

A COMPARATIVE STUDY TO ASSESS THE EFFECTIVENESS OF BETADINE SITZ BATH VERSUS NEEM EXTRACT SITZBATH ON EPISIOTOMY WOUND HEALING AMONG POST NATAL MOTHERS IN SELECTED HOSPITALS, ROHTAS, BIHAR.

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Abstract: A comparative study was conducted to assess the effectiveness of betadine sitzbath versus neem extract sitzbath on episiotomy wound healing among postnatal mothers in selected hospitals, Rohtas, Bihar. A quantitative research design used to conduct 30 postnatal mother (15 sample in each group experimental group 1 & 2) with episiotomy wound healing in Narayan Medical College and Hospital, Jamuhar, Bihar and Vikash Nursing Home, Sasaram, Bihar. Purposive sample technique was considered appropriate for this study. The healing of episiotomy wound was assessed based on the REEDA scale in both group I & II. The collected data was analysed using descriptive and inferential statistics. The finding shows that the mean wound healing score in experimental group 1 in pretest was 8.93 (SD 2.43) and after given the intervention of betadine sitz bath the post test was 1.2 (SD 1.69) respectively. The paired t-test value is -17.96, which is significant at $P < 0.05$ level. And the mean wound healing score in experimental group 2, pretest value was 8.93 (SD 2.76) and after given neem extract sitzbath the post test was 0.46 (SD 0.99) respectively. The paired t-test value is -14.48, which is significant at $P < 0.005$ level. The mean post test episiotomy wound healing score in group 1 was about 1.2 (SD 1.69) and group 2 was about 0.46 (SD 0.99) respectively. The independent t-test value 10.091 which is significant at $P < 0.005$. Therefore it is clearly proved by this study that Neem Extract Sitzbath is effective more than betadine sitzbath on episiotomy wound healing.

Keywords: Comparison, effectiveness, betadine, neem extract, sitzbath, wound healing, postnatal mothers.

Introduction

SH et al (2021) In modern day obstetrics, episiotomy is the most common procedure performed. In today's statistics episiotomy was conducted as many as 65 to 80% of deliver by applying episiotomy procedure. This procedure is widely spreaded in India, America and Poland.

D.M.et.al (2003) Episiotomy is the surgical incision made to enlarge the vaginal opening for delivery of baby's head. It's depending on the client situation and provider preference and judgement, some women is experience delivery with an episiotomy. This is one type of an incision through the perineal tissues that is designed to enlarge the vaginal outlet during the delivery. The rationale for its use and it depends largely on the need to minimize the risk of severe, spontaneous, maternal trauma and to expedite the birth when there is evidence of foetal compromise.

(Wikipedia.org) Betadine 10% Solution is an antiseptic applied on skin, which is infected or is likely to get infected. It works by slowly releasing iodine which kills or prevents the growth of infectious microorganisms.

Mc Guines (2008) The sitz bath is one of the most well-liked hydrotherapy techniques. A sitz bath is a natural method of bathing in very warm water that has its roots in Germany. It is thought that doing this frequently will activate the lymphatic system, improve circulation, and flush out impurities.

(hmk.uk) Neem is revered as India's holiest plant. Its numerous medical applications include treating skin problems. Omega 3-6-9 and other nutrients that maintain skin suppleness are abundant in it. The herb's antiviral, anti-inflammatory, immune-modulating, antibacterial, and antifungal activities are present in all parts of the plant.

Neem extract sitzbath is very useful for healing in episiotomy wound because that medicated sitzbath with herbs like neem is reduced the growth of bacteria, enhancing pelvic circulation, reduces itching, smoothening to vaginal tissue and helps in episiotomy wound healing. Application of neem extract sitzbath twice a day is adequate.

So the researcher felt to make a comparative study to assess the effectiveness of betadine sitz bath versus neem extract sitzbath on episiotomy wound healing among post natal mothers.

Statement of the problem

A comparative study to assess the effectiveness of betadine sitz bath versus neem extract sitzbath on episiotomy wound healing among post natal mothers in selected hospitals, rohtas, bihar.

Objective of the study

1. To determine the effectiveness of betadine sitz bath in episiotomy healing measured by REEDA scale.
2. To determine the effectiveness of neem extract sitz bath in episiotomy healing measured by REEDA scale.

3. To compare the effectiveness of betadinesitz bath and neem extract sitz bath in episiotomy healing by REEDA scale.
4. To identify the relation between healing of episiotomy wound and selected variables of postnatal mother.

Conceptual framework

The conceptual frame work of this study was based on Sister Callista Roy's adaptation model.

Material and methods

Research methodology

The investigator has selected quasi experimental research design (two group pre-test post test).

Research setting

This study was conducted among 30 postnatal mother with episiotomy in Narayan Medical College and Hospital , Jamuhar and Vikash Nursing Home, Sasaram , Rohtas, Bihar.

Sampling technique

Purposive sampling technique was considered appropriate for this study to collect data.

Sampling criteria

Inclusion criteria-

- Postnatal mothers with the age Group of 25 to 35 years.
- The postnatal mothers who had episiotomy wound.
- The postnatal mothers who were willing to participate in this study.
- Postnatal mothers who were available during the data collection period.
- Both primi and multipara postnatal mothers were included.
- The postnatal mothers immediately six hours after delivery.

Exclusive criteria-

- The postnatal mothers who had undergone LSCS.
- The postnatal mothers who had home delivery.
- The postnatal mother with complication.

Tool for data collection

The tool was design into four parts-

- SECTION A:-DEMOGRAPHIC DATA

It comprises of demographic data of episiotomy wound healing such as age, educational status, occupation, family income, religion, gravida, mode of delivery, type of family. No score was given to this demographic profile.

- SECTION B :-OBSTETRICAL HISTORY

It was based on their menstrual history such as parity & previous mode of delivery.

- SECTION C :-REEDA SCALE

SCORING:-

- No infection – 0
- Mild infection -1to 5
- Moderate infection - 6 to 10
- Severe infection – 11 to 15

- SECTION D :-INTERVENTION

Two intervention was given –

- Betadine sitzbath was given for experimental group I.
- Neem extract sitzbath was given for experimental group II.

Method of data collection

The data collection procedure was collected from Narayan Medical College and Hospital , Jamuhar and Vikash Nursing Home, Sasaram , Rohtas, Bihar. The data was collected with 30 sample , the sample is divided in two group (experimental group 1 & experimental group 2), among 15 sample in each group, and who meet the inclusion criteria data is collected by purposive sample technique.

The first two week experimental group 1, pretest was conducted on the first day morning, the wound healing was assess by REEDA scale and the intervention of betadinesitz bath was given for 10-15 minutes, twice a day daily (Morning & Evening) for three days . Then the post test was collected with the same scale on 3rd day evening in postnatal ward.

Next two weeks of period, the experimental group 2, pretest was collected on the first day morning, the wound healing was assess by REEDA scale. Then the intervention of neem extract sitzbath was given for 10-15 minutes, twice a day daily (morning& evening) for three days. Then the post test was collected with the same scale on 3rd day evening in postnatal ward.

Data analysis and interpretation

The result were computed by using descriptive and inferencial statistics were analyze the data.

Section A - Description of demographic characteristics are shows in table 1.

Section B – Finding related to effectiveness of betadine sitz bath in episiotomy healing measured by REEDA scale.

Section C - Finding related to effectiveness of neem extract sitz bath in episiotomy healing measured by REEDA scale.

Section D - Finding related to effectiveness of betadine and neem extract sitz bath in episiotomy healing measured by REEDA scale.

Section E – Association between the episiotomy wound healing and selected demographic variable such as age, education, occupation, family income, types of family, religion, area of residence.

Section F – Hypothesis testing

The first objective of this study was to determine the effectiveness of betadine sitz bath in episiotomy healing measured by REEDA scale are shows in table 2.

On conducting a paired t-test on the pre test values and the post test values it showed that the t-value was -17.96 with a p-value of 0.0001 and the result is significant at $p < 0.5$ proving that the betadine sitzbath had an positive impact in healing of the episiotomy suture wounds.

The second objectives of this study was to determine the effectiveness of neem extract sitz bath in episiotomy healing measured by REEDA scale are shows in table 3.

On conducting a paired t-test on the pre test values and the post test values it showed that the t-value was -14.48 with a p-value of 0.0001 and the result is significant at $p < 0.5$ proving that the neem extract sitz bath had an positive impact in healing of the episiotomy suture wounds.

The third objective of this study to compare the effectiveness of betadine sitz bath and neem extract sitz bath in episiotomy healing by REEDA scale are shows in table 4.

On conducting the independent t-test on the post test values of the betadine sitz bath and the neem extract sitz bath, there was a significant mean difference between the two post test scores with t-value 10.091 and $p = 0.0001$, concluding that the result is significant at $p < 0.05$. This conclusively proves that Neem Extract Sitzbath is effective more than betadine sitz bath on episiotomy wound healing.

The fourth objective of this study to identify the relation between healing of episiotomy wound and selected variables of postnatal mother are shows in table 5.

On associating the knowledge levels of the study participants with the demographic variables the researcher understood that there is no significant relationship between the level of infection and the demographic variables collected for the study.

Hypothesis which shows that the neem extract sitz bath have some effectiveness over betadine sitz bath in healing episiotomy wound are shows in table 6.

Table 1:- Frequency and percentage description of demographic characteristics.

Demographic variables	Betadine sitz bath		Neem extract sitz bath	
	Frequency	Percentage	Frequency	Percentage
1 age				
a. 21-25 years	10	66.66%	9	60%
b. 26-30 years	5	33.33%	6	40%
c. 31-35 years	0	0%	0	0%
2 education				
a. No formal Education	1	6.66%	1	6.66%
b. High school	4	26.66%	5	33.33%
c. Intermediate school	1	6.66%	4	26.66%
d. Graduate	5	33.33%	4	26.66%
e. Post Graduate	4	26.66%	1	6.66%
f. Others	0	0%	0	0%
3 occupation				
a. Heavy worker	3	20%	3	20%
b. Housewife	8	53.33%	7	46.66%
c. Sedentary	4	26.66%	5	33.33%
4 family monthly income				
a. Less than Rs10000	0	0%	1	6.66%
b. Rs10001-Rs20000	3	20%	3	20%
c. Rs20001-Rs30000	4	26.66%	5	33.33%
d. Above Rs30001	8	53.33%	6	40%
5 type of family				
a. Nuclear	4	26.66%	5	33.33%
b. Joint	5	33.33%	7	46.66%
c. Extended	6	40%	3	20%
6 religion				
a. Hindu	10	66.66%	8	53.33%
b. Muslim	3	20%	5	33.33%
c. Christian	2	13.33%	2	13.33%
d. Others	0	0%	0	0%
7 area of residence				
a. Rural	3	20%	6	40%
b. Urban	12	80%	9	60%

8. Parity					
a. One	13	86.66%	12	80%	
b. Two	2	13.33%	3	20%	
c. Three and above	0	0%	0	0%	
9. Previous delivery					
a. Normal vaginal delivery with Episiotomy	1	6.66%	0	0%	
b. Forceps delivery with Episiotomy	0	0%	0	0%	
c. Vacuum delivery with Episiotomy	0	0%	0	0%	
d. Caesarean section	1	6.66%	3	20%	
e. No any previous delivery	13	86.66%	12	80%	

Table 2 : Paired t-test results on effectiveness of betadine sitzbath

Betadinesitz bath	Group	N	Mean	Mean differences	SD	t-Value	p-Value	The result is Significant at p<0.5
	Pre-test	15	8.93	7.73	2.43	-17.96	0.0001	
	Post-test	15	1.2		1.69			

Table 3 : Paired t-test results on neem extract sitz bath

Neem extract sitz bath	Group	N	Mean	Mean differences	SD	t-Value	p-Value	The result is Significant at p<0.5
	Pre-test	15	8.93	8.46	2.76	-14.48	0.0001	
	Post-test	15	0.46		0.99			

Table 4 : Independent t-test results on betadine sitzbath and neem extract sitz bath

Group	N	Mean	Mean diff	SD	t-Value	p-Value	The result is Significant at p<0.5
Post test of Betadinesitz bath	15	1.2	0.74	1.67	10.091	0.0001	
Post-test of neem extract sitz bath	15	0.46		0.99			

Table 5: Association of the demographic variable with the infection levels

Sl. No	demographic data	demographic variables	Mild		moderate		Severe		χ^2 value	Remarks
			no.	%	no.	%	no.	%		
1	Age in year	a. 21-25 yrs	3	10	2	6.66	0	0	$\chi^2= 1.2$ $p= 0.54$	NOT SIGNIFICANT
		b. 26-30 yrs	9	30	6	20	0	0		
		c. 31-35yrs	8	26.6	2	6.66	0	0		
2	Education	a. no formal education	1	3.33	2	6.66	0	0	χ^2 NOT POSSIBLE WITH ZERO AS AN CELL VALUE	
		b. high school	2	6.66	3	10	3	10		
		c. intermediate	0	0	2	6.66	3	10		

		d. graduate	0	0	6	20	3	10		
		e. post graduate	2	6.66	2	6.66	1	3.33		
		f. others	0	0	0	0	0	0		
3	Occupation	a. heavy worker	1	3.33	3	10	2	6.66	$\chi^2= 2.74$ $p= 0.601$	NOT SIGNIFICANT
		b. house wife	3	13.3	5	16.6	6	20		
		c. sedentary	1	3.33	7	23.3	2	6.66		
4	Family monthly income	a.<rs 10000	1	3.33	1	3.33	1	3.33	$\chi^2= 5.485$ $p= 0.4831$	NOT SIGNIFICANT
		b rs 10001 - rs 20000	2	6.66	1	3.33	2	6.66		
		c.rs 20001 - rs 30000	1	3.33	3	10	3	10		
		d rs>30001	1	3.33	10	33.3	4	13.3		
5	Types of family	a. nuclear	1	3.33	6	20	3	10	$\chi^2= 1.125$ $p= 0.8902$	NOT SIGNIFICANT
		b. joint	2	6.66	6	20	4	13.3		
		c. extended	2	6.66	3	10	3	10		
6	Religion	a. hindu	3	10	7	23.3	8	26.6	χ^2 NOT POSSIBLE WITH ZERO AS AN CELL VALUE	
		b. muslim	2	6.66	6	20	0	0		
		c. cristian	0	0	2	6.66	2	6.66		
		d. others	0	0	0	0	0	0		
7	Area of residence	a.rural	2	6.667	7	23.33	1	3.333	$\chi^2= 3.75$ $p= 0.1533$	NOT SIGNIFICANT
		b urban	3	10	8	26.6	9	30		
8	Parity	a. one	4	13.3	13	43.3	8	26.6	$\chi^2= 0.24$ $p= 0.8869$	NOT SIGNIFICANT
		b.two	1	3.33	2	6.66	2	6.66		
		c. three & above	0	0	0	0	0	0		
9	Type of delivery	a. normal	0	0	0	0	1	3.33	χ^2 NOT POSSIBLE WITH ZERO AS AN CELL VALUE	
		b. forceps delivery with episiotomy	0	0	0	0	0	0		
		c. vacuum delivery with episiotomy	0	0	0	0	0	0		
		d. caesarean section	1	3.33	2	6.66	1	3.33		
		e. no any previous delivery	4	13.3	13	43.3	8	26.6		

Table: 6 Hypothesis Testing

	MEAN	STANDARD DEVIATION	Z VALUE	P VALUE	REMARK
Post test of Betadinesitz bath	1.2	1.67	4.094	0.00004238	Betadine sitz bath is less effective than neem extract sitz bath in episiotomy wound healing.
Post-test of neem extract sitz bath	0.46	0.99			

n=30

Conclusion

The study shows that neem extract sitz bath is more effective in episiotomy wound healing than betadine sitz bath. Further studies can be conducted enhancing the healing and relief of pain of episiotomy wound in the field of effectiveness of warm, moist compression, sitz bath, dry heat, infra rays and various antibiotic application on episiotomy wound.

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