JOURNAL MIDWIFERY (JM)
Jurnal Jurusan Kebidanan, Poltekkes Kemenkes Gorontalo
P-ISSN (2407-8506), E-ISSN (2808-523X)
http://jurnal.poltekkesgorontalo.ac.id/index.php/JM/index
DOI: http://dx.doi.org/10.52365/jm.v2i1.739

The Effect of Cabbage and Aloe Vera Compresses on Breast Engogement in Post Partum Mothers

Meli Doloksaribu[1], Emi Br Barus[2]
[1,2] Institut Kesehatan Sumatera Utara, Jl. Jamin Ginting, Lau Cih, Kec. Medan Tuntungan, Kota Medan, Sumatera Utara 20136, Indonesia
Email: melidoloksaribu88@gmail.comr[1], emibarus@gmail.com[2]

ABSTRACT

Swelling of the breast is damming of milk due to narrowing of the lactiferous ducts or by glands that are not completely emptied. Breasts are generally enlarged, hard, and uncomfortable due to increased blood supply to the breasts along with milk production. The purpose of this study was to determine the effect of cabbage and aloe vera compresses on breast swelling in post partum mothers. The sampling technique in this study is accidental sampling. The instrument used was a questionnaire sheet using the Six Point Engagement Scale (SPES). The population and samples in this study were all post partum mothers, 30 people, with 15 cabbage intervention groups and 15 people in the aloe vera intervention group. The research was conducted from January to May 2023. The research analysis used the Paired T-Test. The results of the Paired T-Test the effect of cabbage and aloe vera compresses on breast swelling in postpartum mothers can be seen from the p value of 0.000 (<0.05), it can be concluded that there is an effect of cabbage and aloe vera compresses on breast swelling in postpartum mothers partum. There is an effect of cabbage and aloe vera compresses on breast swelling in post partum mothers.

Keywords: Aloe Vera, Cabbage, Post Partum

ABSTRAK

Pembengkakan payudara adalah pembendungan susu karena penyempitan saluran lactiferous atau oleh kelenjar yang tidak sepenuhnya dikosongkan. Payudara umumnya membesar, keras, dan tidak nyaman karena peningkatan suplai darah ke payudara bersama dengan produksi susu. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh kompres kubis dan lidah buaya terhadap pembengkakan payudara pada ibu pasca melahirkan. Teknik pengambilan sampel dalam penelitian ini adalah *accidental sampling*. Instrumen yang digunakan adalah lembar kuesioner dengan menggunakan *Six Point Engagement Scale* (SPES). Populasi dan sampel dalam penelitian ini adalah semua ibu pasca melahirkan, 30 orang, dengan 15 kelompok intervensi kubis dan 15 orang pada kelompok intervensi lidah buaya. Penelitian dilakukan pada Januari hingga Mei 2023. Analisis penelitian menggunakan *Paired T-Test*. Hasil *Paired T-Test* pengaruh kompres kubis dan lidah buaya terhadap pembengkakan payudara pada ibu nifas dapat dilihat dari *p value* sebesar 0,000 (<0,05), dapat disimpulkan bahwa terdapat pengaruh kompres kol dan lidah buaya terhadap pembengkakan payudara pada partum ibu nifas. Ada efek kompres kubis dan lidah buaya pada pembengkakan payudara pada ibu pasca melahirkan.

Kata kunci: Aloe Vera, Kubis, Post Partum

* Meli Doloksaribu Institut Kesehatan Sumatera Utara, Jl. Jamin Ginting, Lau Cih, Kec. Medan Tuntungan, Kota Medan, Sumatera Utara 20136, Indonesia

INTRODUCTION

The incidence of breast swelling worldwide is 1: 8000. Reported breast swelling from various studies varies, ranging from 20% to 77%. The results of research at the Niloufer Hospital for Women and Children, India, found that out of a total of 250,151 mothers, 11% of mothers experienced breast swelling. Data from the World Health Organization (WHO) in 2019 found that at the age of more than 25 years, 38% were found not to breastfeed their babies due to breast swelling. (Widia and Pangestu, 2019)

The Indonesian Health Demographic Survey (IDHS) in 2019 found 37% of cases of breast swelling. Data from the Health Service in 2019 there were 58% of postpartum mothers who experienced problems in breastfeeding, namely 23% experienced breast swelling, 13% sunken nipples, 9% cracked nipples, 7% mastitis and 6% breast abscesses so that breastfeeding for babies decrease. Swelling is often experienced by 21-52% of women. Meanwhile, severe swelling occurs in 1-44%. Moderate pain is reported by 29-68% of women, and 10-33% of women experience severe pain for up to 14 days, half of whom require analgesia to relieve breast pain. The success of breastfeeding is inseparable from various problems, one of which is the problem of the mother's breast. A common problem associated with breastfeeding is breast engorgement. (Sari, Fatimah and Rismawati, 2021)

The most common difficulties that breastfeeding mothers encounter in the first week postpartum are painful engorgement of the breasts, sore nipples and a baby who fails to suckle and empty milk effectively. Breastfeeding is a natural event for a woman which is beneficial for mother and baby. Breastfeeding problems that often arise during the early postpartum period (childbirth or lactation) are breast engorgement or also known as ASI dams (breast milk). Swelling of the breast is damming of milk due to narrowing of the lactiferous ducts or by glands that are not completely emptied. Breasts are generally enlarged, hard, and uncomfortable due to increased blood supply to the breasts along with milk production. This condition is normal and will last for several days. But sometimes breast enlargement can cause pain so that the mother is not free to use a bra or allow any object to touch the breast. Swollen breasts will feel sore, hot, painful to touch, and tense (Apriyani *et al.*, 2021).

In general, after giving birth, the mother's breasts enlarge, feel hot, hard, and uncomfortable. The enlargement is due to the increased blood supply to the breasts along with the production of milk. Usually this lasts for several days. This condition is normal and nothing to worry about.

However, sometimes the enlargement is painful so that the mother is not free to wear a bra or allow any object to touch her breasts. Failure in the breastfeeding process is often caused by the emergence of several problems in the mother and in the baby. For some mothers who do not understand this problem, failure to breastfeed is often seen as a problem only for their children. Breastfeeding problems that can arise during the early postpartum period (childbirth or lactation) are breast engorgement or also called milk dams. Milk dams occur due to swelling of the breasts due to increased venous and lymph flow, causing milk dams and pain accompanied by an increase in body temperature. (Rohmah, Wulandari and Sihotang, 2019).

Women who are not breastfeeding may experience breast engorgement, milk leakage, and breast tenderness, which peaks on the 3rd to 5th day after delivery. 10 % of women report severe pain for up to 14 days. The impact if breast swelling is not treated can develop into mastitis, an acute infection of the mammary glands, with clinical results such as inflammation, fever, chills, maternal discomfort, fatigue, breast abscess up to septicemia. The impact of breast swelling is a feeling of discomfort to the mother in the form of pain, breasts become hard, fever, difficulty for the baby to suckle the breast, mastitis, breast abscess causing failure in the lactation process. (Kusumastuti, 2023)

Treatment of breast swelling can be done pharmacologically and non-pharmacologically. Pharmacological treatment of breast swelling can be given symptomatic therapy to reduce pain (analgesics) such as paracetamol, ibuprofen taken 3 times a day for 2-3 days. And to reduce breast swelling non-pharmacologically, it can be done with cabbage leaf compresses, aloe vera, alternating hot and cold compresses, endorphins massage, acupuncture, traditional breast care (hot compresses combined with massage), and ultrasound therapy. (Cicilia K *et al.*, 2021)

Intervention to relieve the symptoms of breast swelling is urgently needed. If there is no good intervention, milk production will be disrupted and the reabsorption process begins which is associated with early weaning. This breast swelling can develop into mastitis, an acute infection of the mammary gland, with clinical results such as inflammation, fever, chills, maternal discomfort, fatigue, breast abscess up to septicemia. (Pratiwi *et al.*, 2022)

Treatment that is often done to reduce breast swelling is cold and or warm compresses to reduce fluid trapped in the tissues which causes delays in lactogenesis II. Cabbage leaf compresses (brassica

oleraceavar. capitata) on swollen breasts can be done if there is no wound on the skin of the breast and the mother is not allergic to sulfa, the compress becomes effective and the results are visible within 1-2 hours so that postpartum mothers can breastfeed exclusively and can increase confidence mother during breastfeeding. (Hapsari, Prajoko and Budijitno, 2018)

Cabbage (Brassica Oleracea Var. Capitata) can be used to treat swelling. Cabbage (Brassica Oleracea Var. Capitata) contains the amino acid methionine which functions as an antibiotic and other ingredients such as sinigrin (Allylisothiocyanate), mustard oil, magnesium, sulfur Oxylate Heterosides, this can help widen the capillaries thereby increasing blood flow to and from area, thereby allowing the body to reabsorb the fluid that is dammed up in the breast. Besides that, cabbage leaves (Brassica Oleracea Var. Capitata) also secrete a cold gel which can absorb heat which is marked by the client feeling more comfortable and cabbage leaves (Brassica Oleracea Var. Capitata) become wilted/ripe after 30 minutes of sticking. (Damayanti, Ariani and Agustin, 2020)

One of the plants that has medicinal properties is aloe vera, stating that aloe vera can be used to treat breast pain due to menstruation or breast pain due to the process of stopping breast milk. Aloe vera contains anthraquinone which contains aloin and emodin which can function as analgesics. The analgesic activity of aloe vera is also associated with the presence of carboxypeptidase and bradykinase enzymes which can reduce pain. Pain reduction occurs through stimulation of the immune system and reduction of prostaglandins which are responsible for pain. (Sari *et al.*, 2019)

Signs of inflammation are swelling/edema, redness, heat, pain. Antipyretics are substances that can reduce body temperature or drugs to reduce heat. Aloe vera works as an anti-inflammatory and herbal remedy for burns which can prevent edema by inhibiting cyclooxygenase enzymes or inhibiting the synthesis of prostaglandin E2 (PGE2) from arachidonic acid. PGE2 compounds are prostaglandins released by macrophages and modulate several inflammatory responses as well as increase pain sensitivity. Aloe vera extract also inhibits the migration of neutrophil cells. As an anti-bacterial agent, aloe vera extract inhibits the growth of Streptococcus and Shigella bacteria. (Silaban *et al.*, 2022)

The content of aloe vera leaves there are two types of fluids in aloe vera leaves. The first liquid is a clear liquid like jelly (mucus). This liquid contains anti-bacterial and anti-fungal substances, as well as salicylates which can stimulate fibroblasts (skin cells that function to heal wounds).

Therefore, aloe vera is believed to be able to heal wounds, soak pain, and has anti-inflammatory properties. (Hapsari, Prajoko and Budijitno, 2018)

Based on research conducted by (Nurakilah, 2022), the research subjects were 40 postpartum mothers for 2-3 days. The variable of aloe vera compress on the smooth flow of breast milk was analyzed using the Wilcoxon Test to determine the effectiveness before and after administering the aloe vera compress. The research results showed that breast milk was being expressed smoothly with a posttest mean score in the intervention group of 9.10 and a posttest mean score in the control group of 6.70. Aloe vera compress therapy showed smooth expression of breast milk with a mean ± SD of 9.20 ± 0.304 (p = 0.001).

Conclusion: Compressing with aloe vera is effective in smoothing out breast milk in mothers 2-3 days post partum in the Karanganyar Health Center working area, Tasikmalaya City.

Another research was also conducted by (Sulistyoningtyas and Khusnul Dwihestie, 2022) with the title The Effectiveness of Giving Cabbage Leaf Compresses and Breastcare on Breast Swelling in Postpartum Women at TPMB L Tangerang. The type of research used in this research is quantitative research. The population in this study were all postpartum mothers at TPMB L who visited in March 2022. The average number of postpartum mothers per month was 35-36 postpartum mothers consisting of 15 intervention groups and 15 control groups. The research instrument used an observation sheet to determine breast swelling in postpartum mothers. The analysis used is to use the t-test (t-test). The results showed that there was a significant difference in breast swelling scores before and after being given a cabbage leaf compress in the experimental group ($p<0.05$), and there was a significant difference in breast swelling scores in the experimental group and the control group after being given breastcare ($p <0.05$). Cabbage leaf compresses and breastcare can reduce breast swelling in postpartum mothers.

Another research was also conducted by (Santy, Gupty and Chloranyta, 2022) using a qualitative research design with a case study approach, using two samples of post-partum mothers who experienced breast swelling pain with data collection techniques through interviews, observation and documentation. The results of the study showed that cabbage leaf compresses were effective in reducing breast swelling pain as evidenced by the results of a decrease in the breast swelling pain scale in the first respondent before therapy, namely scale 6 (moderate pain) to

scale 1 (mild pain), then in the second respondent before therapy the pain felt was scale 5 (moderate pain) to scale 0 (no pain). The conclusion of this research is that cabbage leaf compresses have been proven to be effective in reducing the pain scale of breast swelling in post partum mothers.

Based on the background above, similar research has been carried out by other people in Indonesia, but researchers are still interested in conducting similar research because researchers want to see whether there is an effect of cabbage and aloe vera compresses on breast swelling in post partum mothers in North Sumatra, especially at the Helen Tarigan clinic. because the previous research area had respondents with different demographic backgrounds and characteristics as well as different locations than before.

METHOD

The type of research is quantitative research with a quasi experimental design method. Researchers used a Two Group Pretest Posttest design. This research was conducted at the Helen Tarigan Clinic in Medan from January to May 2023. The population and sample in this study were all 30 post partum mothers with 15 people in the cabbage intervention group and 15 people in the aloe vera intervention group. The inclusion criteria in this study were postpartum mothers who had breast swelling and did not take any medication during the research process. Exclusion criteria were postpartum mothers with mastitis and other complications. The sampling technique in this study is Accidental Sampling. The instrument used was a questionnaire sheet using the Six Point Engagement Scale (SPES). Data collection was carried out in two ways, namely primary data was obtained from the Head of the Maternity Clinic, Helen Tarigan, namely the number of postpartum mothers, while secondary data was collected by researchers and research assistants for 7 days for each intervention and carried out once a day for a duration of time. 15 minutes. The research analysis used the Paired T-Test.

RESULTS AND *DISCUSSIONS*

Results

Table 1. Distribution of breast swelling before and after being given cabbage compresses

Pre test			Post test			*p value*
Scale	Frequency	Percentage	Scale	Frequency	Percentage	
Scale 4	0	0	Scale 1	9	60	0,000
Scale 5	10	67	Scale 2	3	20	
Scale 6	5	33	Scale 3	3	20	
Total	15	100	Total	15	100	

Source: Paired T-Test

Table 2. Distribution of breast swelling before and after being given aloe vera compresses

Pre test			Post test			*p value*
Scale	Frequency	Percentage	Scale	Frequency	Percentage	
Scale 4	3	20	Scale 1	12	80	0,000
Scale 5	9	60	Scale 2	3	20	
Scale 6	3	20	Scale 3	0	0	
Total	15	100	Total	15	100	

Source: Paired T-Test

Table 3. The effect of cabbage and aloe vera compresses on breast swelling

Intervention	n	Mean Rank	P value
cabbage	15	6,60	0,000
aloe vera	15	5,58	

Source: Paired T-Test

Discussion

Table 1. Before being given a cabbage compress, the majority of breast swelling was on a scale of 5 (hard and painful breasts), namely 10 people (67%), whereas after being given a cabbage compress, the majority of breast swelling was on a scale of 1 (flaccid breasts, no consistency in the breasts), namely 9 people (60%).

Table 2. Before being given an aloe vera compress, the majority of breast swelling was on a scale of 5 (hard and painful breasts), namely 9 people (60%), whereas after being given a cabbage compress, the majority of breast swelling was on a scale of 1 (flaccid breasts, no consistency in the breasts), namely 12 people (60%).

Table 3. It can be seen that the mean rank of cabbage is 6.60 and the mean rank of aloe vera is 5.58 for breast swelling.

In research conducted by researchers, it was found that the difference in mean rank between cabbage and aloe vera was 1.02 for breast swelling with a p value of 0.000. Meanwhile, in research conducted by Martini et al, the average breast swelling before and after the aloe vera compress had a mean difference of 2.06, while the average breast swelling in the cabbage leaf group before and after had a mean difference of 1.4.

The results of the Paired T-Test to determine the effect of cabbage and aloe vera compresses on breast swelling in post partum mothers can be seen from the p value of 0.000 (<0.05), it can be concluded that there is an effect of cabbage and aloe vera compresses on breast swelling in post partum mother.

Swelling of the breasts can also occur due to blockages in the milk ducts. Blockage in the breast can occur in one or more lactiferous ducts. This disorder can cause milk retention in the breast and if not treated immediately will cause mastitis and breast abscess. (Zaleha and Yulrina Ardhiyanti, 2023)

After post partum, there is a change in the lactation hormones, namely oxytocin and prolactin, each of which has the task of producing breast milk and expelling milk, but their work is influenced by the baby's sucking. Inadequate baby suction is one of the factors that cause breast swelling. Swelling of the breasts occurs due to increased venous and lymphatic flow and narrowing of the lactiferous ducts due to milk accumulating in the breasts. This can result in the emergence of pain, besides that the pain that arises can also be caused by stretching of the mammary tissue due to swelling that occurs so that it suppresses pain receptors. When pain occurs, there will be a release of pain neurotransmitters, one of which is prostaglandin. (Maulida *et al.*, 2022)

Scientifically compressed cabbage (Brassica Oleracea Var. Capitata) can be used to treat swelling. Cabbage or cabbage (Brassica Oleracea Var. Capitata) contains the amino acid methionine which functions as an antibiotic and other ingredients such as sinigrin (Allylisothiocyanate), mustard oil, magnesium, Oxylate Heterosides sulfur, this can help widen the capillaries thereby increasing blood flow to discharge enters from the area, thus allowing the body to reabsorb the fluid that is dammed up in the breast.

Swelling in the breast becomes a serious matter if it is ignored, one of the interventions to relieve the symptoms of breast swelling is by giving cabbage leaf compresses to reduce breast swelling. Cabbage is a form of non-pharmacological therapy that can be used to reduce breast swelling. The benefits of cabbage are as anticancer, good for the digestive system, and good for maintaining the immune system. A study conducted at Stanford University of Medicine showed that the high glutamine content in cabbage is beneficial for treating inflammation, one of which is breast inflammation. (Putrianti, 2022)

Cabbage has the amino acid methionine which functions as an antibiotic and other ingredients such as sinigrin (allylisothiocyanate), mustard oil, magnesium, sulfur oxylate heterosides, this can help widen the capillaries thereby increasing blood flow in and out of the area, thus allowing the body to reabsorb the fluid that is dammed in the breast. In addition, the cabbage leaves also secrete a cold gel that can absorb heat which is marked by the client feeling more comfortable and the cabbage leaves become wilted/ripe after 20-30 minutes of sticking with a freezer temperature of 18^0C. (Napisah, 2022)

The active ingredients, sulforaphane and histidine, can inhibit tumor growth, prevent colon and rectum cancer, detoxify harmful chemical compounds, such as

excess cobalt, nickel and copper in the body, and increase the body's resistance to fighting cancer. The content of amino acids in sulfur is also efficacious for lowering high cholesterol levels, calming nerves and uplifting. External medicine, cabbage can be used as a compress by placing pieces of cabbage leaves where it will be compressed. (Widia and Pangestu, 2019)

According to the researchers' assumptions about the effectiveness of cabbage compresses on breast swelling in postpartum mothers, it was stated in the study that giving cabbage leaf compresses was able to reduce breast swelling. Cabbage compresses are very influential in preventing breast swelling, because by compressing it can help widen the capillaries so that it increases blood flow to and from through the area and allows the body to reabsorb the fluid that is blocked in the breast. Cabbage contains the amino acid methionine which functions as an antibiotic and other ingredients such as sinigrin (Allylisothiocyanate). Swelling and pain in the body is the body's reaction to infection or disease from the outside. Cabbage which is usually used as vegetables or fresh vegetables can also be used to treat and relieve pain and swelling experienced because it has high anti-oxidants in vitamin C. Cabbage compote is an action to treat breasts, especially during the puerperium (breastfeeding period) to reduce swelling of the breast, if the treatment of the breast with a cabbage leaf compress is done properly then the swelling of the breast will decrease.

Aloe vera compresses can be done non-pharmacologically to reduce breast pain, provide a relaxing effect and breast milk can come out smoothly. Aloe vera compresses contain aloe vera leaves. There are two types of liquid in aloe vera leaves. The first liquid is a clear liquid like jelly (mucus), this liquid contains anti-bacterial and anti-fungal substances, as well as salicylates which can stimulate fibroblasts (skin cells that function to heal wounds). Therefore, aloe vera can heal wounds, relieve pain, and has anti-inflammatory properties. (Elfira Sri Futriani and Arifah Rahmawati, 2021)

It is believed that reducing the scale of breast swelling after being given an aloe vera compress can reduce breast swelling and inflammation due to its high sulfur content. The content of aloe vera helps in increasing blood perfusion to the swelling area, dilates the capillaries and acts as a counter blocker thereby reducing swelling and inflammation of the breasts so that the milk flows. (Arista Apriani1 , Wijayanti2, 2018)

(Rofi’ah, Widatiningsih and Sukini, 2019), most of the scale of breast swelling in postpartum mothers before being given

aloe vera compresses was on a scale of 4 while after being given cabbage leaf compresses on a scale of 2. There were differences in the pain scale before and after being given aloe vera compresses. Swelling and breast tenderness begin postpartum, third to fifth day and may continue longer in women who are not breastfeeding.

Another study on aloe vera in nursing mothers was put forward by (Komala Sari, 2020) which states that besides being able to reduce breast swelling, aloe vera gel can also heal cracks/abrasions on the nipples of nursing mothers. Through a search of various literature, it was found that aloe vera leaves (aloe vera) contain ingredients that can treat inflammation. However, its effectiveness has not been studied in depth.

Further research (Anggraini *et al.*, 2022) states that aloe vera has pharmacological effects, namely laxatic and parasiticide. Aloe vera also has other benefits, namely as an antiseptic: a natural cleanser and treats wounds quickly; antipruritics: itch relievers; anesthetics: pain relievers; aphrodisiac: aphrodisiac; antipyretic: fever reducer; antifungal, antiviral and antibacterial derived from saponins; and anti-inflammatory: derived from fatty acids. Aloe vera also contains lignin and polysaccharide compounds which are useful as carriers of nutrients needed by the skin. The characteristics of aloe vera which has a normal level of acidity (pH), almost the same as the pH of human skin, thus giving it the ability to penetrate the skin properly.

Aloe vera also contains amino acids and enzymes, each of which functions to help the development of new cells at an extraordinary speed and remove dead cells from the epidermis.

Aloe vera contains nutritional compounds that can be used for the treatment and healing (therapy) of various diseases. One reference states that aloe vera contains growth hormone (human growth hormone) and anti-aging (anti-aging). The positive effect of increasing the immune system in reducing inflammation, aloe vera has an inhibitory system that blocks pain and a stimulating system that promotes wound healing. Independent laboratory tests on aloe vera show aloe vera activity in modulating antibodies and cellular immunity. Topical steroids are usually used to block acute and chronic inflammation. They decrease edema by reducing capillary permeability, vasodilation and stabilizing lysosomal membranes. Aloe vera (aloe vera) stimulates the growth of fibroblasts to promote wound healing and inhibit the spread of infection. Research shows that only about 1% of steroids can penetrate the stratum corneum of the skin, and 99% is

wasted. The data of this study indicate that aloe vera can act as a vehicle for steroids to enhance absorption and act as an efficient carrier. The use of aloe vera is a significant economic consideration. (Sri and Lubis, 2021)

According to the researchers' assumptions, the average scale of breast swelling before being given the treatment of cabbage leaf compresses and aloe vera respectively is on a scale of 5. Where a scale of 5 indicates hard and painful breasts. On average, mothers who experience breast swelling occur on days 2 to 5. This is because postpartum mothers who breastfeed their babies in the first weeks after giving birth experience milk retention, especially primiparous mothers who have no prior experience in the process of lactation and breastfeeding.

From the research that has been done, the researchers suggest that postpartum mothers continue to express breast milk, but it is not recommended to give it to babies. It is recommended that future researchers examine the nutritional factors of postpartum mothers in the form of food intake.

CONCLUSION

There is an effect of cabbage and aloe vera compresses on breast swelling in post partum mothers.

THANK YOU

Praise the author prays to the presence of God Almighty for His grace the author can complete this research. Thank you to all parties involved in this research that the author cannot mention one by one.

BIBLIOGRAPHY

Anggraini, Y. D. *et al.* (2022). The Effectiveness of Herbal Ingredients To Relieve Breast Engorgement : Literature Review *Healthy : Jurnal Inovasi Riset Ilmu Kesehatan*, 1(4), pp. 176–191. doi: 10.51878/healthy.v1i4.1674.

Apriyani, T. *et al.* (2021). Kompres Daun Kubis (Brassica Oleracea Var.Capitata) terhadap Penurunan Intensitas Nyeri dan Pembengkakan Payudara Ibupostpartum. *Cendekia Medika*, 6(2), pp. 94–102. doi: 10.52235/cendekiamedika.v6i2.95.

Arista Apriani , Wijayanti, D. W. (2018). Efektivitas Penatalaksanaan Kompres Daun Kubis (Brassica Oleracea Var. Capitata) Dan Breast Care Terhadap Pembengkakan Payudara Bagi Ibu Nifas Arista. *Jurnal Kebidanan*, II(4), pp. 238– 243.

Cicilia K, C. *et al.* (2021). Literature Review : Teknik Komplementer

pada Penanganan Bendungan ASI. *Jurnal Universitas Ngudi Waluyo*, pp. 226–232.

Damayanti, E., Ariani, D. and Agustin, D. (2020). Pengaruh Pemberian Kompres Daun Kubis Dingin sebagai Terapi Pendamping bendungan ASI terhadap Skala Pembengkakan dan Intensitas Nyeri Payudara serta Jumlah ASIpada Ibu Postpartum di RSUD Bangil. *Journal of Issues in Midwifery*, 4(2), pp. 54–66. doi: 10.21776/ub.joim.2020.004.02.1.

Elfira Sri Futriani and Arifah Rahmawati (2021). Pengaruh Pemberian K Ompres Lidah Buaya Terhadap Nyeri Payudara Pada Ibu Yang Mengalami Bendungan ASI. *Jurnal Antara Keperawatan*, 4(3). doi: 10.37063/antaraperawat.v4i3.722.

Hapsari, P. N., Prajoko, Y. W. and Budijitno, S. (2018). Efektifitas Aloe Vera (*Aloe Barbadensis Milleer*) Dalam Penanganan *Hand Foot Syndrome* Pada Pasien Kanker Payudara Yang Mendapat Kemoterapi *Capecitabine* Per Oral. *Diponegoro Medical Journal (Jurnal Kedokteran Diponegoro)*, 7(2), pp. 451–461.

Komala Sari, V. (2020). Efektivitas Kompres Daun Kubis (*Brassica Oleraceavar. Capitat*a) Dan Breast Care Terhadap Pengurangan Pembengkakan Payudara the Effectiveness of Compressed Cabbage Leaves (*Brassica Oleraceavar. Capitata*) and *Breast Care on Reducing Breast Development*. *Jurnal Voice of Midwifery*, 10(2), pp. 929–939.

Kusumastuti, N. A. (2023). Pengaruh Kompres Aloe Vera sebagai Alternatif Pengobatan Pembengkakan Payudara pada Ibu Post Partum. 12(01).

Maulida, H. *et al.* (2022). Pengaruh Kompres Daun Kol Terhadap the Effect of Cabbage Leaf Compresses on Breast, 9 (November), pp. 217–224.

Napisah, P. (2022). Perawatan Payudara Menggunakan Daun Kubis Pada Ibu Postpartum di Cicendo Kota Bandung. *Jurnal Abdimas PHB*, 5(1), pp. 1–6.

Nurakilah, H. (2022). Efektivitas Terapi Kompres Lidah Buaya (Aloe Vera) Terhadap Kelancaran Pengeluaran ASI pada Ibu 2-3 Hari Post Partum di Wilayah Kerja Puskesmas Karanganyar Kota Tasikmalaya. *Jurnal Bimtas*.

Pratiwi, Y. S. *et al.* (2022). Upaya Peningkatan Pengetahuan Tentang Pemanfaatan Daun Kubis Sebagai Upaya dalam Mengurangi Bengkak

Payudara Pada Ibu Nifas. *Lentera Jurnal (Jurnal Pengabdian)*, 2(2), pp. 213–218.

Putrianti, B. (2022). Tingkat Pengetahuan Dengan Persepsi Tentang Kompres Daun Kubis Untuk Mengurangi Bengkak Payudara Pada Ibu Menyusui. *Jurnal Kesehatan Karya Husada*, 10(2), pp. 93–102.

Rofi'ah, S., Widatiningsih, S. and Sukini, T. (2019). Efektivitas Aromaterapi Lemon untuk Mengatasi Emesis Gravidarum. *Jurnal Kebidanan*, 9(1), pp. 9–16. doi: 10.31983/jkb.v9i1.3814.

Rohmah, M., Wulandari, A. and Sihotang, D. W. (2019). Efektivitas Kompres Daun Kubis (Brassica Oleracea) terhadap Skala Pembengkakan Payudara pada Ibu Post Partum di PMB Endang Kota Kediri. *Journal for Quality in Women's Health*, 2(2), pp. 23–30. doi: 10.30994/jqwh.v2i2.34.

Santy, F. N., Gupty, P. W. and Chloranyta, S. (2022). Pengaruh Terapi Daun Kubis Terhadap Nyeri Pembengkakan Payudara Pada Ibu Post Partum. *Jurnal Kesehatan Panca Bhakti Lampung*, 10(1), p. 26. doi: 10.47218/jkpbl.v10i1.156.

Sari, R. I. *et al.* (2019). Efektifitas Kompres oleovera Terhadap Nyeri Pembengkakan pada Ibu menyusui. *Jurnal Ners Indonesia*, 10(1).

Sari, S. P., Fatimah, T. and Rismawati (2021). Pengaruh Kompres Daun Kobis Terhadap Nyeri Payudara Pada Ibu Postapartum Di Klinik Murniati. *Jurnal Kebidanan*, XIII(01), pp. 139–148.

Silaban, V. F. *et al.* (2022). Efektivitas Kompres Lidah Buaya terhadap Nyeri Pembengkakan Payudara pada Ibu Post-Partum di Klinik Theresia. *JUMANTIK (Jurnal Ilmiah Penelitian Kesehatan)*, 6(4), p. 347. doi: 10.30829/jumantik.v6i4.10473.

Sri, U. L. I. and Lubis, W. (2021). Pengaruh pemberian kompres lidah buaya untuk mengurangi nyeri akibat pembengkakan payudara pada ibu post partum di puskesmas pintu padang tahun 2021.

Sulistyoningtyas, S. and Khusnul Dwihestie, L. (2022). Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal, *Peran Mikronutrisi Sebagai Upaya Pencegahan Covid-19*, 12(Januari), pp. 75–82.

Widia, L. and Pangestu, D. A. P. (2019). Pengaruh Kompres Daun Kubis (Brassica Oleracea Var. Capitata) Terhadap Pembengkakan Payudara (Breast Engorgement) Pada Ibu Nifas. *Jurnal Darul Azhar*, 8(1), pp. 45–51.

Zaleha, S. and Yulrina Ardhiyanti (2023). Pemberian Kompres Daun Kubis Dalam Mengatasi Bendungan Asi Pada Ibu Nifas. *Jubida*, 1(2), pp.74–81. doi: 10.58794/jubida.v1i2.211.