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THE EFFECT OF COLD CABBAGE LEAF COMPRESSES ON REDUCING PAIN INTENSITY AND BREAST SWELLING IN POSTPARTUM MOTHERS

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ABSTRAK : EFEKTIVITAS PEMBERIAN KOMPRES DAUN KUBIS DINGIN (BRASSICA OLERACEA) TERHADAP PENURUNAN INTENSITAS NYERI DAN PEMBENGKAKAN PAYUDARA PADA IBU NIFAS

Latar Belakang: Bagi seorang wanita, menyusui merupakan pengalaman alami dan bermanfaat bagi ibu dan anak. Pembengkakan payudara, juga dikenal sebagai "bendungan ASI", merupakan masalah menyusui yang dapat terjadi pada awal masa nifas. Di TPMB Kota Bandung, ibu nifas yang menyusui sering mengalami rasa tidak nyaman dan bengkak akibat bendungan ASI. Kompres daun kubis dapat menjadi pengobatan non farmakologi karena daun kubis mempunyai efek dalam mengurangi nyeri dan pembengkakan payudara.

Tujuan: Untuk mengetahui apakah kompres dingin daun kubis efektif mengurangi nyeri dan bengkak pada payudara ibu pasca melahirkan.

Metode: Penelitian ini bersifat kuantitatif, dengan desain pre-eksperimental one-group pretest-posttest design. Sampel penelitian diambil dengan menggunakan total sampling yaitu 30 responden. Analisis data menggunakan uji Kolmogorov-Smirnov dan Wilcoxon signed test.

Hasil: tingkat nyeri dan pembengkakan payudara ibu nifas sebelum mendapat kompres dingin daun kubis. 20 partisipan (66,7%) melaporkan nyeri payudara ringan, 10 partisipan (33,3%) melaporkan nyeri sedang, dan 17 partisipan (56,7%) melaporkan edema sedang. 13 partisipan (43,4%) melaporkan pembengkakan ringan. setelah diberikan kompres daun kubis dingin 2 partisipan (6,7%) tidak mengalami nyeri, 28 partisipan (93,3%) mengalami nyeri ringan dan 24 partisipan (80%) tidak mengalami pembengkakan pada payudaranya, 6 partisipan (20%) mengalami pembengkakan ringan

Kesimpulan: Di TPMB Y Kota Bandung, kompres dingin daun kubis (Brassica Oleracea) terbukti bermanfaat dalam menurunkan nyeri dan pembengkakan payudara ibu nifas.

Saran: Pembengkakan payudara ibu nifas bisa mendapatkan manfaat dari kompres daun kubis yang diberikan oleh bidan.

Kata Kunci : Bendungan ASI, intensitas nyeri, kompres daun kubis, pembengkakan payudara

ABSTRACT

Background: Breastfeeding is a fundamental aspect of maternal care that offers numerous advantages to both the mother and her baby. In the initial postpartum phase, women may experience difficulties such as breast engorgement, also known as milk congestion. This condition is commonly observed among postpartum women in the city of Bandung, who may suffer from discomfort and swelling as a result of milk congestion. One effective non-medical remedy for alleviating these symptoms is the use of cabbage leaf compresses, which can minimize pain and swelling in the breasts.

Objective: To evaluate how well cold cabbage leaf compresses alleviate pain and decrease breast swelling in women after childbirth.

Method: This study employs a quantitative approach featuring a pre-experimental design with a single group undergoing pretest and posttest evaluations. The research sample consists of 30 participants selected through total sampling. Data analysis is conducted using the Kolmogorov-Smirnov test and the Wilcoxon signed-rank test..

Results: Before applying cold cabbage leaf compresses, postpartum women reported varying levels of pain and swelling: 20 participants (66.7%) had mild breast pain, 10 participants (33.3%) experienced moderate pain, and 17 participants (56.7%) had moderate swelling, while 13 participants (43.4%) had mild swelling. After using the cold cabbage leaf compresses, 2 participants (6.7%) reported no pain, 28 participants (93.3%) experienced mild pain, and 24 participants (80%) had no swelling. Only 6 participants (20%) reported mild swelling.

Conclusion: In conclusion, applying cold cabbage leaf compresses (Brassica Oleracea) is effective in reducing both pain intensity and breast swelling in postpartum women in TPMB Y Bandung City.

Suggestion: midwives can provide cabbage leaf compresses to postpartum women with breast swelling.

Keywords: Breast milk dam, pain intensity, cabbage leaf compress, breast engorgement

INTRODUCTION

Ensuring optimal nutrition for children during their first two years is crucial for their health, growth, and survival. Achieving the best nutritional outcomes can be facilitated by following guidelines set by WHO, such as starting breastfeeding within the early hour after the baby is born is very important for the baby's health and development (Suprayitno, Pratiwi and Yasin, 2018). Exclusive breastfeeding in the first half of the year, with the introduction of healthy and sufficient additional food in the first half of the year, and consistent breastfeeding for two years or more, are recommended practices to support optimal growth and development of babies (Asnidawati and Ramdhan, 2021).

Breastfeeding is a fundamental process that provides advantages for both the mother and the infant. During the early postpartum period, women may encounter issues such as breast engorgement, sometimes referred to as milk congestion or milk dam. (Ainuan, L. D., & Wulandari, 2021). Breast milk dams develop when the lactiferous glands are not fully emptied, the ducts narrow, or there are anomalies in the nipple that prevent the milk from flowing freely. Because of the increased venous and lymph flow, this causes the breasts to expand, which can hurt and raise the body temperature (Rizky, 2023).

Several ways to reduce breast engorgement are pharmacological and non-pharmacological. Non-pharmacological therapy includes the implementation of acupuncture, traditional breast care such as warm compresses combined with massage, as well as the use of cabbage leaf compresses and alternating applications of warm and cold compresses (Andari et al., 2021). Cabbage leaves have received widespread attention from lactation experts over the past 10 years because they have been used as traditional medicine to cure various diseases for hundreds of years (Napisah *et al.*, 2021). Cabbage, or Brassica oleracea, is a type of vegetable that is widely available and affordable to the public. Cabbage contains phytonutrients as well as various other vitamins such as vitamins A, C, E, and glucosinolates which have anti-cancer functions. Cabbage also contains sulfur, which can be used to relieve inflammation and breast swelling. (Hasibuan et al., 2021)..

Cabbage leaf compress has an effect in relieving breast pain and swelling (Kabiri *et al.*, 2017). Methionine, an amino acid with antibacterial qualities, is found in cabbage leaves (Brassica oleracea), along with other substances like magnesium, sulfur oxylate heteroside, mustard oil, and sinigrin (Allylisothiocyanate). These elements have the ability to widen capillaries and improve blood flow to and from the injured area, and help the body in the process of reabsorbing fluid trapped in the breast (Hassan *et al.*, 2020). Additionally, cabbage leaves generate a cold gel that is heat-absorbing, providing additional comfort to clients. Cabbage leaves can remain effective for 20-30 minutes after being attached, before they wilt or become cooked (Djamaludin, Fatih and Qaulia, 2020).

Cabbage leaves that are in room temperature or in the refrigerator are both equally effective in reducing breast swelling (Tileuberdi *et al.*, 2022). So it can be concluded that breast swelling can be reduced not because of the cold effect produced due to storage in the refrigerator, but because of the content of substances in cabbage leaves that can be adsorbed into the skin, it's just that cabbage leaves that are at room temperature wither faster than in the refrigerator. (Apriyani et al., 2021).

Cold compress is useful for reducing oedema (Arofiah, Fadilah and Mulyati, 2023). Cabbage leaf compress makes a vasocontriction cycle for 9-16 minutes can reduce blood flow so that local oedema can decrease and lympatic drainage can be optimized. (Rohmah, Wulandari and Sihotang, 2019).. Cabbage leaves should not be compressed directly on damaged skin areas such as nipple blisters. (Niluh Nita Silfia *et al.*, 2023). If the nipple is blistered, the cabbage leaf compress is simply placed on the breast without covering the damaged skin. (Hidayat Hayati L, 2020). Research Damayanti (2020), stated that the experimental group's breast swelling scores differed significantly from those of the control group before and after the intervention. The use of cabbage compresses proved to be a more effective intervention than simple breast care. The purpose of this study was to

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determine whether utilizing cabbage compresses as part of postpartum care for mothers who have trouble nursing works well.

Based on this, research is intended to find out how effective a cold compress made from cabbage leaves (Brassica oleracea) was in reducing the pain level and swelling in the mother's breasts after giving birth at TPMB "Y" Bandung City.

RESEARCH METHODS

This research employs a quantitative approach with a pre-experimental design featuring a single-group pretest-posttest format. Initially, observations are made before the intervention is administered, followed by further observations after the intervention to assess changes. The sampling method used is Total Sampling, which involves including all members of the target population. In this case, the sample consists of 30 postpartum mothers (0-42 days) who are breastfeeding. The research tools include cold cabbage leaves (Brassica Oleracea) and pretest-posttest questionnaires. Univariate analysis is conducted through frequency distribution to calculate the percentage of respondents in each category. For bivariate analysis, the normality test using the Kolmogorov-Smirnov method shows that the data does not follow a normal distribution (p-value <0.05). Consequently, the Wilcoxon signed-rank test is utilized for analysis due to the non-normal distribution of the data.

RESEARCH RESULTS

According to the findings presented in Table 2, the Wilcoxon test results reveal that among the 30 participants, prior to applying cold cabbage leaf compresses, 20 individuals (66.7%) reported mild pain and 10 individuals (33.3%) reported moderate pain. After applying the compresses, 2 participants (6.7%) experienced no pain, 28 participants (93.3%) had mild pain, and there were no reports of moderate or severe pain. The analysis yielded a p-value of <0.001, which is less than the significance threshold of 0.05, indicating a significant reduction in pain intensity following the application of cold cabbage leaf compresses. Therefore, it could be stated that using cold cabbage leaf compresses have positive impact in alleviating breast pain in postpartum women in TPMB Y Bandung City.

Table 1
Effectiveness of Cold Cabbage Leaf Compress on Reducing Breast Pain Intensity in Postpartum Women

Pain intensity	Test Results				P-Value
	Pre Test		Post Test		
	N	%	N	%	
No pain	0	0	2	6,7	
Mild pain	20	66,7	28	93,3	
Moderate pain	10	33,3	0	0	0,001
Severe pain	0	0	0	0	

Wilcoxon test

Table 2
Effectiveness of Cold Cabbage Leaf Compress on Breast Swelling in Postpartum Women

Pain intensity	Test Results				P-Value
	Pre Test		Post Test		
	N	%	N	%	
No swelling	0	0	24	80	
Mild swelling	13	43,3	6	20	
Moderate swelling	17	56,7	0	0	0,001
Heavy swelling	0	0	0	0	

As shown in Table 2, the Wilcoxon test results reveal that among the 30 participants, prior to applying cold cabbage leaf compresses, 13 individuals (43.4%) had mild swelling, and 17 individuals (56.7%) had moderate swelling. After using the compresses, 24 participants (80%) reported no swelling, 6 participants (20%) had mild swelling, and there were no reports of moderate or severe swelling. The analysis provided a p-value of <0.001, which is below the 0.05 threshold, indicating a significant reduction in breast swelling following the use of cold compresses made from cabbage

leaves. Thus, it can be concluded that postpartum women in TPMB Y Bandung City benefit from using cold cabbage leaf compresses to reduce breast edema.

In this study, the Wilcoxon test results showed that the p-value was 0.000 (<0.05), indicating a significant difference in the intensity of breast pain before and after giving cold compresses from cabbage leaves to postpartum mothers. Based on these results, the Ha is accepted while the H0 is rejected, research indicates that applying cold cabbage leaf compresses to postpartum ladies at TPMB Y Bandung City is beneficial in lessening the severity of their breast pain.

This finding is confirmed by a study conducted by Maulida (2020), This research shows that using a cabbage leaf compress can reduce the increased pain in the breasts. The amino acid glutamine content in cabbage leaves has been proven effective in treating various types of inflammation, involving breast inflammation, for example. In addition, cabbage's high sulfur level is thought to lessen breast pain and inflammation (Maulida, Fitriani and Wahyuni, 2022).

Active substances such as sulforaphane and histidine in cabbage have the ability to inhibit tumor growth, prevent colon and rectal cancer, and remove dangerous chemical compounds such as excessive cobalt, nickel and copper in the body. Apart from that, this content can also improve the body's immune system in fighting cancer. The sulfur amino acid content in cabbage is also useful in reducing high cholesterol levels, calming the nerves, and increasing enthusiasm in external medicine. Cabbage can be applied as a compress by placing the cut leaves on the area that needs treatment (Windyatama and Silvitasari, 2023). Cabbage contains the amino acid glutamine which has antibiotic and anti-inflammatory properties, so it can help loosen small blood vessels to reduce swelling when used as an external compress (Ningrum, Rohani and Haryono, 2023)..

The compress is useful to reduce oedema. Cabbage leaf compress is used to create a vasocontriction cycle for 9-16 minutes, where blood flow decreases so that local oedema can decrease and lympatic drainage can be optimized. (Indrayani and Haliza, 2023). Based on scientific research, cabbage leaves have been proven to reduce breast swelling without causing side effects and can increase the length of breastfeeding. However, it is important not to use cabbage leaf compresses on damaged skin areas such as sore nipples. If the nipple is chafed, place the cabbage leaves around the breast without covering the damaged skin. (Safitri, Wijayanti and Santoso, 2022)..

In this study, the Wilcoxon test showed that the p-value was 0.000 (<0.05), demonstrating a notable difference in breast edema in postpartum moms before and after using cold compresses made of cabbage leaves. These results show that the use of cold cabbage leaf compresses is beneficial in reducing breast swelling in postpartum women in TPMB Y Bandung City, rejecting the H0 and supporting the Ha.

These findings are confirmed by a study conducted by Ervi (2020), the results of this study suggested that applying cold compresses made from cabbage leaves to the participants may help to lessen the degree of breast enlargement and pain experienced by new moms. The amino acids methionine, allylisothiocyanate, sulfur, magnesium, oxylate, and mustard oil are found in cabbage leaves, which have antibiotic and anti-inflammatory properties. These components help expand small blood vessels (vasodilation), which increases outflow and inflow, including fluid trapped in the breasts (Damayanti, Ariani and Agustin., 2020).

Breast swelling is a serious problem that requires treatment, one of which is using a cabbage leaf compress to reduce the symptoms of swelling. Methionine, an amino acid with antibacterial properties, is found in cabbage leaves along with other substances like magnesium, sulfur heteroside, mustard oil, sinigrin (Allylisothiocyanate), and oxylate, which play a role in expanding capillaries to increase blood flow in the area and facilitate the reabsorption of fluid trapped in the area in the breast. The cool gel content in cabbage leaves can relieve heat, which provides comfort to clients, and the cabbage leaves will wilt or mature after use (Safaah, Erna Eka Wijayanti and Umu Qonitun, 2023).

Referring to research findings, the subtraction in pain in mothers after utilizing this cabbage compress could also be influenced by the coldness of the compress given, where, cold compresses can indeed help relieve pain. When the two components are combined, it becomes a good and effective alternative. Cabbage leaves contain a lot of vitamins. Breast pain is caused by inflammation in the mother's breast. Cabbage contains lutamine which can treat inflammation.

CONCLUSIONS

Before applying cold cabbage leaf compresses (Brassica Oleracea), the majority of postpartum women reported mild breast pain, with 20 participants (66.7%) experiencing this level of

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discomfort, while 10 participants (33.3%) reported moderate pain. After the application of the compresses, 2 participants (6.7%) experienced no pain, and 28 participants (93.3%) had only mild pain. This indicates that cool cabbage leaf compresses (Brassica Oleracea) can help postpartum women at TPMB Y Bandung City experience less severe breast pain. Regarding breast swelling, prior to treatment, most postpartum women had moderate swelling, with 17 participants (56.7%) affected, while 13 participants (43.4%) experienced mild swelling. Following the use of cold cabbage leaf compresses, 24 participants (80%) reported no swelling, and 6 participants (20%) had mild swelling. This suggests that cold cabbage leaf compresses (Brassica Oleracea) can help postpartum ladies at TPMB Y Bandung City with their breast edema.

SUGGESTIONS

Midwives are anticipated to effectively incorporate the use of cold cabbage leaf compresses into their care routines for postpartum women dealing with breast pain and swelling. By acquiring the necessary knowledge and skills, midwives can deliver safe and effective treatments, ensuring the best possible care for postpartum women. Additionally, midwives should offer clear guidance on the proper application techniques and benefits of cold cabbage leaf compresses, enabling mothers to independently use this method at home to alleviate their symptoms.

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