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COMPARISON OF HOT VS COLD APPLICATION IN REDUCING EPISIOTOMY PAIN AMONG POSTNATAL MOTHERS

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ABSTRACT

No one knows better than the mother that pregnancy is an amazing journey. After the mother gives birth, the mother goes through another round of dramatic emotional and physical changes. The mother probably feels alternatively sheer joy and utter exhaustion and may also experience physical discomfort which she might not have expected. Pain and discomfort from episiotomy incision continue to be a problem from many postnatal mothers. Helping the mother in alleviating the discomfort and helping her to overcome it and will enable her to get feeling of well-being. Heat from the lamp and cold produces strong analgesic effect and reduces pain.

The study was to compare the effectiveness of hot and cold application in reducing the pain among postnatal mothers with episiotomy. A quasi experimental Factorial design was used in this study. 30 samples were selected by non probability convenient sampling method. Samples divided into 2 groups as 15 mothers for hot application group and 15 mothers under cold application. The hot applied through infra-red lamp. The cold by the means of cold pack on the episiotomy wound for 20mts. The pain was assessed before intervention and following hot and cold application at 30mts, 1 hour and 3 hour intervals, by using MC CAFFERY NUMERICAL PAIN SCALE. The result showed that the obtained 't' value () was significant at 0.05 level. It shows that hot application was effective than cold application in relieving post episiotomy pain.

KEYWORDS

Compare, Effectiveness, Pain, Hot Application, Cold Application, Episiotomy and Postnatal Mother.

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INTRODUCTION

The pain after delivery brings the hostile situation for the woman to cope up with the baby and family. In India there is still a lack of awareness is present to reduce the episiotomy pain among patients and midwives.

One of the aim of good Intranatal care is “*Delivery with minimum injury to the infant and mother*” with

the use of episiotomy; Episiotomy is on surgically planned incision on the perineum and the posterior vaginal wall during the second stage of labour. This is performed in order to enlarge the vaginal introitus, so as to facilitate easy and safe delivery of the fetus and to minimize over stretching and rupture of the perineal muscle and fascia.

Until 20th century the routine use of episiotomy was believed to have multiple benefits for both mother and infant. Episiotomy is important in itself as a significant factor affecting women's comfort and health after birth, even though episiotomy was widely used. This so called trival operation should be an important health issue as it is the most frequently performed surgical procedure after cutting the umbilical cord. The mothers who underwent episiotomy experience pain, incomplete healing, inadequacy in meeting self care and new born care.

Damage to perineum occurs in at least 39% of women being delivered and perineal wound breakdown is associated with perineal edema. The study conducted between July 1997 and June 2003 to identify risk of ASL (Anal Sphincter Lacerations). The result shows that the risk of ASL increased with maternal age, increased infant weight and delayed or rarely performed episiotomy.

American bar association (2000)^{B15} declared pain relief as basic legal right. Nurses are ethically and legally responsible for managing pain and relieving suffering. Effective pain management not only reducing pain but also improves quality of life and promotes earlier mobilization and return to work, resulting in fewer hospital stays, and reduced health care cost.

Cold and heat application relieves pain and promote healing. The selection of heat versus cold application varies with client condition. Cold application can reduce the acute pain from inflamed tissues. Ice massage and application of cold packs are two types of cold therapy that are particularly effective for pain relief. Application near the actual site of pain tents to work best.

Effectiveness of heat application is quite therapeutic, improving blood flow to an injured part. The application of cold can initially diminish swelling and pain. To relieve pain in the area, cold application

or application of infrared heat may be used. Both the measures are considered to be a comforting measure. Although episiotomy sutures can cause considerable discomfort, Applying an ice or cold pack to the perineum during the first 24 hours reduces perineal edema and the possibility of hematoma formation, thereby reducing pain and promoting healing and comfort.

OBJECTIVES OF THE STUDY

- To assess the level of pain among postnatal mothers with episiotomy by using numerical scale.
- To assess the effectiveness of hot application in reducing pain among postnatal mothers with episiotomy.
- To assess the effectiveness of cold application in reducing pain among postnatal mothers with episiotomy.
- To compare the effectiveness of hot and cold application in reducing pain among postnatal mothers with episiotomy.

HYPOTHESES

H₁: The mean post pain score of hot application will be significantly less than the mean pre pain score of hot application.

H₂: The mean post pain score of cold application will be significantly less than the mean pre pain score of cold application.

H₃: There will be a significant difference between the effectiveness of hot and cold application in reducing pain among post natal mother with episiotomy.

MATERIAL AND METHODS

A quasi experimental factorial design was used for this study.30 samples were selected by using non probability convenient sampling technique, out of which 15 were allotted to hot application and 15 were allotted to cold application group. Mc. Caffery numerical scale was used to assess the pre test pain level on day 1. It took 10 minutes to collect data from each sample. On the same day morning hot application and cold application was given to group I and group II respectively for 20mts. Next ½ hour, 1

hour, 3 hour pain assessment was done from each sample, including group I and II. On the same day evening again the hot and cold was applied to the same group and again the post assessment were made at ½, 1 hour and 3 hour interval. Again the next day morning and evening the procedure was repeated and pain level monitored from 2 groups. Mc caffery numerical scale consists of 0-no pain, Mild pain 1-3 Moderate pain 4-6, Severe pain 7-10.

RESULTS

Table No.1 shows that the level of pain among postnatal mothers with episiotomy. Out of 15 mothers in group-I 10 (66.7%) had moderate pain, 5 (33.3%) had severe pain in pre test. In post test 14 (94 %) had mild pain, 1 (6%) had moderate pain and no one had severe pain at ½ hour interval. After 1 hour interval 14 (94 %) had mild pain 1 (6%) had moderate pain; no one had severe pain. and after 3 hour interval 12 (80%) had mild pain, 3 (20%) had moderate pain and no one had severe pain.

Table No.2 Reveals In group-II, 1(6 %) had mild pain, 9(60%) had moderate pain 5(34 %) had severe pain in pretest and in the post test 11(73 %) of them had mild pain, 4(27 %) had moderate pain and no had severe pain at ½ hour interval. After 1 hour 10(66.7%) had mild pain, 5(33.3%) had moderate pain in and after 3 hour in post test 5(33 %) had mild pain, 8(53 %) moderate pain and 2(14 %) had severe pain. It is inferred that hot and cold application is effective in reducing episiotomy pa

Table No.3 reveals the mean difference is 4.5 between pretest 7 and post test 2.5 mean score group-I. The obtained 't' value 12.1032 was significant at 0.05. The mean difference between pretest 7.1 and post test 3.2 was 3.9 in group-II. The obtained 't' value 2.35 was significant at $p < 0.05$.

Hence, there was a significant difference between pretest and post test on pain in hot application and cold application group. It was true difference and not by change, hence the stated hypothesis was accepted. It was inferred that hot and cold application was effective in reducing pain among postnatal mothers with episiotomy.

Table No.4 Reveals that the mean difference is 0.7 between group-I 2.06 and group-II 2.7. The obtained

't' value was 6.369 significant $p < 0.05$. Hence, the stated hypothesis was accepted.

It was inferred that there will be a significant difference between hot and cold application.

DISCUSSION

Main aim of the study was to compare the effectiveness of hot and cold application on episiotomy pain among postnatal mothers. An experimental factorial study with manipulation of two independent variables such as hot application and cold application and the interaction effects of hot and cold application on pain reduction was compared. Mc caffery numerical scale consists of 0-10 points was used to assess the increasing intensity of pain response. The response was analyzed by (mean, frequency, percentage and standard deviation and inferential statistics like ('F' Ratio and paired 't' test.) Discussions on findings were arranged on the basis of objectives. The findings revealed that in group-I 10(66.7%) had moderate pain, 5(33.3%) had severe pain in pre test. In post test 14(94 %) had mild pain, 1(6%) had moderate pain and no one had severe pain at ½ hour interval. After 1 hour interval 14(94 %) had mild pain 1(6%) had moderate pain; no one had severe pain. and after 3 hour interval 12(80%) had mild pain, 3(20%) had moderate pain and no one had severe pain. In group-II, 1(6 %) had mild pain, 9(60%) had moderate pain 5 (34 %) had severe pain in pretest and in the post test 11(73 %) of them had mild pain, 4(27 %) had moderate pain and no had severe pain at ½ hour interval. After 1 hour 10(66.7%) had mild pain, 5(33.3%) had moderate pain in and after 3 hour in post test 5(33 %) had mild pain, 8(53 %) moderate pain and 2(14 %) had severe pain. It is inferred that the hot application cold application was effective in reducing pain immediately. But hot application was effective than the cold application in reducing pain up to 3 hour duration.

Table No.1: Distribution of pre test and post test pain level of hot application group at ½ hour, 1 hour and 3 hour

N=30

S.No	Level of Pain	Group I-Hot application							
		Pre Test		Post Test					
		N	%	½ hour interval		1 hour		3 hours	
n	%			N	%	N	%		
1	No Pain	-	-	-	-	-	-	-	-
2	Mild Pain	-	-	14	94	14	94	12	80
3	Moderate Pain	10	66.7	1	6	1	6	3	20
4	Severe Pain	5	33.3	-	-	-	-	-	-

Table No.2: Distribution of pre test and post test pain level of cold application group at ½ hour, 1 hour and 3 hour interval

N=30

S.No	Level of Pain	Group II -cold application							
		Pre Test		Post Test					
		N	%	½ hour interval		1 hour		3 hours	
n	%			N	%	N	%		
1.	No Pain	-	-	-	-	-	-	-	-
2.	Mild Pain	1	6	11	73	10	66.7	5	33
3.	Moderate Pain	9	60	4	27	5	33.3	8	53
4.	Severe Pain	5	34	-	-	-	-	2	14

Table No.3: Distribution of pre and post test data on mean pain score of Hot and Cold Application among Postnatal Mothers with Episiotomy

N=30

S.No	Group	Mean	S.D	MD	't' value
Hot application					
1	Pretest	7	1.1547	4.5	12.1*
2	Post Test	2.5	1.1105		
Cold application					
3	Pretest	7.1	1.034	3.9	2.35*
4	Post test	3.2	1.2668		

*Significant p<0.05

Table No.4: Comparison of Post test Pain level of Hot and cold Application among Postnatal Mothers with Episiotomy

N=30

S.No	Group	Mean	S.D	MD	't' value
1	Hot application	2.06	0.69	0.7	6.369*
2	Cold application	2.7	0.998		

*Significant p<0.05

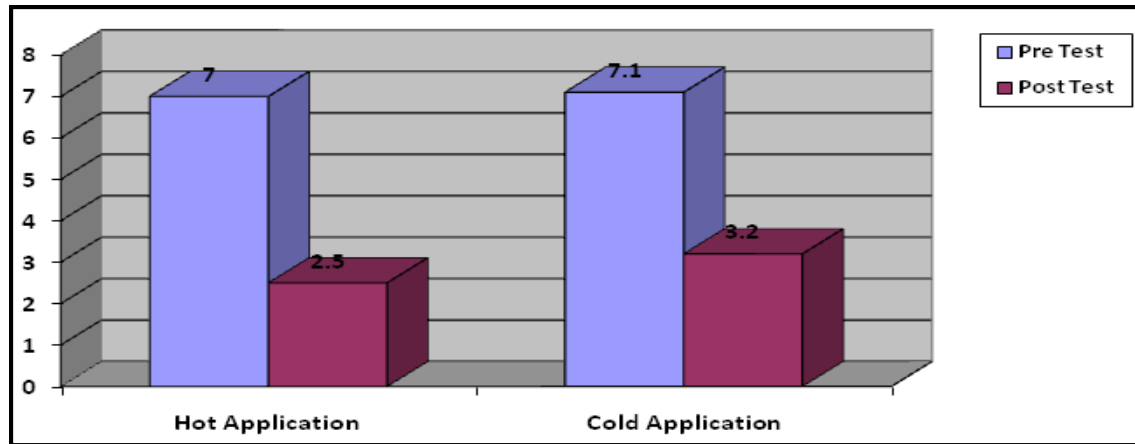


Figure No.1: Mean pain score among hot and cold application group

CONCLUSION

The findings of this study clearly points out that infra red lamp and ice pack is effective in pain relief among post natal mothers with episiotomy. The midwives have a very important role to play in enabling effective pain relief through the use of hot application and cold application as a independent nursing intervention.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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