500SI / mg of vitamin A, 0,30 mg of vitamin B 0.30 and 280 mg of vitamin C, these results were obtained from conducting a study of 200 grams of papaya leaves with an edible amount of 71%.

II. METHODS

It was a pre experiment study with one group pretest posttest , all of the sample of this study was given intervention. This study was carried out from September to October 2019. The study population comprised post partum women and stay in the working area BPM F.

sample of 10 post partum women taken by purposive sampling technique. Each respondent was given treatment by giving 200 grams of papaya leaf for 7 days. The measurement of breast milk volume is done twice, that is before consuming papaya leaf decoction on day 8 after consuming papaya leaf decoction.

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 3.1 Average Breast Milk Volume before papaya leaf intervention

Volume Of Breast Milk	Mean	Standard deviation	Min-Max
Pre-Test	**25.9**	**6.04520**	**16.0-37.0**

Regarding to production of breastmilk before intervention, it was found that; the average of breastmilk production sclase was 25,9

Table 4.2 Average volume of mother's milk after papaya leaf decoction

Volume ASI	Mean	Standard deviation	Min-Max
Pos-test	**37.6**	**7.10555**	**28.0-53,0**

Regarding to production of breastmilk after intervention, it was found that; the average of breastmilk production sclase was 37.6

Table 4.3 Effect of Giving Papaya Leaf Decoction on Increasing Breast Milk Volume in Postpartum Mother

	Paired Differences					
				95%		
	Mean	**Standar Deviation**	**Standar error**	**Lower**	**Upper**	**P**
Breast Milk Volume **Pre test Post Test**	**-1.17000**	**2.05751**	**.65064**	**-13.17185**	**-10.22815**	**0.001**

Average of breastmilk production before intervwntion is 25.9 with a standard deviation 6.045 while the average of breastmilk production after intervention is 37.6 with a standard deviation of 7.105, Dependent T-test results p value of 0.01 <0.05 indicates that there was papaya leaf intervention effect on increasing production of breastmilk.

IV. DISCUSSION

According to the related research carried out in March 2016 with the type of experimental research with the design of the study group comparative / posttest only control group design. The research sample was obtained by purposive sampling. This study used a sample of 32 respondents, each 16 respondents for the intervention group and the control group. The instrument used to measure the adequacy of breast milk is an observation sheet. Data collection was carried out by the researchers themselves and the data obtained were analyzed univariately and bivariately using the Mann Whitney test. The results of the study: the influence of papaya leaves on the adequacy of breast milk (p = 0.038, a = 0.05).

According to a related study from Lilin Turlina Rindy Wijayanti in 2015 showed that most or 57.14% in the ASI expenditure control group 3 days after delivery and the majority or 71.4% in the ASI expenditure control treatment group on day 2, from the statistical test the results obtained there is a significant influence in the administration of papaya leaf drinks on the smoothness of breast milk in postpartum mothers with p = 0.004 (p <0.05).

According to the researchers' assumptions, before consuming the decoction of puerperal mother papaya leaves have a small volume of breast milk. According to this study due to several factors including mothers consuming foods that can reduce the volume of milk such as peanuts because nuts can inhibit the supply of milk expenditure, BB does not affect the volume of milk.

This study is comparable with research conducted (Sri BanunTitiIstiqomah, et al Chotimah, 2015) with the title effect of giving papaya to smooth milk production in breast feeding mothers in the village of Wononokerto in the health center of Jombang perterongan in 2014. Papaya fruit has increased due to papaya pudding contains lactogogum which can secrete the prolactin and oxytocin hormones such as alkhaloid, felifenol steroid, flafonoid and other substances which are most effective in increasing and facilitating milk production. With 20 respondents that breast milk production before consuming papaya fruit the average frequency of breastfeeding was 5.7 times with a standard deviation of 0.80131 and after consuming the average papaya fruit the breastfeeding experienced an increase to 9.75 times with a standard devision of 0.78604. the correlation between the two variables was 0.793 and the difference in the average value of increasing milk production in mothers who did not consume it and in mothers who consumed papaya was 4.05000 with sig 0.001. because sig <0.05, it means that the average milk production before and after consumption of papaya fruit can affect the increase in breast milk production in breastfeeding mothers in the village of Wononokerto in the health center of Jombang.

According to the researchers' assumptions, in addition to supplementary food factors for mothers, mothers who experience an increase in the volume of high milk, can be influenced by the frequency of breastfeeding mothers, where the more often mothers breastfeed the volume of milk will increase. The volume of breast milk is more optimal when mothers breastfeed their babies 5 times or more per day. Based on the results of the interview there were 3 respondents aged> 25 years with primiparous parity, according to researchers the number of children can affect the volume of breast milk, because in mothers who for the first time gave birth their experience was less in breastfeeding or were not ready to breastfeed physiologically, usually in primipara mothers often problems such as papilla abrasions mothers do not know how to breastfeed properly so that the nipples abrasions and mothers rarely breastfeed because the mother feels pain in her nipples when breastfeeding and also changes in shape and condition of the nipple that is not good. In addition, mothers also do not know how to care for good breasts that can increase breast milk and the mother's lack of experience in caring for her baby so that mothers are not accustomed to new activities after having a baby, such as staying up late often, resulting in a mother's lack of rest and fatigue, this can also affect the volume of mother's milk.

Based on the results of the study after being given a papaya leaf decoction for 7 days in breastfeeding mothers, it was found that the volume of breast milk in the mother increased. According to researchers this is because papaya leaves have many benefits where papaya leaves contain many enzymes papain, bromelin enzymes, alkhaloid, karpaina, and vitamins A, B and C.

Alkhaloid and papain enzymes that have the potential to stimulate the prolactin and oxytocin enzymes that are effective in increase the volume of ASI. Where vitamin A can help prolactin hypophise in the brain epithelium so that prolactin will increase and activate the epithelial cells in the alveoli to ride milk in the breast and cause increased milk supply so as to increase maternal confidence in helping the adequacy of breast milk.

This is in line with the research of endang suwanti (2016) the effect of katuk leaf extract on the adequacy of breastfeeding in breastfeeding mothers, namely the test of the influence of chi square obtained the value of p = 0.002, the conclusion there is a significant effect of katuk leaf consumption on the adequacy of breast milk (p = 0.001) .

According to the researchers' assumptions, an increase in the volume of breast milk is because the papaya leaf decoction contains alkhaloid and papain enzymes has the potential to stimulate the prolactin and oxytocin hormones which are effective in increasing milk content of other ingredients such as bromelin, glycoside, saponin, calcium and contain vitamin AB and other C substances. another that is effective in increasing and expediting milk production so that the volume of milk increases. The hormonal prolactin reflex to produce breast milk, when the baby sucks the mother's nipples and areola, neorohormonal stimulation occurs in the mother's nipple and areola. This stimulation is transmitted to the pituitary through the vagus nerve, then to the anterior lobule. From this lobe secretes the hormone prolactin, enters the blood circulation and reaches the glands that make breast milk consumption of papaya leaf decoction regularly carried out for 7 days causing the effect of increasing the amount of milk.

V. CONCLUSION

The chemical content of papaya leaves is known to have a variety of chemical properties. Among others bromelin enzymes, alkaloids, karpaina, papain enzymes, pseudocarpain, carposid, glycoside saponin, calcium and many contain vitamin B, vitamin B, vitamin C. Papaya leaves is contain many substances which needed by the body and various kinds of vitamin content, one of them is vitamin A which can help the hypophise of prolactin in in the epithelium of the brain so that prolactin will increase. It is crucial to educate postpartum mother to consumpt papaya leaf to increase their breastmilk

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