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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 at Govt. SMGS Maternity Hospital, Jammu (J&K)

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Abstract:

The moment of birth is both joyous and beautiful. Birth is a unique dynamic process, foetal and maternal physiologies interact symbiotically. Every woman who became pregnant has to undergo the process of delivery. In normal process of delivery, the baby is delivered per vagina; an episiotomy is performed on vagina by health care provider or midwife. The present study was under taken to assess the effectiveness of medicated and non medicated sitz bath on episiotomy wound healing among postnatal mothers at Govt. SMGS Maternity Hospital, Jammu (J&K). The sample consisted of 40 postnatal mothers (20 in experimental and 20 in control group). Purposive sampling technique was used to select the sample. Socio-demographic profile, obstetrical history variables tool and REEDA scale were used to collect the data from subjects. The results revealed that both medicated and non medicated sitz bath are equally effective in episiotomy wound healing among postnatal mothers. Thus, sitz bath either medicated or non medicated should be encouraged among postnatal mothers so as to fasten the episiotomy wound healing and easy recovery of postnatal mothers.

Keywords: Medicated Sitz Bath, Non Medicated Sitz Bath, Episiotomy Wound, Postnatal Mothers

1. Introduction

Giving birth is a powerful and life changing event with a lasting impact on women and their families.¹ Every woman who became pregnant has to undergo the process of delivery. Sometimes it may be normal or forceps, vacuum and caesarean section. In normal process of delivery the baby is delivered per vagina, an episiotomy is performed by health care provider or midwife.²

The World Health Organization (WHO) recommends an episiotomy rate of 10% for normal deliveries³. Although the frequency of performing an episiotomy is decreasing, 30% to 50% of women may still receive episiotomy.⁴

The rate of episiotomy varies between 8% in Netherlands and 99% in Eastern Europe. Asian women are likely to require episiotomy compared with non Asian women as Asian skin tends not to stretch as well as Caucasians⁵. Perineal trauma during vaginal delivery is very common occurring in about 40% of primi gravidae and 20% of multiparous women⁶.

Episiotomy is a common surgical planned incision on the perineum and the posterior vaginal wall during the second stage of labour to enlarge the vaginal introitus so as to facilitate easy and safe delivery of the fetus, to minimize the overstretching and rupture of perineal muscles and fascia and to reduce the stress and strain on the fetal head. Episiotomy also helpful in reduction in duration of second stage of labor. The first performance of episiotomy was done in 1742, when perineal incisions were used to facilitate deliveries⁷.

Pritchard, Mac- Donald and Gant 1985, described that episiotomy reduces the incidence of cystocele, rectocele and stress incontinence. In cases where an episiotomy is indicated, a medio lateral incision may be preferable to a median (midline) incision as the latter is associated with a higher risk of injury to the anal sphincter and the rectum⁸.

The problems associated with the procedure, include unsatisfactory anatomical results, increased blood loss, perineal pain and dyspareunia. The muscles of the perineum are involved in many activities like (sitting, walking, squatting, bending, urinating, and defecating). Thus, an incision in this area causes a great deal of discomfort.⁹

A sitz bath or hip bath is a bath in which a person sits in water up to the hips. It is used to relieve discomfort and pain. The term sitz bath is derived from the German word Sitzbad, meaning a bath (Bad) in which one sits (sitzen). Sitz baths may either be warm or cool. Warm baths are recommended for reducing the itching, pain and discomfort. An ordinary bathtub can be filled with 3 to 4 inches (7.6 to 10.2 cm) of hot water about 110 °F (43 °C), and sat in for 15–20 minutes or until the water cools down¹⁰. Sitz bath is one of the easiest and more effective ways to ease pain and lessen discomfort associated with a painful condition in the pelvic area.¹¹

A quasi-experimental study conducted to assess the effectiveness of sitz bath in reduction of episiotomy pain and wound healing among postnatal mothers admitted in postnatal units of DMC Hospital and Deep Hospital, Model town, Ludhiana, Punjab. The sample was 60 postnatal mothers with episiotomy (30 in each experimental group and 30 in control group). Experimental group received sitz bath and control group received routine care. The data was analysed by using numerical pain rating scale and REEDA Scale to assess pain and wound healing. The result was found that

application of sitz bath was effective in relieving episiotomy pain and improving wound healing ($p=0.001$).¹²

Objectives of the Study

- To assess the effectiveness of medicated sitz bath on episiotomy wound healing among postnatal mothers in experimental group.
- To assess the effectiveness of non-medicated sitz bath on episiotomy wound healing among postnatal mothers in control group.
- To compare the post test level of episiotomy wound healing among postnatal mothers between experimental and control group.

2. Materials & Methods

For the present study, **Quantitative research approach** and **quasi-experimental design (Non-equivalent, post-test only)** design was used. The research setting was Govt. SMGS Maternity Hospital, Jammu. The sample consisted of 40 postnatal mothers (20 in experimental 20 in control group) with episiotomy. Purposive sampling technique was used to select the sample. Prior to the data collection procedure, formal permission was obtained from the Medical Superintendent of hospital. Socio-demographic profile, Obstetrical history variables tool and REEDA scale was used to collect personal information. Socio-demographic profile included items like age (in years), educational status, occupational status, family income, residence, religion and dietary pattern. Obstetrical History Variables included type of episiotomy, Parity, Antibiotics prescribed and Analgesics prescribed. The REEDA scale is used to assess the episiotomy wound healing after giving intervention. REEDA scale consists of 5 major assessment areas (redness, edema, ecchymosis/bruising, discharge, approximation). Each area is given a minimum score of 0 and maximum score of 3. The total score is 15. It is scored as No infection (0), mild infection (1-5), moderate infection (6-10) and severe infection (11-15). Measurement of wound was done by paper centimetre scale. The review of literature, expert's opinions and investigator's own experience provided the basis for construction of tool.

Data collection was done in January 2018. Prior to interview the questionnaire to the postnatal mothers, investigator gave self introduction to the subjects and explained the purpose of gathering information. A good rapport was established with the subjects. They were assured that their responses will be used kept confidential and the information will be used only for research purpose. Formal consent was taken from subjects. The time taken by each respondent for filling the tool was average for 15-20 minutes. The data gathered was analyzed and calculated by percentage, mean, standard deviation and 't' test.

3. Results

Section-I

Table 1: Frequency and percentage distribution of demographic variables of postnatal mothers

Socio-demographic Variables	Experimental group (n=20)		Control Group (n=20)	
	Frequency	% age	Frequency	% age
1. Age in years				
<21 years	0	0.0	0	0.0
21-25 years	8	40.0	8	40.0
26-30 years	11	55.0	8	40.0
>30 years	1	5.0	4	20.0
2. Educational status				
Illiterate	0	0.0	0	0.0
Primary education	6	30.0	6	30.0
Secondary education	8	40.0	10	50.0
Graduate	6	30.0	4	20.0
Post Graduate	0	0.0	0	0.0
3. Occupational status				
Housewife	17	85.0	16	80.0
Private job	2	10.0	0	0.0
Govt. job	1	5.0	4	20.0
4. Family income per month (in Rs.)				
<5001	0	0.0	0	0.0
5001-10000	6	30.0	7	35.0
10001-15000	7	35.0	8	40.0
15001-20000	6	30.0	4	20.0
>20000	1	5.0	1	5.0
5. Residence				
Rural	9	45.0	10	50.0
Urban	11	55.0	10	50.0
6. Religion				
Sikh	6	30.0	7	35.0
Christian	0	0.0	1	5.0

Hindu	14	70.0	12	60.0
Any others	0	0.0	0	0.0
7.Dietary pattern				
Vegetarian	13	65.0	13	65.0
Non-vegetarian	7	35.0	7	35.0

Table 1 reveals the frequency and percentage distribution of demographic variables of postnatal mothers. It shows that majority of the postnatal mothers 11(55%) were in the age group of 26-30 years in experimental group and 8(40%) were in the age group of 21-25 years and 26-30 years in control group. Educational status of postnatal mothers shows that majority of postnatal mothers had secondary education 8(40%) in experimental group and 10(50%) in control group. Occupational status of postnatal mothers reveals majority were housewife 17(85%) in experimental and 16(80%) in control group. According to the monthly income of their family reveals that highest percentage belonged in the income group of 10,001-15000 in experimental group 7(35%) and in control group 8(40%). Majority of the postnatal mothers reside in urban area 11(55%) in experimental group and 10(50%) reside in rural and urban area in control group. Majority of postnatal mothers belong to Sikh family 14(70%) in experimental group and 12(60%) in control group. According to dietary pattern majority of the postnatal mothers had vegetarian 13(65%) in both experimental and control group.

Section-II

Table 2: Frequency and percentage distribution of obstetrical history variables of postnatal mothers

N=40

Obstetrical history Variables	Experimental group (N=20)		Control Group (N=20)	
	Frequency	%age	Frequency	% age
Type of Episiotomy				
Right medio-lateral	20	100.0	20	100.0
Left medio-lateral	0	0.0	0	0.0
Parity				
Primipara	11	55.0	12	60.0
Multipara	9	45.0	8	40.0
Antibiotics prescribed				
Amclox	9	45.0	11	55.0
Covatil	11	55.0	9	45.0
Analgesics prescribed				
Volsec-D	9	45.0	8	40.0

Zubidol-P	11	55.0	12	60.0
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Section-III

Table 3: (a) Effectiveness of medicated sitz bath on episiotomy wound healing among postnatal mothers in experimental group.

Experimental Group (N=20)						
	N	Range	Mean	Std	mean % age	f value p value
Day1	20	2-10	6.4	2.1	42.3	102.6,
Day2	20	0-5	2.5	1.3	16.7	0.000***
Day3	20	0-2	0.4	0.6	2.7	

*p<0.05, ***p<0.001 using ANOVAs with repetitive measures

Table 3 (a) reveals the effectiveness of medicated sitz bath on episiotomy wound healing among postnatal mothers in experimental group. It shows that highest mean score (6.4 ± 2.1) was obtained on day 1 whereas the lowest mean score (0.4 ± 0.6) was obtained on day 3 after providing medicated sitz bath. Hence the difference in episiotomy wound healing among postnatal mothers were highly significant in experimental group.

Table 3: (b) Frequency and percentage distribution of effectiveness of medicated sitz bath on episiotomy wound healing among postnatal mothers in experimental group.

Experimental group	Day 1		Day 2		Day 3	
	Frequency	% age	Frequency	% age	Frequency	% age
No infection	0	0	1	5	13	65
Mild infection	6	30	19	95	7	35
Moderate infection	14	70	0	0	0	0
Severe Infection	0	0	0	0	0	0

Table 3 (b) reveals the frequency and percentage distribution of episiotomy wound healing among postnatal mother in experimental group that on day 1, 14(70%) postnatal mothers had moderate infection and 6(30%) postnatal mothers had mild infection. On day 2, 19(95%) postnatal mothers had mild infection and 1(5%) postnatal mothers had no infection. On day 3, 13(65%) postnatal mothers had no infection and 7(35%) postnatal mothers had mild infection.

Section-IV

Table 4: (a) Effectiveness of non-medicated sitz bath on episiotomy wound healing among postnatal mothers in control group.

Control Group (N=20)						
	N	Range	Mean	Std	mean % age	f value p value
Day1	20	4-12	8.7	2.3	57.7	200.1,
Day2	20	1-8	4.4	2.1	29.0	0.000***
Day3	20	0-3	1.3	1.0	8.7	

*p<0.05, ***p<0.001 using ANOVAs with repetitive measures

Table 4 (a) reveals the effectiveness of non-medicated sitz bath on episiotomy wound healing among postnatal mothers in control group. . It shows that highest mean score (8.7 ± 2.3) was obtained on day 1 whereas the lowest mean score (1.3 ± 1.0) was obtained on day 3 after providing non- medicated sitz bath. Hence, the difference in episiotomy wound healing among postnatal mothers were highly significant in control group.

Table 4: (b) Frequency and percentage distribution of effectiveness of non-medicated sitz bath on episiotomy wound healing among postnatal mothers in control group.

Control Group	Day1		Day2		Day3	
	frequency	% age	Frequency	% age	Frequency	% age
No infection	0	0	0	0	6	30
Mild infection	2	10	13	65	14	70
Moderate infection	13	65	7	35	0	0
Severe Infection	5	25	0	0	0	0

Table 4(b) reveals the frequency and percentage distribution of episiotomy wound healing among postnatal mother in control group that on day 1, 13(65%) postnatal mothers had moderate infection, 5(25%) postnatal mothers had severe infection and 2(10%) postnatal mothers had mild infection. On day 2, 13(65%) postnatal mothers had mild infection and 7(35%) postnatal mothers had moderate infection. On day 3, 14(70%) postnatal mothers had mild infection and 6(30%) postnatal mothers had no infection.

SECTION-V

Table 5: Comparison the post test level of episiotomy wound healing among postnatal mothers between experimental and control group.

Severity of Infection - REEDA score							
Time of observation	Experimental Group (n=20)			Control Group (n=20)			t p value
	mean	SD	Mean% age	mean	SD	Mean% age	
Day 1	6.4	2.1	42.3	8.7	2.3	57.7	3.28, 0.002*
Day 2	2.5	1.3	16.7	4.4	2.1	29.0	3.38, 0.002*
Day 3	0.4	0.6	2.7	1.3	1.0	8.7	3.57, 0.001***

*p<0.05, ***p<0.001

Table 5 reveals the comparison the post test level of episiotomy wound healing among postnatal mothers between experimental and control group. The highest mean score (6.4 ± 2.1) was obtained on day 1 whereas the lowest mean score (0.4 ± 0.6) was obtained on day 3 after providing medicated sitz bath in experimental group and the highest mean score (8.7 ± 2.3) was obtained on day 1 whereas the lowest mean score (1.3 ± 1.0) was obtained on day 3 after providing non- medicated sitz bath in control group. The obtained 't' value on day 1(3.28), day 2(3.38) and day 3(3.57). The significant difference among post test shows that there is no significant difference was observed in experimental and control group. Both are equally effective.

4. Discussion

Objective 1: To assess the effectiveness of medicated sitz bath on episiotomy wound healing among postnatal mothers in experimental group.

The study results shows that highest mean score (6.4 ± 2.1) was obtained on day 1 whereas the lowest mean score (0.4 ± 0.6) was obtained on day 3 after providing medicated sitz bath. Hence the differences in episiotomy wound healing among postnatal mothers were highly significant in experimental group. It shows the effectiveness of medicated sitz bath on episiotomy wound healing among postnatal mothers in experimental group. A similar study conducted to assess the effects of olive oil sitz bath on improvement of perineal injury after delivery. Finding showed that there was a significant difference between the study and control group with regards to pain severity after 5 and 10 days ($p<0.05$), wound redness after 5days ($p<0.0001$) and redness ($p<0.000$), edema ($p<0.05$) 10 days after delivery. Any case of ecchymosis, discharge and approximation (distance between the wound edges) was not observed in the olive group but those signs were observed in the control

group. It shows effect of olive oil sitz bath on improvement of perineal injury after delivery.⁵

Objective 2: To assess the effectiveness of non-medicated sitz bath on episiotomy wound healing among postnatal mothers in control group.

The study results shows that highest mean score (8.7 ± 2.3) was obtained on day 1 whereas the lowest mean score (1.3 ± 1.0) was obtained on day 3 after providing non- medicated sitz bath. Hence the differences in episiotomy wound healing among postnatal mothers were highly significant in control group. It shows the effectiveness of non- medicated sitz bath on episiotomy wound healing among postnatal mothers in control group. A similar study conducted to assess the effectiveness of medicated and non-medicated sitz bath in episiotomy wound healing on postnatal mothers admitted in selected hospital at Bangalore. Finding showed that in medicated group on day 1 the mean is 5 and when it reaches to day 5 mean scores reduced to 0.64. In non-medicated group on day 1 mean is 5.04 and on day 5 mean scores reduced to 4.16. The mean percentage on day 1 in medicated group is 33.3 and on day 5 percentage reduced to 4.2, 33.6 on day 1 in non-medicated group and day 5 shows small difference as 27.73. The obtained 't' value on day 3(7.76), day 4(6.54) and day 5(7.17). It shows episiotomy wound healing faster in medicated group than non-medicated group.¹³

Objective 3: To compare the post test level of episiotomy wound healing among postnatal mothers between experimental and control group.

The study result shows that highest mean score (6.4 ± 2.1) was obtained on day 1 whereas the lowest mean score (0.4 ± 0.6) was obtained on day 3 after providing medicated sitz bath in experimental group and the highest mean score (8.7 ± 2.3) was obtained on day 1 whereas the lowest mean score (1.3 ± 1.0) was obtained on day 3 after providing non- medicated sitz bath in control group. The obtained 't' value on day 1(3.28), day 2(3.38) and day 3(3.57). The significant difference among post test shows that there is no significant difference was observed in experimental and control group. Both are equally effective. A similar study conducted to assess the effectiveness of medicated and non-medicated sitz bath in episiotomy wound healing on postnatal mothers admitted in selected hospital at Bangalore. Finding shows that in medicated group on day 1 the mean is 5 and when it reaches to day 5 mean scores reduced to 0.64. In non-medicated group on day 1 mean is 5.04 and on day 5 mean scores reduced to 4.16. The mean percentage on day 1 in medicated group is 33.3 and on day 5 percentage reduced to 4.2, 33.6 on day 1 in non-medicated group and day 5 shows small difference as 27.73. The obtained 't' value on day 3(7.76), day 4(6.54) and day 5(7.17). It shows episiotomy wound healing faster in medicated group than non-medicated group.¹³

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