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A Comparative Study to Assess the Effectiveness of Medicated and Non-Medicated Sitz Bath on Episiotomy Wound Healing among Postnatal Mothers Admitted in Selected Government Hospital, Tumkur

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Abstract: ***Aim of the study: Labour is a wondrous act of nature, and unique to every childbearing woman. The onset of motherhood presents a unique set of physical, emotional and psychological challenges. The post-partum phase can become even more challenging when the new mother experiences perineal or genital tract trauma as a result of child birth. Episiotomy is a surgical incision in the perineum to enlarge the vaginal opening for birth as prophylaxis against soft-tissue-trauma. The focus of this study was to evaluate the effectiveness of Medicated and non-medicated sitz bath on episiotomy wound healing among postnatal mothers at selected hospital, Tumkur, Karnataka. Objectives: 1) To assess the episiotomy status before and after the sitz bath. 2) To determine the effects of medicated and non-medicated sitz bath in episiotomy wound healing. 3) To compare the effectiveness of medicated and non-medicated sitz bath. 4) To associate the demographic variable with the effectiveness of sitz bath on mothers with episiotomy wound healing. Methods: Through non-probability convenient sampling technique. Data was collected using structured questionnaire. Major Findings of the Study: The overall analysis of level of episiotomy wound healing of postnatal mothers showed that majority 64% of medicated and 44% of non-medicated sitz bath group subjects episiotomy wound was not healed on the first day assessment. After implementation of the medicated and non-medicated sitz bath, on the third day assessment majority 40% of subjects had moderately healed episiotomy wound and 12% of the subjects wound was healed in Medicated group. Whereas in non-medicated group 64% of the subjects had mildly healed episiotomy wound and 20% of subjects episiotomy wound was not healed. Interpretation and Conclusion: Findings of the study show that there was a significant difference in pre test and post test level of episiotomy wound healing of postnatal mothers. From this it is concluded that the Medicated and non-medicated sitz bath both are effective in improving the episiotomy wound healing and it is also showed significant difference between post test healing scores of medicated and non-medicated group which reveal that the medicated sitz bath is more effective than the non-medicated sitz bath. And there was no significant association between level of episiotomy wound healing of postnatal mothers and selected demographic variables.***

1. Introduction

Motherhood is a beautiful process whereby the mother safely delivers a child. Care must be given to ensure safe childbirth,Safe motherhood . Midwives have cared for women during childbirth.. During labour, midwives can literally play a vital role they will be there throughout the birth to reassure the parents, administer pain relief, encourage the mother with her breathing, talk her through the different stages of labour and eventually deliver the baby. After the baby has been born, the midwife will continue to care for the mother and baby. An episiotomy also known as perineotomy, is surgically planned incision on the perineum and the posterior vaginal wall during second stage of labor. The incision, which can be midline or at an angle from the posterior end of the vulva, is performed under local anesthetic , and is sutured closed after delivery. It is one of the most common medical procedures performed on. Nowadays alternative and complementary methods such as Aromatherapy using essential oils are established as an alternative therapy for episiotomy. It is used increasingly and Lavender oil is frequently prescribed due to its antiseptic and healing properties [7]. The herb's name comes from the Latin lavare, which means " to wash " and it was used as an antiseptic in the hospital as well as home setting .

2. Need for Study

A study conducted to establish the prevalence of perineal pain, the effects of pain on postnatal recovery in Royal Women's Hospital, Victoria, Australia. Researchers conducted structured interviews of 215 women in the postnatal ward of tertiary hospital, within 72 hours of vaginal birth. Results revealed that 90% of women reported some perineal pain, with 37% reporting moderate or severe pain. Over a third of women experienced moderate or severe perineal pain, particularly when walking(33%) or sitting(39%), while 45% noted that pain interfered with their ability to sleep. Women reported moderate or severe perineal pain when they undertook activities involving feeding their infant (12%) or caring for their infant(12) Various intervention are found to reduce episiotomy pain and enhance healing process, which include administration of analgesics, cleanliness, applying ice pack , topical application by dry heat (infra red therapy), sitz bath, performance of Kegel's exercise and perineal care [16].

A sitz bath involves immersion of the pereneal area/ buttocks in warm water (medicated if ordered) at a temperature of 105 to 110 degree F for 15 to 20 minutes. It is used to relive discomfort. A study conducted on "Pharmacological and non pharmacological treatment for relief of perinea pain after vaginal delivery" in Brazil to

identify the types of pharmacological and non pharmacological treatment used during hospitalization, in the relief of perinea pain after vaginal deliveries. Result reveals that among 130 patients 98.5% used drugs, and 62.3% of them also used non- drug treatments such as Ice pack, warm sitz bath and hot compress. Effectiveness of sitz bath versus infrared lamp therapy in the management of episiotomy pain and wound healing among postnatal mothers.

3. Review of Literature

A study was conducted in 60 qualified primiparous women admitted for labour. They were randomly categorized into two groups: case group using with Lavender oil and control that using with hospital protocol. Participant's pain and discomfort were recorded using a Visual Analogue Scale (VAS) and a Redness, Edema, Ecchymosis, Discharge Scale (REEDA). Pain was evaluated at 4 h, 12 h and 5 days following episiotomy. Collected data was analyzed in SPSS 14 using an independent t-test and chi-square. There was a statistical difference in pain intensity scores between the after episiotomy and the REEDA score was significantly lower in the experimental group 5 days after episiotomy ($p = 0.000$). They concluded that use of Lavender oil essence can be effective in reducing perineal discomfort following episiotomy. It was suggested that Lavender oil essence may be preferably to the use of betadine for episiotomy wound care 2 groups after 4 h ($p = 0.002$, and 5 days ($p = 0.000$)

Assumptions
Medicated sitz bath may have good effect on episiotomy wound healing.

Hypotheses
H_1: There will be a significant difference between medicated and non-medicated sitz bath in episiotomy healing.
H_2: There will be significant association between the episiotomy wound healing and selected demographic variables.

4. Methodology

- **Research Approach:** An evaluative research approach wais used for this study
- **Research Design** In the present study the quasi-experimental design with pre test post test control group design was adapted
- **Variables under study: (1) Dependent variable:** healing status of episiotomy wound of postnatal mothers is the dependent variable. (2) independent variables is Medicated and non-medicated sitz bath on episiotomy wound.
- **Setting:** The present study was undertaken in Government Hospital, Tumkur
- **Population:** In this study, target population consists of all postnatal mothers at Government Hospital, Tumkur.
- **Accessible Population:** In this study, accessible population consists of postnatal mothers at Government Hospital, Tumkur who meet the inclusive criteria.
- **Sample:** In this study the sample consisted postnatal mothers at Government Hospital, Tumkur.
- **Sample size:** The total sample size of this study is 50 postnatal mothers were assigned 25 each in medicated and non-medicated sitz bath group.
- **Sampling technique:** In this study, convenient sampling technique was adopted.

Inclusion Criteria
- Primi and multi parous mothers with episiotomy

Exclusion Criteria
- Who are not willing to participate in the study
- Those who don't know kannada or English.
- Heavy vaginal bleeding with episiotomy
- Post natal mothers with perineal tear
- Mothers with cardiac diseases, gestational diabetes and hypertensive disorders etc.

Tool preparation:
Tool used for the research study was REEDA scale

Development of tool:
Section A: Socio Demographic Data: The socio demographic data consists of 8 items pertaining to Age, religion, educational status, gravida status, gestational age, birth weight, type of episiotomy and length of episiotomy.

Section B: Structured episiotomy wound healing questionnaire
This part of the tool consists of 5 items on various symptoms of episiotomy wound healing.
Content validity of protocol: The draft of the protocol along with the criteria checklist was given to 5 experts of whom, 4 were in the field of Obstetrics and Gynecological Nursing, and 1 physician. There was 100% agreement by experts in the content area. Modifications were made as per suggestions after discussing with the guide.

Reliability: The reliability of the REEDA scale was established by using inter-rater method. In order to establish the reliability, the tool was used on 6 postnatal mothers in government hospital who fulfilled the inclusion criteria. The reliability quotient obtained for the tool was 0.98.

Pilot study: The pilot study was conducted in the Government hospital, Tumkur from 17-03-2018 to 20-03-2018, to assess the feasibility, practicability and assessment of measurement.

Data Collection Procedure: Formal written permission was obtained from concerned authorities before data collection. The data collection period was one month from 22-03-2018 to 17-04-2018. The subjects were selected and the purpose of the study was explained to them and confidentiality was taken from all the postnatal mothers by explaining the purpose of study.The data was collected in the following phases. pre-test was conducted for each postnatal mother by using REEDA scale. post test was conducted on 3rd day after administration of the protocol; the same REEDA scale was used. During the conduction of the study there was no problem aroused and subjects were co operative to conduct the study.

Plan for Data Analysis:
The data was analyzed by using both descriptive and inferential statistics based on the objectives and hypotheses of the study.

Descriptive statistics: Baseline proforma containing sample characteristics were analyzed by using frequency and percentage distribution.

Inferential statistics: The effectiveness of medicated or non-medicated sitz bath episiotomy wound healing was analyzed by paired 't' test. Association between mean pre test episiotomy wound healing scores with their selected demographic variables were analyzed by chi-square test.

Scoring technique: The REEDA consisted of 5 items. Each item will be rated from 0 to 3 depending on the level of symptom. The maximum score was 15

5. Results

This chapter deals with the analysis and the interpretation of data obtained from 50 postnatal mothers, Each 25 patients in medicated sitz bath and Non-medicated sitz bath group with the help of REEDA scale to assess the episiotomy wound healing status on first and 3rd postnatal day. Descriptive and inferential statistics were used to analyze the data that was collected.

Section I: Demographic Profile of Postnatal Mothers

Table 1: Distribution of Postnatal mothers by their age N= 50 (E= 25, C= 25)

Age in years	Medicated Sitz Bath		Non-medicated Sitz Bath	
	Frequency	Percentage	Frequency	Percentage
a) Less than 20 years	9	36	6	24
b) 21-25 years	11	44	11	44
c) 26-30 years	3	12	5	20
d) Above 31 years	2	8	3	12
Total	25	100	25	100

Table 2: Distribution of Postnatal mothers according to their Religion N=50 (E=25, C= 25)

Religion	Medicated Sitz Bath		Non-medicated Sitz Bath	
	Frequency	Percentage	Frequency	Percentage
a) Hindu	17	68	20	80
b) Muslim	4	16	2	8
c) Christian	4	16	3	12
Total	25	100	25	100

Table 3: Distribution of Postnatal mothers according to Educational Status, N= 50 (E= 25, C= 25)

Educational Status	Medicated Sitz Bath		Non-medicated Sitz Bath	
	Frequency	Percentage	Frequency	Percentage
a) Illiterate	3	12	4	16
b) Primary Education	13	52	9	36
c) Secondary education	4	16	7	28
d) PUC and above	5	20	5	20
Total	25	100	25	100

Table 4: Distribution of Postnatal mothers by their Gestational Age N= 50 (E= 25, C= 25)

Gestational Age	Medicated Sitz Bath		Non-medicated Sitz Bath	
	Frequency	Percentage	Frequency	Percentage
a) Pre term	8	32	5	20
b) Term	8	32	11	44
c) Post term	9	36	9	36
Total	25	100	25	100

Table 5: Distribution of Postnatal mothers according to Type of episiotomy, N= 50 (E= 25, C= 25)

Type of episiotomy	Medicated Sitz Bath		Non-medicated Sitz Bath	
	Frequency	Percentage	Frequency	Percentage
a) Medio-lateral	14	56	11	44
b) Medial	6	24	8	32
c) Lateral	2	8	2	8
d) J Shape	3	12	4	16
Total	25	100	25	100

Table 6: Distribution of Postnatal mothers on Length of episiotomy, N=50(E=25, C= 25)

Length of episiotomy	Medicated Sitz Bath		Non-medicated Sitz Bath	
	Frequency	Percentage	Frequency	Percentage
Less than 2 cm	7	28	13	52
2.1-4cm	16	64	8	32
More than 4 cm	2	8	4	16
Total	25	100	25	100

Section–II: Level Of Episiotomy Wound Healing Among Postnatal Mothers Medicated Sitz Bath And Non-Medicated Sitz Bath Group.

Table 9: Episiotomy wound healing of postnatal mothers on pre test, N=50(E=25,C=25)

Episiotomy wound healing level	Medicated Sitz Bath		Non-medicated Sitz Bath	
	Frequency	Percent	Frequency	Percent
Healed	0	0	0	0
Moderately healed	0	0	0	0
Mildly healed	9	36	14	56
Not healed	16	64	11	44
Total	25	100	25	100

Table 10: Episiotomy wound healing of postnatal mothers on post testN=50(E=25,C=25)

Episiotomy wound healing level	Medicated Sitz Bath		Non-medicated Sitz Bath	
	Frequency	Percent	Frequency	Percent
Healed	3	12	0	0
Moderately healed	10	40	4	16
Mildly healed	12	48	16	64
Not healed	0	0	5	20
Total	25	100	25	100

Section III: Comparison of Episiotomy Wound Healing Scores of Postnatal Mothers

Table 12: Comparison of pretest and post test episiotomy wound healing scores among postnatal mothers N= 50 (E= 25, C= 25)

Group	First Day/pre test		Third day/Post test		Mean difference	t Value	Inference
	Mean	SD	Mean	SD			
Medicated Sitz bath	10.88	2.386	5.68	3.375	5.2	8.826	S
Non-medicated Sitz bath	10.68	2.466	8	2.55	2.68	4.654	S
Mean Difference	0.2		2.32				
t Value	0.562		3.717				
Inference	NS		NS				

Section IV: Association of Pre Test Episiotomy Wound Healing Scores of Postnatal Mothers Selected Demographic Variables

Table 13: Association of pre test episiotomy wound healing scores of postnatal mothers medicated sitz bath group with selected demographic variables N= 25

Variables	Below Median	Median and above	Chi square	Df	P value (0.05)	Inference
1. Age						
a. Less than 20 years	1	8				
b. 21-25 years	5	6				
c. 26-30 years	1	2				
d. Above 31 years	2	0	6.411	3	0.093	NS
2. Religion						
a. Hindu	6	11				
b. Muslim	2	2				
c. Christian	1	3	0.554	2	0.758	NS
3. Educational Status						
a. Illiterate	0	3				
b. Primary Education	7	6				
c. Secondary education	1	3				
d. PUC and above	1	4	4.25	3	0.236	NS
4. Gravida status						
a. Primi gravida	8	10				
b. Multi gravida	1	6	1.99	1	0.158	NS
5. Gestational age						
a. Pre term	3	5				
b. Term	3	5				
c. Post term	3	6	0.043	2	0.979	NS
6. Birth Weight						
a. Less than 2.5 kg	5	12				
b. 2.5-3.5kg	4	4	1.001	1	0.317	NS
7. Type of episiotomy						
a. Mediolateral	5	9				
b. Medial	3	3				
c. Lateral	0	2				
d. J Shape	1	2	1.645	3	0.649	NS
8. Length of episiotomy						
a. Less than 2 cm	1	6				
b. 2.1-4cm	7	9				
c. More than 4 cm	1	1	2.02	2	0.364	NS

Table 14: Association of pre test episiotomy wound healing scores of postnatal mothers of non-medicated sitz bath group with selected demographic variables N=25

Variables	Below Median	Median and above	Chi square	Df	P value (0.05)	Inference
1. Age						
a. Less than 20 years	2	4				
b. 21-25 years	4	7				
c. 26-30 years	1	4				
d. Above 31 years	2	1	1.799	3	0.615	NS
2. Religion						
a. Hindu	6	14				
b. Muslim	1	1				
c. Christian	2	1	1.707	2	0.426	NS
3. Educational Status						
a. Illiterate	2	2				
b. Primary Education	1	8	7.129	3	0.068	NS

c.	Secondary education	5	2				
d.	PUC and above	1	4				
4.	**Gravida status**						
a.	Primi gravida	5	14				
b.	Multi gravida	4	2	3.222	1	0.073	NS
5.	**Gestational age**						
a.	Pre term	2	3				
b.	Term	3	8				
c.	Post term	4	5	0.677	2	0.713	NS
6.	**Birth Weight**						
a.	Less than 2.5 kg	0	3				
b.	2.5-3.5kg	8	7				
c.	More than 3.5 kg	1	6	5.076	2	0.079	NS
7.	**Type of episiotomy**						
a.	Mediolateral	4	7				
b.	Medial	3	5				
c.	Lateral	0	2				
d.	J Shape	2	2	1.474	3	0.688	NS
8.	**Length of episiotomy**						
a.	Less than 2 cm	9	4				
b.	2.1-4cm	0	8				
c.	More than 4 cm	0	4	12.981	2	0.002	S

Testing of hypothesis

H_1: There will be a significant difference between medicated and non-medicated sitz bath in episiotomy healing.

The total difference in the mean of overall episiotomy wound healing score was 5.2 and 2.68 in the medicated and non-medicated groups respectively and the obtained t value is 8.826 and 4.654 found to be significant at the level of $p<0.01$. There is improvement in episiotomy wound healing status of postnatal mothers in both the groups. Whereas the independent t test computed between post test scores of medicated and non-medicated group t value are 3.717 which shows the significant difference between two groups. Hence the hypothesis H_1 is accepted.

6. Summary

- Majority 44% of Medicated and non-medicated group were aged between 21-25 years.
- Majority 68% of Medicated and 80% of the non-medicated group subjects were Hindus.
- Majority 52% of Medicated and 36% of the non-medicated group subjects had primary education.
- Majority 72% of Medicated and 76% of the non-medicated group subjects were primi gravidae, and 28% of medicated and 24% of non-medicated sitz bath group subjects were multi gravidae.
- Majority 56% of Medicated and 44% of the non-medicated group subjects had medio-lateral episiotomy.
- Pre test episiotomy wound healing scores found to be 10.88 (72.53%) with standard deviation 2.386 in the medicated group and 10.68 (71.2%) with standard deviation 2.466 in the non-medicated group which indicate the homogeneity of subjects in both the groups.

7. Conclusion

The focus of this study was to assess the effectiveness of medicated and non-medicated sitz bath on episiotomy wound healing level of postnatal mothers at Government Hospital Tumkur. Quasi experimental (pre test post test control group) design and evaluative approach was used in the study. The data was collected from 50 samples through convenient sampling technique. The present study assessed the effectiveness of medicated and non medicated sitz bath is effective in episiotomy wound healing and reduction in pain perception

8. Recommendations

- A similar study can be replicated on large sample to generalize the findings.
- A similar study can be conducted in different setting.
- A true experimental study can be conducted to assess the effectiveness of medicated sitz bath for episiotomy wound healing.

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