A Study to Evaluate the Effectiveness of Chilled Cabbage Leaves Application on Reducing Breast Engorgement among the Volunteered Postnatal Mothers Admitted in a Selected Hospital at Guwahati, Assam

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Abstract: *This pre experimental study was conducted to evaluate the effectiveness of chilled cabbage leaves application on reducing breast engorgement among the volunteered postnatal mothers. Quantitative research approach with pre experimental one-group pre-test post-test design was adopted for the study. 58 volunteered postnatal mothers with breast engorgement were selected by convenient sampling technique from GMCH, Guwahati, Assam. The tools used were structured interview questionnaire (socio-demographic variables and clinical profile), six point engorgement scale and numerical pain rating scale. After the pre-test, chilled cabbage leaves were applied 2 times a day for 3 days and post-test was done on 4th day after the intervention using the same tool. Data were analyzed by descriptive and inferential statistics. The study revealed that before intervention majority 53.5% of the volunteered postnatal mothers had moderate breast engorgement, majority 48.3% of the volunteered postnatal mothers had moderate pain and after intervention majority 58.6% of the volunteered postnatal mothers had mild breast engorgement and majority 48.3% of the volunteered postnatal mothers had mild pain. Findings of study showed a significant difference between the mean pre test and post test breast engorgement and pain score which were statistically tested using paired t test (breast engorgement t=21.30; p=0.001 and pain t=21.40; p=0.001) and were found to be highly significant at 0.01 level of significance. It was found that chilled cabbage leaves application is effective on reducing breast engorgement among the volunteered postnatal mothers. The study also found that there was a significant association between the pre intervention level of breast engorgement with residential area (χ²=6.616, p<0.05).*

Keywords: Chilled cabbage leaves application, Breast engorgement, Volunteered postnatal mothers

1. Introduction

Motherhood is a blessing and a special feeling for every woman even it gives so much pain and discomfort while giving birth. A mother can give the best gift to her baby as breast milk which contains all the nutrients required for the growth and development of a baby.

Breast engorgement may occur to any postnatal mother in 2nd-5th days of postpartum period which may also be experienced after 5th day and also within two weeks of postpartum period. Pain and discomfort due to breast engorgement causes hesitation in the mothers to breastfeed their baby that worsens engorgement.

Cabbage has both anti-irritant and anti-inflammatory properties. Cabbage leaves have been used for centuries as a folk remedy for a wide variety of ailments and received much renewed interest from lactation professionals over the past ten years. By promoting skilled and specialized care in the clinical management of breastfeeding, nurses contribute to the health and well-being of women, children, and family during their professional practice. Also, nurses should guide and demonstrate the mothers about expressed breast milk to feed their babies, and prevent mothers from breast engorgement.

2. Need of the Study

Numerous strategies have been adopted over the years in the treatment of breast engorgement. But very few researches have been conducted to monitor the effect of cabbage leaves on breast engorgement. After going through the review of literature, it is found that chilled cabbage leaves application benefits in reducing breast engorgement. But it is found that only limited studies have been done related to this method. Hence the researcher felt that there is a need for the study on chilled cabbage leaves application on reducing breast engorgement among the postnatal mothers.

3. Objectives

1. To assess the level of breast engorgement among the volunteered postnatal mothers.
2. To evaluate the pre intervention and post intervention level of breast engorgement among the volunteered postnatal mothers.
3. To determine the association between the pre intervention level of breast engorgement with their selected socio-demographic variables among the volunteered postnatal mothers.

Hypothesis

1. H_1 -There is a significant difference between the pre intervention and the post intervention score on reducing breast engorgement among the volunteered postnatal mothers.
2. H_2 -There is a significant association between the pre intervention score on reducing breast engorgement with their selected socio demographic variables among the volunteered postnatal mothers.

4. Materials and Methods

Quantitative research approach with pre experimental one-group pre-test post-test design was adopted for this study. Fifty eight volunteered postnatal mothers with breast engorgement were selected by convenient sampling technique from GMCH, Guwahati, Assam. The tools used were structured interview questionnaire (socio-demographic variables and clinical profile), six point engorgement scale and numerical pain rating scale. After obtaining permission from the ethical committee of AIN Guwahati and GMCH Guwahati; the main study was conducted. On the 1st day, after giving introduction about herself and the study, informed consent was obtained from each study participants and ascertained willingness to participate and confidentiality. Pre test was conducted by administering structured interview questionnaire on socio-demographic variables and clinical profile and the level of breast engorgement was assessed using six point engorgement scale and level of pain was assessed using numerical pain rating scale. Chilled cabbage leaves was applied twice daily for 15-20 minutes duration for continuous 3 days. On 4th day post-test was conducted by using same tool.

5. Results

- According to the age, 51.7% of the participants were in the age group of 21-25 years.
- It was found that 39.7% of participants had high school education.
- Based on occupation of participants, 84.6% were housewife.
- Based on type of family, 70.5% were living in nuclear family.
- Based on residential area, 58.6% participants were from rural area.
- According to religion, 50% were belongs to Islam.
- Findings showed that 50% were in 2nd day of postnatal period.
- According to mode of delivery, 62.1% had normal vaginal delivery.
- Based on gravida, 62% were primi gravida mothers.
- According to frequency of feeding, 65.5% were feeding every 2 hourly.
- According to duration of feeding, 62.1% were feeding for 5-10 minutes.
- Analysis showed that 82.8% had reported swelling on breast.
- All participants i.e. 100% had reported pain on breast.
- Analysis showed 69% had hardness on breast.
- According to study, 53.4% had used other method if swelling, pain, hardness present on breast.

Level of breast engorgement and pain among volunteered postnatal mothers

The level of breast engorgement and pain was assessed by using standardized six point engorgement scale and numerical pain rating scale. The maximum score for six point engorgement scale was 6 and the minimum score was 1. The scale classified the breast engorgement as no engorgement (1), mild engorgement (2-3), moderate engorgement (3-4) and severe engorgement (6). The maximum score for numerical pain rating scale was 10 and the minimum score was 0. The scale classified the pain as no pain (0), mild pain (1-3), moderate pain (4-6) and severe pain (7-10). The pre-test score of level of breast engorgement in volunteered postnatal mothers in GMCH Guwahati revealed that, majority 53.5% of participants had moderate breast engorgement, followed by 31% had severe breast engorgement and 15.5% had mild breast engorgement. The pre-test score of level of pain on breast in volunteered mothers revealed that majority 48.3% of participants had moderate pain, followed by 36.2% had severe pain and 15.5% had mild pain.

Table 1: Mean, SD and Paired t Test value of the level of breast engorgement among the volunteered postnatal mothers before and after intervention

Group	Mean	SD	Mean difference	t	P
Pre-test	4.69	1.173	2.19	21.30	0.001**
Post-test	2.50	1.143			

**P<0.01 level of significance

Table 2: Mean, SD and Paired t Test value of the level of pain among the volunteered postnatal mothers before and after intervention

Group	Mean	SD	Mean difference	t	P
Pre-test	5.47	1.769	3.41	21.40	0.001**
Post-test	2.05	1.711			

**P<0.01 level of significance

Association between pre-intervention level of breast engorgement with their selected socio-demographic variables

Chi square test was used to find the association between the level of breast engorgement and selected socio-demographic variables. The study revealed that there was a significant association between the residential area and pre-intervention level of breast engorgement (p<0.05) but, there were no significant association between pre-intervention level of breast engorgement and other socio-demographic variables like age, educational qualification, occupation, type of family and religion.

6. Discussion

The findings of the present study showed a significant difference in the mean breast engorgement scores (4.69±1.173 to 2.50±1.143) before and after intervention. This result indicates and strongly suggests that chilled cabbage leaves application is highly effective on reducing breast engorgement among the volunteered postnatal mothers.

Similar study conducted on effectiveness of chilled cabbage leaves application on breast engorgement among postnatal mothers. It was found that chilled cabbage leaves

application was highly effective on reducing breast engorgement as the calculated t value was 5.88 and p value <0.001 being less than 0.05 level of significance by Saini R, Saini P (2014).

7.Limitations

1. Sample size of the study was limited to 58 samples due to time bound.
2. The study was limited to the volunteered postnatal mothers with breast engorgement.

8.Recommendations

1. A similar study can be replicated on a large sample in different setting to strengthen the findings.
2. A study can be conducted to assess the effectiveness of other alternative therapies in reducing breast engorgement.
3. A comparative study can be conducted between chilled and room temperature cabbage leaves.
4. A comparative study can be conducted between chilled cabbage leaves and cold application.

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