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Effectiveness of Green Cabbage Leaves (GCL) Vs Hot water bag (HWB) application on Breast Engorgement in Postnatal Mothers

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Abstract

"A Quasi Experimental study to compare the effectiveness of GCL and HWB application on Breast Engorgement in Postnatal Mothers in a selected Hospital of Dehradun, Uttarakhand".

Methodology: Quasi Experimental approach with Time Series Design was used as research design for the study. Sixty three postnatal mothers (32 in experimental group and 31 in control group) who fulfilled inclusion criteria were selected as sample consecutively and they were assigned randomly to experimental group and control group respectively. The data were collected by using Six point Engorgement scale and Numeric Pain scale. Intervention was given in the form of Green cabbage leave application in experimental group whereas, Hot water bag application in control group for 20 minutes in six interval of time.

Results: Majority of Postnatal mothers (94%) in GCL group and (97%) in Hot Water Bag group were initiated breast feeding after 24 hour of delivery. Majority of the mothers (94 %) had undergone LSCS in GCLand (97%) in the HWB group. The homogeneity was checked in both the group by using chi square test, fisher's exact test and 't' test. It was found that except the educational status, the group were homogeneous in term of Age, Parity, Type of Delivery, Initiation of Breast Feeding, Frequency of Feeding, Duration of Breast Feeding, and Postnatal Day of engorgement. ANOVA was used for analysis. It was showed that from baseline to 20 minutes, mean engorgement and pain score in both the groups were same and then after six hours to 36 hours the mean and SD was decreased in both groups.

Conclusion: Findings Concluded that GCL are more effective than HWB in reducing breast engorgement whereas in Pain, there was reduction in both the groups gradually.

Keywords: *Breast engorgement, Pain, Postnatal mothers, Green Cabbage Leaves (GCL), Hot water bag (HWB).*

Introduction

Childbirth is a life changing event which is wonderful and gives joyful experience but it can also be difficult period bringing with it, new problems for suffering. In the most extreme case the mother, or the baby or both may have health problem either major or minor laid down in the postnatal period. The sufferings related to childbirth is a significant portion of the world's overall tally of ill and death.[1]The Best gift that a mother can give to her newborn child is breast milk. Perfectly formulated for the baby and full of wonderful antibodies, it is far superior to any other formula feeding. This has great benefits for the baby not only it is healthier but the action of feeding the child is a moment of love in which the baby learns to bond, smell, and cares with mother as she gives nourishment and affection.[2]

A newborn baby has only three demands: they are warmth in the hands of its mother, food from her breasts, and security in the knowledge of her presence.

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Breast feeding satisfies all three demands.[3] Though breastfeeding is a natural way to bond with and nourish babies; it often doesn't come without challenges. Mothers who are interested in breastfeeding or who are having trouble with establishing a solid breastfeeding relationship with their newborns often wonder where to turn for help and even contemplate giving up on nursing their babies out of frustration or fear[4].

In July 2010, WHO had reported that every infant and child has the right to good nutrition according to the Convention on the Rights of the Child. Globally, 30% (or 186 million) of under five children are estimated to be stunted and 18% (or 115 million) have low weight-for-height, mostly as a consequence of poor feeding and repeated infections, while 43 million are overweight. WHO and UNICEF recommended However many infants and children do not receive optimal feeding; for example, on average only around 35% infants of 0 to 6 months old are exclusively breastfed. Early initiation of breastfeeding, within one hour of birth, protects the newborn from acquiring infections and reduces newborn mortality. The risk of mortality due to diarrhoea and other infections can increase in infants who are either partially breastfed or not breastfed at all.[5]

Warm compress is a very safe and provide pain relief and easy express the milk without medication and don't have to be concerned about side-effects. Heat therapy is the application of either moist or dry heat to the skin. Heat can be either superficial or deep. Superficial heat can be applied using a warm shower, hot packs, hot moist suppress or warm wax (paraffin) or hot water bottle. [6]

A study was conducted in New Delhi to compare the effect of cabbage leaves and hot and cold compress in the treatment of breast engorgement. A sample of 60 mothers participated in the study, 30 in the experimental group and 30 in the control group. The control group received alternate hot and cold compress and the experimental group received cold cabbage leaves application. The pre and post-treatment scores of breast engorgement and pain were recorded. The study result revealed that, both treatments were effective in decreasing breast engorgement whereas, hot and cold compresses were found to be more effective than cold cabbage leaves [7]

Methodology

The study was conducted in a Postnatal ward of obstetric and gynaecological department. 63 mothers who were having breast engorgement as sample which were selected through consecutive sampling technique by assessing Six point Engorgement scale, Numeric Pain scale.

Investigator taken 63postnatal mothers, thirty two in experimental group and thirty one in control group were selected as the subject of the study. The data was collected from 28th Jan to 10th March 2012 at selected Hospital. In the first phase, subjects who fulfilled inclusion criteria were selected consecutively and randomly assigned to either Experimental or Control group. Informed written consent was obtained from participants of the study after explaining the purpose of the study.

Mother in experimental group was asses with Engorgement scale, Numeric Pain scale. The mother who were in experimental group the room temperature Green cabbage leaves was applied for 15 mints in six time for the six hour gap interval for two days duration .Affter each intervention of room temperature Green cabbage leave post assessment was done with Engorgement scale, Numeric Pain scale after each intervention

Mother in control group were also assed with Engorgement scale, Numeric Pain scale . The mother who were in Control group the hot water bag was applied for 15 mints in six time for the six hour gap interval for two days duration .After each intervention hot water bag of post assessment was done with Engorgement scale, Numeric Pain scale after each intervention.

Data Analysis

Sociodemographic characteristics were described using frequency and percentage. Trial version of Statistical Package for social science 16.0 was used to analyze the data. Inferential statistics involved comparison of both group by independent t test , ANOVA, Chi–square test and Spearman co-relation test.

Results

Sociodemographic characteristic of study participants are described in Table 1. There was no significant difference between control group and experimental group in terms of sociodemographic characteristics.

Table 1. Sociodemographic characteristics of study participants (N=63)

Characteristic	Experimental Group		Control Group		Total		Chi Square &'t' Value	p value
	f	%	f	%	f	%		
Age in years 20-30 31-40	30 02	94 06	27 04	87 13	57 06	90 10	1.98	0.056
Parity Primipara Multi para Grandmultipara	19 12 01	59 38 03	15 16 0	48 52 0	34 28 01	54 44 02	2.027	0.363
Type of delivery NVD LSCS	02 30	06 94	01 30	03 97	03 60	05 95	2.027	0.363
Educational status No formal education Primary Secondary Above secondary	07 10 09 06	22 31 28 19	02 08 04 17	06 26 13 55	09 18 13 23	14 29 21 36	11.31	0.003
Initiation of breast feeding Within half an hour After 24 hour	02 30	06 94	01 30	03 97	03 60	05 95	0.001	0.974
Duration of breast feeding 15-20minutes on both breast 15-20minutes on one breast less than 15 minutes	22 04 06	69 12 19	22 06 03	71 19 10	44 10 09	70 16 14	1.384	0.50
Frequency of breast feeding On demand Every two hourly Specific time(within 1 hr)	17 09 06	53 28 19	18 08 05	58 26 16	35 17 11	56 27 17	0.162	0.92
Postnatal day of engorgement 2- 4 days 5-7days	28 04	87 13	27 04	87 13	55 08	87 13	0.002	0.96

Analysis of effectiveness of GCL Vs HWB in relieving breast engorgement and Pain in Experimental and Control group.

Table No.2: Analysis of effectiveness of GCL Vs HWB in relieving breast engorgement in Experimental and Control group.

N=63

GROUPS	Engorgement score (Mean ± SD)							p value (within the group)
	Baseline	After 20 min	After 6hrs	After 12hrs	After 24hrs	After 30hrs	After 36hrs	
Experimental Group (GCL)	5.59 ± 0.49	5.59 ± 0.49	5.31 ± 0.64	4.44 ± 0.56	3.78 ± 0.65	3.13 ± 0.33	3.03 ± 0.18	0.000
Control Group (HWB)	5.65 ± 0.48	5.65 ± 0.48	5.64 ± 0.48	5.06 ± 0.62	4.64 ± 0.48	4.51 ± 0.50	4.19 ± 0.54	0.000

Table No.2 shows the baseline and after 20 minutes mean Engorgement score in both the groups were same i.e 5.59 ±0.49 in GCL group and 5.65±0.48 in HWB group. After 6 hrs, the mean and SD was 5.31± 0.64 in GCL Group and in HWB group 5.64 ± 0.48. After 12hrs hrs, 24hrs 30hrs, 36hrs the mean and SD was decreasing in both the GCL Group and in HWB group. It shows that there was decrease after each interval and there was significant difference between the mean breast engorgement score in GCL and HWB group and also shows that there was significant difference within the groups. Hence the researcher rejects the null hypothesis and accepts alternative hypothesis.

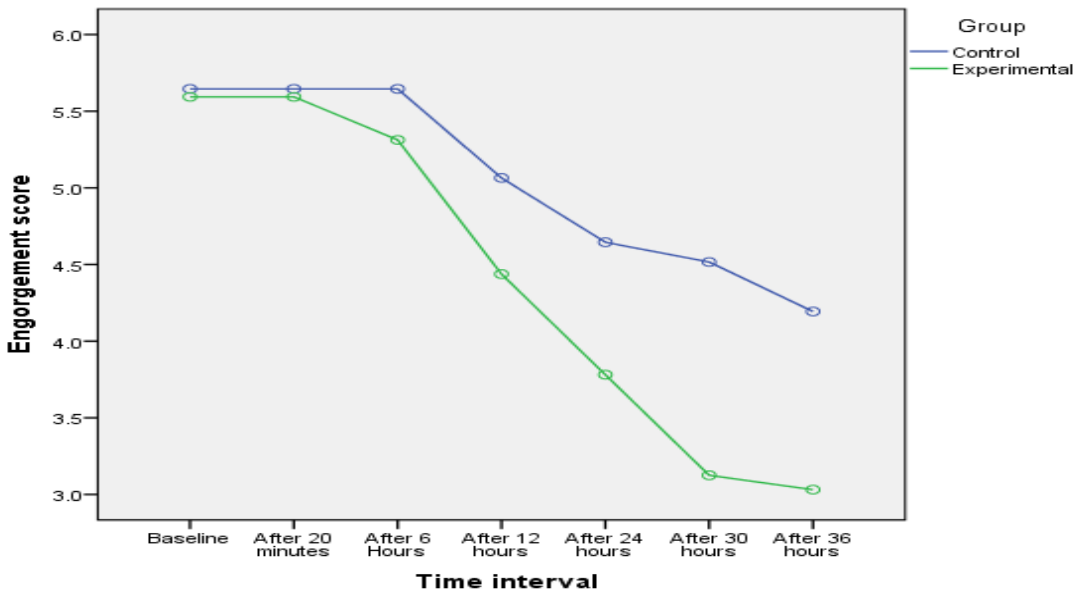

Figure No.1: Line graph representation of estimated marginal mean of engorgement score of GCLand HWB group N=63

Figure No.1 shows line diagram showed that the mean initial engorgement score for both the groups from baseline to after 20 minutes were same. Then there was steadily decline in both the groups throughout six intervals of time. The decline of engorgement score of GCL group were from Score 6 to3 whereas, the decline in HWB group were score 6-4. The result showed that there was rapid decrease in engorgement level in the GCL group than the HWB group.

Table No.3: Analysis of effectiveness of GCL Vs HWB on relieving Pain in Experimental and Control group. N=63

GROUPS	Pain score (Mean ± SD)							p value (within the group)
	Baseline	After 20min	After 6hrs	After 12hrs	After 24hrs	After 30hrs	After 36hrs	
Experimental Group (GCL)	6.218 ± 1.03	6.218 ± 1.03	5.37 ± 1.00	4.53 ± 0.94	3.75 ± 0.74	2.78 ± 0.65	2.25 ± 0.43	0.000
Control Group (HWB)	6.19 ± 0.90	6.19 ± 0.90	5.38 ± 0.80	4.61 ± 0.71	3.87 ± 0.71	3.06 ± 0.62	2.41 ± 0.50	0.000

Table 3 shows the baseline and after 20 minutes mean pain score in both the groups were same i.e 6.218±1.03 in GCL group and 6.19±0.90 in HWB group. After 6 hrs, the mean and SD was 5.37±1.00 in GCL Group and in HWB group 5.38±0.80. After 12hrs hrs, 24hrs 30hrs, 36hrs the mean and SD was decreasing in both the GCL Group and in HWB group. Hence the researcher accepted alternative hypothesis which indicates that the reduction in engorgement was not by chance but because of the intervention.

N=63

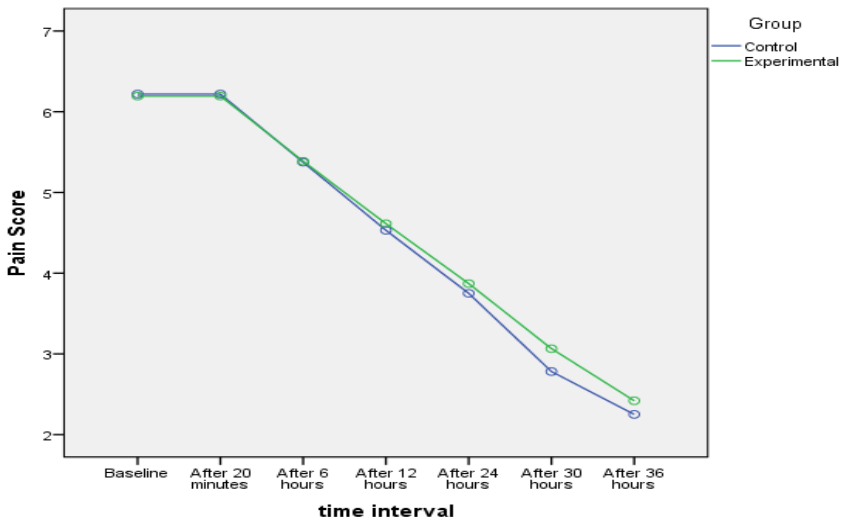

Figure No.2: Line graph representation of estimated marginal mean of pain between experimental and control group in the pain scale.

Figure No.2 shows line diagram showed that the mean initial pain score for both the groups from baseline to after 20 minutes were same. Then there was steadily decline in both the groups throughout six intervals of time. The result showed that there was equal reduction in pain score in the GCL group and the HWB group.

Discussion

Beast engorgement after delivery is the common breast problem in this era due to maternal and child ill health . The implication of Green cabbage leaves helps in quick relieve of engorgement without any side effect to mother and newborn.

Conclusion

This study showed that GCL are more effective than HWB in relieving breast engorgement among the postnatal mothers. GCL as well as HWB application both can be used in relieving pain due to breast engorgement**.** The Green cabbage leaves can be offered to every mother who have engorged breast as treatment until and unless they have allergy to cabbage leaves.

Conflict of Interest –Nil

Source of Funding- Self

Ethical Clearance –Himaliyan College of nursing

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