# Effectiveness of Betadine Versus Neem Extract Sitzbath on Episiotomy Wound Healing Among Post-Natal Mothers

**Mrs Ritika Janet Singh**
Assistant Professor, Dept. of OBG
PhD Scholar, Shri Venkateshwara University, Amroha Gajraula, Meerut, U.P, India

**Abstract:** *Post-partum period lasts from delivery to six weeks afterward, it is also known as fourth trimester. The post-natal mothers experience various physiological and psychological changes when she makes the transition from the pregnant woman to a mother. Episiotomy wound can cause a considerable discomfort and pain the perineum is extremely tender area and the muscles of perineum are involved in many activities. e.g sitting, walking, controlling urination and defecation. This discomfort interferes with the rest and sleep. Sitzbath is one of the oldest, cheapestand safest treatments for curing many common ailments. The technique exploits the reaction of the body to hot stimulus. Povidine - Iodine is an antiseptic solution that is usually used in Iran for episiotomy wound healing. Neem extracts is a powerful insects repellent, anti- bacterial, anti- fungal, anti- viral, anti- inflammatory, anti- diabetic and also strengthens the body's over all immune responses.*

*Materials and Methods: Quasi-Experimental design, two groups pre-test, post-test only design was used to assess the effectiveness of Neem extract and Betadine sitz bath on episiotomy wound healing among post-natal mothers. The study conducted on 60 samples. Data was collected using structured interview schedule and REEDA scale assessment of episiotomy wound healing.*

*Results: The findings shows that the mean wound healing score in experimental group I in before betadine sitzbath is 9.3 (SD±1.104) and after Betadine sitzhbath is 0.56 (SD±0.670) respectively. The paired t- test value is 38.870which is significant at P<0.05 level. And the mean wound healing score in experimental group II, before Neem extract sitzbath is 9.2 (SD±0.959) and after Neem extract sitzhbath is 0.23 (SD±0.424) respectively. The paired t-test value is 53.926which is significant at P<0.05 level.The mean post-test wound healing score in group I is about 0.56 (SD±0.670) and group II is about 0.23 (SD±0.424) respectively. The independent t-test value 2.537 which is significant at p<0.05. The results shows that there is a significant difference between the mean post test score of betadine sitzbath and mean post test score of neem extract sitzbath on episiotomy wound healing among postnatal mothers. Therefore it is clearly proved by this study that Neem Extract Sitzbath is effective more than betadine sitz bath on episiotomy wound healing.*

*Conclusion: After the detailed analysis of the study findings showed that neem extract sitzbath is more effective in episiotomy wound healing than Betadine among postnatal mothers. Regarding the association the findings revealed that there was no significant association between the level of wound healing and their selected demographic variables in experimental group-I and experimental group-II..*

**Keywords:** Betadine, Neem extract, Sitzbath, Episiotomy, Wound healing, post-natal mothers

## I. INTRODUCTION

Post-partum period lasts from delivery to six weeks afterward, it is also known as fourth trimester. The post-natal mothers experience various physiological and psychological changes when she makes the transition from the pregnant woman to a mother. The needs of the client and the family during the post-partum period can be met through coordinated multi-disciplinary care of the mother, child and the family.Episiotomy wound can cause a considerable discomfort and pain the perineum is extremely tender area and the muscles of perineum are involved in many activities.

e.g sitting, walking, controlling urination and defecation. This discomfort interferes with the rest and sleep. Mother feels discomfort even when she holds her baby and it affects breast feeding and newborn care. A cortisonebased cream or a sitz bath helps to decrease inflammation to relieve tension in that area.Sitzbath is one of the oldest, cheapest and safest treatments for curing many common ailments. The technique exploits the reaction of the body to hot stimulus. It is seen that heat soothes the body hence increasing the internal activity. Cold water shunts the blood to internal organs whereas hot water removes the waste from the body tissues.Povidine - Iodine is an antiseptic solution that is usually used in Iran for episiotomy wound healing. Neem extracts is a powerful insects repellent, anti- bacterial, anti- fungal, anti- viral, anti- inflammatory, anti- diabetic and also strengthens the body's over all immune responses. Neem oil contains fatty acids which build collagen, promote wound healing and maintain skin elasticity. This keeps any wound (or) lesion free from secondary infection by micro-organisms.

## II. OBJECTIVES OF STUDY

1. To compare the pre and post-test level of wound healing scores among post-natal mothers in experimental group I (Betadine sitzbath)
2. To compare the pre and post-test level of wound healing scores among post-natal mothers in experimental group II (Neem extract sitzbath).
3. To compare the effectiveness of post-test level of wound healing scores among postnatal mothers between experimental group I&II.
4. To find out the association between the post-test level of episiotomy wound healing scores with their selected demographic variables in experimental group I. (betadine sitzbath)
5. To find out the association between the post-test level of episiotomy wound healing scores with their selected demographic variables in experimental group II.(neem extract sitzbath).

## III. MATERIALS AND METHODS

Quasi-Experimental design, two groups pre-test, post-test only design was used to assess the effectiveness of neem extract sitz bath and betadine sitz bath on episiotomy wound healing among post-natal mothers. The study conducted on 60 samples. Data was collected using structured interview schedule and REEDA scale assessment of episiotomy wound healing. Data was collected with following structured tool –

**Section A: Demographic Profile**

To assess the demographic profile, the structured interview schedule was used. It comprised 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. The data was used for descriptive statistics.

**Section B: REEDA scale assessment of episiotomy wound healing**

REEDA acronym is used as a nursing tool when evaluating an episiotomy wound which is invented by Nancy Davidson – (1974). REEDA stands for redness, oedema, ecchymosis (purplish patch of blood flow), discharge, and approximation (closeness of the skin edges). This tool is used to assess healing based on a 3 point scale; a score of 3 signifies an assessment of very poor wound healing.

**SCORING INTERPRETATION**

The scoring from 0-3 and it is used to assess the signs of infection.

0    -None    1    -Mild    2    -Moderate    3    -Severe

The level of infection was interrupted as follows; Observational checklist of REEDA Scale is scored as no infection-0, mild infection 1-5, moderate infection 6-10 and severe infection 11-15.

| Level of infection | Score | % |
|---|---|---|
| No infection | 0 | 0 |
| Mild infection | 1-5 | 7-33 |
| Moderate infection | 6-10 | 34-66 |
| Severe infection | 11-15 | 67-100 |

The content validity of the tool was corrected by five experts (4 nursing experts and 1 medical expert). There was no change made in the standardized tool. The reliability of REEDA scale was assessed by inter-rater reliability method and Karl Pearson co-efficient formula. The tool was found to be reliable (0.98).Final study was conducted on 60 samples. The sample for the study comprised of primi postnatal mothers who had undergone episiotomy, who met the designated criteria were selected through purposive sampling technique. Objectives of study was discussed and obtained consent for participation in study. Base line data was assessed by REEDA scale assessment. Based on the objective and the hypothesis the data was analysed by using various statistical tests i.e. percentage, mean, paired t test. Independent t test and chi square test.

**Statistical Methods**

The data collected from the participants was planned to be analysed on the basis of the objectives of the study using descriptive and inferential statistics. Data was organized data in a master data sheet.

Data analysis is the systematic organization of research data and the testing of research hypothesis using that data. The plan of data analysis was as follows

Demographic variables would be analysed in terms of frequency and percentage.

To assess the pre and post-test score by Mean, SD Frequency percentage

To compare the pre and post-test level of wound healing scores among postnatal mothers in exp – group I(Betadine sitzbath) by Paired "t" Test

To compare the pre and post-test level of wound healing scores among postnatal mothers in exp – group II ((Neem extract sitzbath)) by Paired "t" Test

To compare the effectiveness of mean post-test level of wound healing scores among postnatal mothers between experimental group I & II by Independent "t" test

To find the association between mean post-test level of wound healing scores among postnatal mothers with their demographic variables in experimental group I& II by using chi- square test.

## IV. RESULTS

**Section A: Frequency percentage distribution of demographic variables**

**Table 1: N = 60**

| S. No | Demographic Variables | Group –I N=30 | | Group –II N=30 | | Total N=60 | |
|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % |
| 1. | **Age in years** | | | | | | |
| | a) 15-25 | 20 | 67 | 20 | 67 | 40 | 67 |
| | b) 26-35 | 10 | 33 | 10 | 33 | 20 | 33 |
| | c) 36 & Above | 0 | 0 | 0 | 0 | 0 | 0 |
| 2. | **Educational Status** | | | | | | |
| | a) No Formal | 1 | 3 | 4 | 13 | 5 | 8 |
| | b)Primary | 8 | 27 | 6 | 20 | 14 | 23 |
| | c)HighSchool | 2 | 7 | 8 | 27 | 10 | 17 |
| | d)HighSecondary | 10 | 33 | 6 | 20 | 16 | 27 |
| | e) Graduate and Post Graduate | 9 | 30 | 6 | 20 | 15 | 25 |
| 3. | **Occupation** | | | | | | |
| | a) Housewife | 21 | 70 | 17 | 56 | 38 | 64 |
| | b) Farmer | 00 | 00 | 00 | 00 | 00 | 00 |
| | c) Office Worker | 01 | 03 | 08 | 26 | 09 | 15 |
| | d) Others | 08 | 26 | 05 | 16 | 13 | 21 |
| 4. | **Income per Month** | | | | | | |
| | a) Rs. 3000&below | 22 | 73 | 21 | 70 | 43 | 72 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | b) Rs. 3001-5000 | 01 | 03 | 05 | 17 | 06 | 10 |
| | c) Rs. 5001 & above | 07 | 24 | 04 | 13 | 11 | 18 |
| 5. | **Religion** | | | | | | |
| | Hindu | 20 | 67 | 22 | 74 | 42 | 70 |
| | Christian | 8 | 26 | 4 | 13 | 12 | 20 |
| | Muslim | 2 | 6 | 4 | 13 | 6 | 10 |
| 6. | **Type of family** | | | | | | |
| | Nuclear | 14 | 46 | 16 | 53 | 30 | 50 |
| | Joint family | 16 | 53 | 14 | 46 | 30 | 50 |

Table 1 shows the demographic variables among primi postnatal mothers in both experimental group I&II such as age, education, occupation, religion, income¸ type of family, mode of delivery, and gravida. Regarding age in experimental group I, majority 20(67%) of primi mothers belonged to the age group of 15-25 years and 10(33%) belonged to age group of 26-35 Years. In experimental group II majority of mothers 20(67%) belonged to the age group of 15-25 years and 10(33%) belonged to the age group of 26-35 years. With regard to education in experimental group I, majority of the mothers 10(33%) had higher secondary school. In experimental group II majority of the mothers 8(27%) had high school education. Regarding occupation in experimental group I, majority of the mothers 21(70%) were house wives and least 1(3%) were office workers. In experimental group II majority of the mothers 17(56%) were house wives and least 5(16%) were coolie workers. Regarding religion in experimental group I, majority of primi mothers 20(66%) were Hindu, and the least 2 (6%) were Muslims and 8(26%) were Christians. In experimental group II, majority of primimothers 22(73%) were Hindu, and 4(13%) were Muslims and 4(13%) were Christians. In regard to income, in experimental group I majority of mothers 22(73%) had income Rs 3000&below, and least 1(3%) had income Rs 3001-5000. In experimental group II majority of mothers 21(70%) had income Rs 3000 & below. Regarding type of family, in experimental group I majority of the primi mothers 14(47%) were from nuclear family and 16(53%) were from joint family. In experimental group II majority of the primi mothers 16(53%) were from nuclear family and 14(47%) were from joint family**.**

**Section B: Comparison of Pre-test & Post-test Score On Wound Healing In Experimental Group I**

**Table 2: N = 30**

| Level of infection | Pre-test | | Post-test | |
|---|---|---|---|---|
| | **Number** | **%** | **Number** | **%** |
| No infection (0) | 2 | 7 | 21 | 70 |
| Mild infection (1-5) | 27 | 90 | 09 | 30 |
| Moderate infection (6-10) | 01 | 03 | - | - |
| Severe infection (11-15) | - | - | - | - |

Table 2 Depicts that in experimental group in pre-test 27(90%) primi mothers had mild infection. In the post-test 21(70%) primi mothers had no infection and 9(30%) primi mothers had mild infection.

**Comparison of Mean, Standard deviation, Mean difference and Paired "t" value between pre-test and post-test score on wound healing in experimental Group- I.**

**Table 2.1: N = 30**

| S.N | Group | N | Wound Healing | Mean | SD | Mean difference | Paired 't' | Table Value |
|---|---|---|---|---|---|---|---|---|
| 1. | **I** | 3 | Pre-test | 9.3 | 1.104 | 8.74 | 38.870 | 2.060 |
| | | 0 | Post-test | 0.56 | 0.670 | | | |

df =29 P<0.05[**]

The table 2.1 indicates that the pre-test mean score is 9.3 ( SD=1.104 ) and post-test mean score is 0.56 (SD=0.670) and the Paired " t " value is 38.870 which is significant at P<0.05 level.

**Section C: Comparison of Pre-test And Post-test Score On Wound Healing In Experimental Group II**

Table 3: N = 30

| Level of infection | Pre-test | | Post-test | |
|---|---|---|---|---|
| | Number | % | Number | % |
| No infection (0) | 3 | 10 | 25 | 83.3 |
| Mild infection (1-5) | 24 | 80 | 05 | 16.7 |
| Moderate infection (6-10) | 03 | 10 | - | - |
| Severe infection (11-15) | - | - | - | - |

Table 3 depicts that in experimental group in pre-test 24(80%) primi mothers had mild infection. In the post-test majority 25(83.3%) primi mothers had no infection and 5(16.7%) primi mothers had mild infection.

**Comparison of Mean, Standard deviation, Mean difference and Paired "t" value between pre-test and post-test score on wound healing in experimental Group- II.**

Table 3.1: N = 30

| S.N | Group | N | Wound Healing | Mean | SD | Mean difference | Paired 't' | Table Value |
|---|---|---|---|---|---|---|---|---|
| 1. | II | 3 | Pre-test | 9.2 | 0.95 | 8.97 | 53.926 | 2.060 |
| | | 0 | Post-test | 0.23 | 0.42 | | | |

df =29 P<0.05[**]

Table 3.2 indicates that the pre-test mean score is 9.2 (SD=0.959) and post-test mean score is 0.23 ( SD=0.424) and the Paired " t " value is 53.926, which is significant at P<0.05 level.

**Section D: Comparison of Post Test Score on Wound Healing In Experimental Group I & II**

Table 4: N = 60

| S.N | Group | N | Wound Healing Score | Mean | SD | Mean difference | Independent 't' Value | Table Value |
|---|---|---|---|---|---|---|---|---|
| 1. | I | 30 | After betadine Sitzbath | 0.56 | 0.670 | 0.33 | 2.537 | 2.001 |
| 2. | II | 30 | After Neem Extract Sitzbath | 0.23 | 0.424 | | | |

df =58P<0.05[**]

This table 4 indicates that mean score of wound healing after betadine sitztbath is 0.56 ( SD=0.670 ) and mean score of wound healing after neem extract sitzbath is 0.23 ( SD=0.424 ) respectively.The Independent 't' value obtained for wound healing score is2.537. This is significant at P< 0.05 level. From the mean scores it is clear that the mothers in group II have a lower level of wound healing score than group I

**Section E: Association between Post Test Level of Wound Healing Score among Mothers in Experimental Group I & II with their Selected Demographic Variables**

**Association between post test score level of wound healing score among mothers in experimental group I with their selected demographic variables. (Betadinesitzbath)**

Findings of association between the post-test level of wound healing in experimental group I with their selected demographic variable. Age, educational status, Occupation, Income, Religion, type of family were found only significant association.

**Association between post-test e level of wound healing score among mothers in experimental group II with their selected demographic variables. (Neem extract sitzbath)**

Findings of association between the post-test level of wound healing in experimental group II with their selected demographic variable. Age, educational status, Occupation, Income, Religion, type of family werehaving significant association.

## V. DISCUSSION

### Section A: Frequency percentage distribution of demographic variables

Data shows that the majority 20(67%) of primi mothers belonged to the age group of 15-25 years and 10(33%) belonged to age group of 26-35 Years. In experimental group II majority of mothers 20(67%) belonged to the age group of 15-25 years and 10(33%) belonged to the age group of 26-35 years. With regard to education in experimental group I, majority of the mothers 10(33%) had higher secondary school. In experimental group II majority of the mothers 8(27%) had high school education. Regarding occupation in experimental group I, majority of the mothers 21(70%) were house wives and least 1(3%) were office workers. In experimental group II majority of the mothers 17(56%) were house wives and least 5(16%) were coolie workers. Regarding religion in experimental group I, majority of primi mothers 20(66%) were Hindu, and the least 2 (6%) were Muslims and 8(26%) were Christians. In experimental group II, majority of primimothers 22(73%) were Hindu, and 4(13%) were Muslims and 4(13%) were Christians. In regard to income, in experimental group I majority of mothers 22(73%) had income Rs 3000&below, and least 1(3%) had income Rs 3001-5000. In experimental group II majority of mothers 21(70%) had income Rs 3000 & below. Regarding type of family, in experimental group I majority of the primi mothers 14(47%) were from nuclear family and 16(53%) were from joint family. In experimental group II majority of the primi mothers 16(53%) were from nuclear family and 14(47%) were from joint family**.**

### Section B: Comparison of Pre-test & Post-test Score On Wound Healing In Experimental Group I

In experimental group in pre-test 27(90%) primi mothers had mild infection. In the post-test 21(70%) primi mothers had no infection and 9(30%) primi mothers had mild infection. the pre-test mean score is 9.3( SD=1.104 ) and post-test mean score is 0.56 (SD=0.670) and the Paired " t " value is 38.870 which is significant at $P<0.05$ level.

### Section C: Comparison of Pre-test And Post-test Score On Wound Healing In Experimental Group II

In experimental group in pre-test 24(80%) primi mothers had mild infection. In the post-test majority 25(83.3%) primi mothers had no infection and 5(16.7%) primi mothers had mild infection. The pre-test mean score is 9.2 (SD=0.959) and post-test mean score is 0.23 (SD=0.424) and the Paired "t" value is 53.926, which is significant at $P<0.05$ level.

### Section D: Comparison of Post Test Score on Wound Healing In Experimental Group I & II

The mean score of wound healing after betadine sitzt bath is 0.56 (SD=0.670) and mean score of wound healing after neem extract sitzbath is 0.23 (SD=0.424) respectively. The Independent 't' value obtained for wound healing score is2.537. This is significant at $P< 0.05$ level. From the mean scores it is clear that the mothers in group II have a lower level of wound healing score than group I

### Section E: Association between Post Test Level of Wound Healing Score among Mothers In Experimental Group I & II With their Selected Demographic Variables

The findings revealed that there was significant association between the level of wound healing and their selected demographic variables educational status and occupation in experimental group-I& II.

## VI. CONCLUSION

Analysis of the study findings showed that neem extract sitzbath is more effective in episiotomy wound healing than betadine sitzbath among postnatal mothers. Regarding the association the findings revealed that there was no significant association between the level of wound healing and their selected demographic variables in experimental group-I and experimental group-II.

- **Implications:** The findings of the study have certain important implications for the nursing profession in the field of Nursing Practice, Nursing Education, Nursing Administration, Nursing Research and Community Health Nursing.
- **Nursing Administration:** The nurse administrator should conduct in-service education to nursing personnel regarding other measures used for wound healing. Workshops, seminars about the effectiveness of Neem Extract sitzbath and Betadine sitzbath and episiotomy wound can be made available to nursing staff in wards and nurse education in institute
- **Nursing Education:** The nurse educator can orient the students with alternative therapies and promoting wound healing in betadine sitzbath and Neem Extract sitzbath. The nurse educator can include information on Neem Extract and betadine and sitz bath in the clinical rounds and clinical presentation.
- **Nursing Services:** The nurses can practice betadine and neem extract sitz bath along with routine perineal care is improving the wound healing on postnatal mothers with episiotomy. Nurses as the change agent can introduce various preventive measures to prevent infection on postnatal mothers with episiotomy.
- **Nursing Research:** The finding of this study can be effectively utilized by the emerging researchers for their reference purpose. The research study enhances the body of knowledge in nursing science.

## REFERENCES

[1]. Bobar Lowdermilk, et.al.,(1995).''Maternity nursing'', (4th ed.). Mosbys company. Pp 302-304.
[2]. Daftary,(2004).''Manuel of obstetrics'',(1st ed.). New Delhi: Elsevier India private ltd. Pp 204.
[3]. Duttta. D.C.,(2004).''Textbook of Obstetrics'', (4thed). Calcutta: New central book agency. Pp 568-571
[4]. Fraser,D.M.et.al.(2003).''Myles Text Book of Midwives'', (14th ed.).Edinburgh:Churchill Livingstone.
[5]. George.B,(1995).''Nursing Theories'',(4th ed.).California: A Pearson Education Company.Pp 468
[6]. Gurumani.N,(2005).'' An Introduction ToBiostatitics'', (2nd ed).Chennai: MJP Publishers. Pp 212-215.
[7]. Jacob Annamma,(2005).'' A Comprehensive Text Book of Midwifery'', (1st ed.). New Delhi: Jaypee brothers. Pp 516.
[8]. Lewis, et.al.(2004). "Medical surgical nursing", (7th ed.). London: Mosby company.
[9]. Littleton.Y.(2007). ''Maternity Nursing Care'',(1sted.). Haryana: Sanat printers. Pp 352-354.
[10]. Marriner Ann.,(202). ''Nursing theories and its Work'', (3rd ed.). Philadelphia: Mosby Publication. Pp 184.

Copyright to IJARSCT
www.ijarsct.co.in

DOI: 10.48175/IJARSCT-9524

ISSN
2581-9429
IJARSCT

395