

Cabbage Leaves vs Hot and Cold Compresses in the Treatment of Breast Engorgement

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This study was conducted to evaluate the effect of cold cabbage leaves and alternate hot and cold compresses in decreasing breast engorgement and pain in post-natal mothers admitted in AIIMS, New Delhi.

Introduction

Engorgement is the physiologic condition characterised by the painful swelling of the breasts associated with the sudden increase in milk volume, lymphatic and vascular congestion, and interstitial oedema during the first two weeks following birth. It is caused by insufficient breastfeeding and/or blocked milk ducts. Breast pain that interferes with successful breastfeeding leads to abandonment of exclusive breastfeeding (Woolridge, 2006). Numerous strategies have been adopted over the years in the treatment of breast engorgement. These include kangaroo care, fluid limitation, binding the breasts or wearing a tight bra, hot and cold compresses, application of cabbage leaves etc. Very few researches have been conducted to monitor the effect of cabbage leaves on breast engorgement, even these have come up with inconclusive and conflicting results.

A study on the effectiveness of cabbage leaves can contribute to providing evidence for introducing the intervention in clinical practice

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and thus the present study was conducted. The objective of this study was to assess and compare the effectiveness of cold cabbage leaves and hot and cold compresses in the treatment of breast engorgement.

Material and Methods

This was a quasi experimental study, using time series, non-equivalent control group design with multiple institutions of treatment, done in post-natal ward in AIIMS, New Delhi on 60 subjects during May to December 2006.

Inclusion criteria

- ♦ Post-natal mothers with breast engorgement
- ♦ Willing of the subjects to participate in study

Exclusion criteria

- ♦ Mothers with allergy to sulfa drugs and cabbage
- ♦ Mothers with soft breasts; mothers receiving lactation suppressants
- ♦ Mothers with infected breasts, breast abscess, mastitis, broken skin of breasts, bleeding or cracked nipples

After enrolling the subjects based on inclusion and exclusion criteria, information sheet was given to them and consent obtained. Identification data and obstetric characteristics of each subject were recorded in vali-

dated subject data sheet. The study was conducted in two phases. In the first phase, first 30 mothers in control group were given alternate hot and cold compresses. The temperature of water for hot compress ranged between 43-46°C, and for cold compress it ranged between 10-18°C as assessed by lotion thermometer. On completion of first phase, next 30 mothers in experimental group were given cold cabbage leaves treatment for relieving breast engorgement. Cabbage leaves were refrigerated for approximately 20-30 minutes prior to the procedure in the freezer compartment of the refrigerator. Cold cabbage leaves were kept inside mother's bra for 30 minutes.

Both the treatments were performed three times a day for two subsequent days. The intervention was done six times on each subject. The duration of each intervention was 30 minutes. Pre-treatment and post-treatment scores of breast engorgement and pain were recorded after each treatment session. Breast engorgement was measured using six point breast engorgement scale and pain score was assessed using numeric rating pain scale. The data obtained was entered into MS Excel sheet. The statistical software STRATA was used for analysis.

	Pre-treatment Mean (SE) N=30	Post-treatment Mean (SE) N=30	p-value
Control group			
Breast engorgement score	5.03 (0.7)	2.97 (0.2)	<0.001***
Pain score	6.1 (1.5)	0.51 (0.4)	<0.001***
Experimental group			
Breast engorgement score	5.17 (0.7)	3.02 (0.2)	<0.001*
Pain score	6.4 (1.2)	3.45 (0.4)	<0.001*

* p value significant at 0.001 level.

Table 1: Comparison of pre-treatment & post-treatment scores for breast engorgement and pain in both groups

Results.

The two groups were homogeneous with regard to all demographic and obstetric variables as analysed by chi square and Fisher's exact test except for breastfeeding for which adjusted analysis using GEE (generalised estimating equations) was done. There was no difference between the groups with regard to pre-treatment scores of breast engorgement and pain as analysed by student 't' test (Fig. 1). GEE was

used to compare correlated responses for post-treatment scores for both the outcome variables between the groups and to compare pre-treatment and post-treatment scores within the groups. Both the treatments i.e. hot and cold compress and cabbage leaves were effective in decreasing breast engorgement and pain in post-natal mothers ($p \leq 0.001$) as shown in Table 1. Cold cabbage leaves and hot and cold compress

both were equally effective in decreasing breast engorgement ($p=0.07$) as shown in Table 2. Hot and cold compresses were found to be more effective than cold cabbage leaves in relieving pain due to breast engorgement ($p \leq 0.001$) in post-natal mothers as shown in Fig. 2.

Discussion

This study is supported by the findings of Snowden et al (2001) who did a review of research studies to determine the effects of several interventions to relieve symptoms of breast engorgement among breastfeeding women and found that cabbage leaves were effective in the treatment of engorgement. Roberts et al also compared the effectiveness of cabbage leaf extract with that of a placebo in treating breast engorgement in lactating women and concluded that both the groups received equal relief in discomfort and decreasing breast tissue hardness. The present study also supports the findings of Hill & Humenick (1994)

Table 2: Comparison of post-treatment breast engorgement scores in postnatal mothers in control and experimental groups

No. of applications	Control group Mean (SE) (N=30)	Experimental group Mean (SE) (N=30)	Mean difference	95% C.I.	p-value
1	5.14 (0.205)	4.22 (0.160)	0.18	30-0.48	0.288
2	3.84 (0.185)	4.06 (0.158)	0.22	0.13-56	0.225
3	3.51 (0.189)	3.92 (0.155)	0.42	0.05-0.2	0.026*
4	3.743 (0.205)	4.26 (0.171)	0.52	11-0.91	0.012**
5	3.18 (0.178)	3.23 (0.176)	0.1	0.22-0.33	0.73
6	2.97 (0.171)	3.03 (0.130)	0.1	0.17-0.27	0.6

* p value significant at 0.05 level

** p value significant at 0.01 level

who reported that type of delivery and parity are not critical variables in predicting engorgement.

Conclusion

Cold cabbage leaves as well as alternate hot and cold compresses both can be used in the treatment of breast engorgement. Hot and cold compresses are more effective in decreasing pain as compared to cold cabbage leaves in relieving pain due to breast engorgement.

Acknowledgement

I thank my guide Dr. Manju Vatsa and the co-guide Dr. Vatsla Dadhwal for their guidance throughout the study. I am grateful to the mothers who participated in this study and nurses of post-natal ward of AIIMS who helped me during the course of study. I thank the statistical depart-

ment for statistical analysis and the ethical review board for giving ethical clearance.

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Figure 1 : Pre-treatment scores of breast engorgement and pain in control and experimental groups

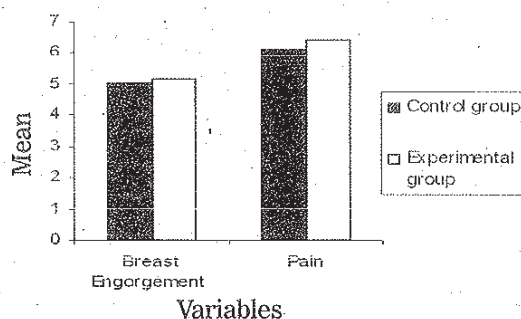
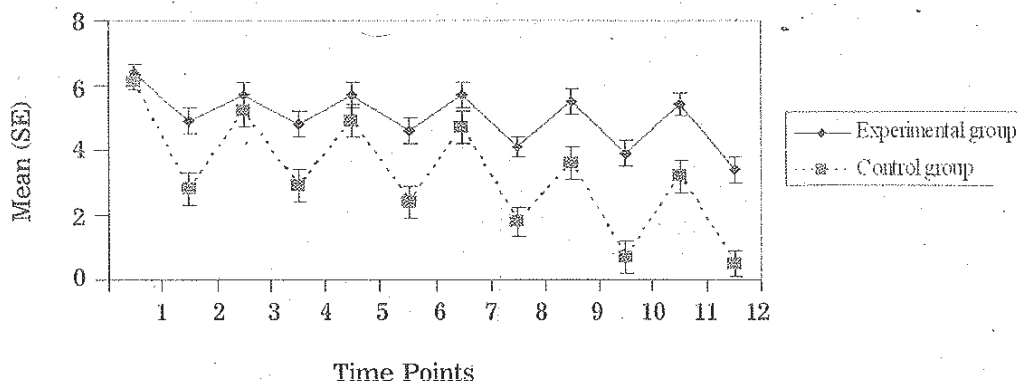


Figure 2 : Comparison of post-treatment pain scores in control and experimental group



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