

A Study to Assess the Effectiveness of Medicated Sitz bath on Episiotomy Healing of Postnatal Mothers

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Abstract

Background: Episiotomy pain and delayed wound healing can interfere with the daily activities and comfort of postnatal mothers. Effective, low-cost nursing interventions are needed to promote healing and prevent complications.

Objectives: To evaluate the effectiveness of a medicated sitz bath on episiotomy wound healing among postnatal mothers.

To determine the association between pre-test episiotomy healing scores and selected demographic variables.

Methods: A quasi-experimental pre-test and post-test control group design was adopted. The study was conducted among 60 postnatal mothers who had normal vaginal delivery with episiotomy at a selected hospital in Kollam. Purposive sampling was used to assign 30 mothers to the experimental group and 30 to the control group. Episiotomy wound healing was assessed using the REEDA scale. The experimental group received medicated sitz bath twice daily for three days, while the control group received routine perineal care. Data were analyzed using descriptive and inferential statistics, including the Mann-Whitney U test.

Results: The pre-test mean REEDA score in the experimental group was 1.53 (SD = 1.57), which reduced to 0.27 (SD = 0.58) in the post-test, indicating significant improvement in wound healing. The Mann-Whitney U test showed a statistically significant difference between the experimental and control groups ($Z = 6.18, p < 0.01$).

Conclusion: Medicated sitz bath was found to be an effective, simple, and economical intervention for promoting episiotomy wound healing among postnatal mothers. It can be safely incorporated into routine postnatal care to enhance recovery and prevent complications.

Keywords: Episiotomy, Medicated Sitz Bath, Postnatal Mothers, Wound Healing, Nursing Care

Introduction

Background of the Problem

During this period a mother is going through the physiological process of uterine involution and at

the same time adapting to her new role in the family. Episiotomy pain often interferes with basic daily activities for the woman such as walking, sitting, and passing urine and also negatively impacts on motherhood experiences like taking care of newborn.¹

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Episiotomy did not become common until the early 1900s when the shift from home to hospital delivery. The use of episiotomy was expanded in 1921. The statistics show that an episiotomy was performed for 14.9% of vaginal births, with the highest rate being recorded in Victoria (20.5%). A combined laceration and episiotomy occurs in 1.6% of women who had vaginal birth, giving a total of 16.6% (statistics from Australia's mothers and babies 2006 report). In 1742, recommended the procedure for those cases in which the external vaginal opening is so tight that labour is dangerously prolonged².

Episiotomy was not widely used until the 1920s. In addition to the strong advocacy for the use of episiotomy of the day, changes in maternity practices also affected the use of episiotomy. The shift from home birth to hospital deliveries contributed to a shift in the conceptualization of the nature of childbirth. This shift made Episiotomy as a common surgical procedure performed during second stage of labour to enlarge the vaginal inriotus and to shorten the second stage of labour in cases of fetal distress. Episiotomy is protective against more severe perineal lacerations³.

Considerable evidences of risks are also associated with episiotomy such as pain, edema, infection, and ultimately dyspareunia. However, appropriate treatment can resolve or reverse all these after effects. The prompt use of the best selected treatment for any injury including, an episiotomy, ensures it will heal completely, in the shortest possible time, with the least amount of complications. So midwives have an important role to play in the care of perineal wounds following child birth. The maintenance of effective pain relief must be balanced with the need to promote wound healing.

There are several treatments for relieving perineal pain and promoting wound healing. Pharmacological and non-pharmacological methods are used to treat this discomfort. Pharmacological pain relief methods include non-steroidal anti-inflammatory drugs, oral analgesics, local anaesthetics and opioids. But this method is associated with serious adverse effects such as constipation, gastric irritation, passage of the drug to maternal milk, and prolonged bleeding time⁴.

It is vital that health professionals who care for the puerperant patient know how to evaluate and treat perineal pain. Considering the high rates of perineal trauma after normal deliveries that still exist in our population, it is necessary to offer these patients alternative treatments for perineal pain & wound healing based on scientific evidence.

Sitzbath is a simple and cost effective and easy method of treating episiotomy wound in the hospital as well as home settings. As its takes less time, sitzbath is not a routine practice in our Obsterics and Gynecological ward settings inspite of it being cost effective and less time consuming. During this procedure care giver can talk and communicate with the mothers many reduce the fear and may relieve the pain and increases comfort, during the post natal days. The postnatal mothers can even do this independently in the home settings when they get discharged from the hospitals following the delivery⁵.

Need and Significance of The Study

A woman in birth is at once her most powerful, and her most vulnerable. But any women who has birthed unhindered understands that they are stronger than they know. 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 birth⁶.

The world health organization has taken a clear stand against routine episiotomy. The episiotomy infections are preventable and can be reduced by practicing clean delivery and effective postnatal care. Midwives have an important role in the care of episiotomy wound after child births (WHO statistics, 2007)⁷.

In India, the overall rate of episiotomy was 40.6%. Among that midwives performed episiotomies at a lower rate (21.4%) than faculty (33.3%) and private providers (55.6%)⁸. The episiotomy rate in Karnataka is approximately 88% in women who are undergoing difficult labour. In Bangalore rates of

episiotomy for vaginal birth range from 31% to 95% of the grand total of 3590 vaginal deliveries⁹.

Materials and Methods

Research Approach

A quantitative approach was considered an appropriate research approach for the present study regarding the effectiveness of medicated sitzbath on episiotomy healing of postnatal mothers.

Research Design

The research design selected for the present study was quasi experimental with pre-test and post-test design to achieve the objectives of the study.

Variables

Two types of variables are used in this study. They are:

Independent variable:-Medicated sitzbath.

Dependent variable: -Episiotomy healing of postnatal mothers

Setting of the study : The study subjects were selected from Victoria Hospital, Kollam.

Population : postnatal mothers who had normal vaginal delivery with episiotomy.

Sample and Sampling Technique

Sample: Postnatal mothers who had normal vaginal delivery with episiotomy, admitted in postnatal ward of Victoria Hospital, Kollam. The sample size was 60 postnatal mothers who had vaginal delivery divided 30 each in control and experimental group.

Sampling Technique

The purposive sampling was used to collect data from the available samples falling under inclusion criteria. (Purposive sampling was used in this study because the research required participants who met specific clinical criteria, namely postnatal mothers who had undergone normal vaginal delivery with episiotomy. This technique allowed the researcher to deliberately select mothers who possessed the characteristics necessary to evaluate the effectiveness

of the medicated sitz bath on episiotomy wound healing.

In a hospital setting, the number of postnatal mothers with episiotomy at any given time is limited and varies daily. Therefore, probability sampling was not practical. Purposive sampling ensured that only eligible and available participants who fulfilled the inclusion criteria were recruited within the data collection period.

Additionally, this method helped in:

Ensuring homogeneity of the sample with respect to the clinical condition

Facilitating timely data collection within the study duration

Enhancing the feasibility of conducting an intervention-based study in a clinical environment

Thus, purposive sampling was considered appropriate to obtain a relevant and accessible sample for assessing the effectiveness of the medicated sitz bath.)

Inclusion Criteria

Postnatal mothers who are:- having episiotomy, willing to participate in the study, able to follow the instructions.

Exclusion Criteria

Postnatal mothers with:- complications such as Post Partum Hemorrhage and perineal tear.

cardiac diseases, gestational diabetes, eclampsia and other infections.

Data Collection Tools

Data were gathered using two main instruments:

1. Structured Questionnaire

A structured questionnaire was used to obtain baseline information from postnatal mothers. This tool collected data on socio-demographic variables such as age, education, occupation, type of family, and monthly income. Obstetric and clinical variables including parity, type

of delivery, day of episiotomy, and previous knowledge regarding perineal care were also recorded.

2. REEDA Scale

Episiotomy wound healing was assessed using the standardized REEDA Scale, which measures five components: Redness, Edema, Ecchymosis, Discharge, and Approximation of wound edges. Each item was scored on a numerical scale, and the total score indicated the level of wound healing. Lower scores reflected better healing progress. The tool was selected due to its reliability and wide use in postpartum wound assessment.

Validity and Reliability

Content validity of the tools was established through expert review by specialists in obstetrics and gynecological nursing. Necessary modifications were made based on their suggestions to improve clarity and relevance. The REEDA scale is a standardized and previously validated tool, ensuring consistency in measurement. Reliability of the questionnaire was confirmed through pilot testing, which showed the instrument to be clear and feasible.

Pilot Study

A pilot study was conducted among 10 postnatal mothers who met the inclusion criteria to assess the feasibility of the research design and tools. The study confirmed that the instruments were understandable and the procedure for administering the medicated sitz bath was practical in the clinical setting. No major changes were required, and the pilot participants were excluded from the main study.

Ethical Considerations

Formal permission was obtained from the hospital authorities before data collection. Ethical clearance was secured from the institutional ethics committee (No. G-1335/14 dated 16.05.2014 from DMO and 20.06.2014 from institution). Informed

consent was obtained from each participant after explaining the purpose of the study, procedure, and benefits. Privacy and confidentiality were strictly maintained throughout the research. Participants were assured that their involvement was voluntary and that they could withdraw at any time without affecting their care.

Data Collection Procedure

Data collection was carried out in the postnatal ward. Postnatal mothers who fulfilled the inclusion criteria were selected and informed about the study. After obtaining consent, baseline data were collected using the structured questionnaire, and initial episiotomy wound assessment was done using the REEDA scale.

Participants in the experimental group were given medicated sitz bath as per the prescribed protocol for a specified number of days, while the control group received routine perineal care. Follow-up assessments of wound healing were conducted using the REEDA scale to evaluate improvement.

Statistical Analysis

Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to describe demographic and clinical variables. The Mann-Whitney U Test used to assess significant difference between pretest and posttest wound score. Chi-square test was applied to determine the association between selected demographic variables and wound healing outcomes.

Result

The findings of the study revealed that postnatal mothers who received medicated sitz bath showed a greater reduction in REEDA scores compared to those who received routine care. This indicates improved episiotomy wound healing in the experimental group. Statistical analysis demonstrated a significant difference in post-test wound healing scores between the two groups, confirming the effectiveness of medicated sitz bath.

Table 1. Distribution of samples according to post test score

Distribution of samples according to post test score of episiotomy wound healing (n = 60)	Distribution of samples according to post test score of episiotomy wound healing (n = 60)	Distribution of samples according to post test score of episiotomy wound healing (n = 60)	Distribution of samples according to post test score of episiotomy wound healing (n = 60)	Distribution of samples according to post test score of episiotomy wound healing (n = 60)
Episiotomy wound healing	Experimental	Experimental	Control	Control
Episiotomy wound healing	Frequency	Percent	Frequency	Percent
No infection	24	80.0	2	6.7
Mild infection	6	20.0	26	86.7
Moderate infection	0	0.0	2	6.7

Table 2. Effectiveness of medicated sitz bath on episiotomy healing

		Mean	SD	Median	Z#	P
Pre	Experimental	1.53	1.57	1.00	1.67	0.094
Pre	Control	0.87	1.07	0.00	1.67	0.094
Post	Experimental	0.27	0.58	0.00	6.18**	0.000
Post	Control	2.87	1.57	3.00	6.18**	0.000

Discussion

The present study was undertaken to evaluate the effectiveness of medicated sitz bath on episiotomy wound healing among postnatal mothers. The findings demonstrated a significant reduction in REEDA scores in the experimental group compared to the control group, indicating improved wound healing. The warm medicated solution likely enhanced local blood circulation, reduced edema, and promoted tissue repair. The antiseptic properties of the solution may have contributed to reduced risk of infection.

The study also found that certain demographic variables such as age and occupation showed association with healing outcomes, whereas variables like parity, religion, education, and family type did not show significant association. This suggests that while socio-demographic factors may influence recovery to some extent, appropriate nursing care remains the key determinant of healing.

The findings of the present study are in agreement with previous research that demonstrated the effectiveness of sitz bath therapy in promoting perineal wound healing and reducing discomfort

among postnatal mothers. Studies have reported that warm sitz baths improve local circulation, reduce edema, and accelerate tissue repair in episiotomy wounds.¹⁰

A quasi-experimental study conducted among postnatal mothers found that those who received warm sitz bath showed significantly lower REEDA scores and faster wound healing compared to mothers who received routine perineal care.¹¹ Similar improvements in pain relief and wound approximation were also reported in mothers who practiced medicated sitz bath twice daily during the early postpartum period.¹²

Another clinical study evaluating non-pharmacological interventions for episiotomy care revealed that sitz bath therapy significantly reduced signs of inflammation such as redness and edema, thereby promoting faster healing and enhancing maternal comfort.¹³ These findings support the results of the present study, where the experimental group showed marked improvement in REEDA scores.

In contrast, a few studies have noted that the effectiveness of sitz bath may vary depending on the duration, frequency, and type of solution used. Studies using only plain warm water or shorter intervention periods reported slower improvement when compared to medicated sitz bath regimens.¹⁴ This may explain why the present study, which used a medicated solution twice daily, demonstrated significant healing benefits.

Nursing Implications

Nursing Practice

The findings of the study highlight the importance of medicated sitz bath as a routine nursing intervention for postnatal mothers with episiotomy. Nurses play a key role in promoting perineal hygiene, preventing infection, and facilitating faster wound healing. Regular assessment of the episiotomy site using standardized tools such as the REEDA scale enables early identification of complications. Teaching mothers the correct

method of performing sitz bath at home empowers them in self-care and promotes recovery during the puerperium.

Nursing Administration

Nurse administrators are responsible for ensuring quality maternal care services in healthcare institutions. Based on the study findings, hospital policies can include medicated sitz bath as a standard postnatal care protocol for mothers with episiotomy. Administrators should organize in-service education programs to update staff nurses on evidence-based practices related to episiotomy care. Adequate supplies and facilities for sitz bath should be ensured in postnatal wards to support effective implementation.

Nursing Education

Nursing education programs should emphasize evidence-based, non-pharmacological interventions for postpartum care. Teaching student nurses about the benefits, procedure, and precautions of medicated sitz bath will improve their competency in maternity nursing. Simulation and clinical demonstrations can help learners develop skills in assessing episiotomy wounds and providing appropriate interventions. Continuing education programs can also be conducted for practicing nurses to update their knowledge.

Nursing Research

The study contributes to the growing body of evidence supporting non-pharmacological interventions in postnatal care. Further research can be conducted with larger samples, different settings, and varied durations of sitz bath therapy to strengthen generalization. Comparative studies between medicated sitz bath and other interventions such as cold therapy, infrared therapy, or herbal applications can also be explored. Longitudinal studies may help determine long-term outcomes on wound healing and maternal comfort.

Conclusion

Based on the findings, it can be concluded that medicated sitz bath is an effective intervention for enhancing episiotomy wound healing among postnatal mothers. It significantly reduces signs of inflammation and promotes faster tissue repair as evidenced by lower REEDA scores in the experimental group. The procedure is simple, economical, and can be safely practiced both in hospital and at home under proper guidance. Incorporating medicated sitz bath into routine postnatal care can improve maternal comfort, reduce complications, and enhance overall recovery during the puerperium.

Limitations

The study was limited to a small sample size of postnatal mothers from a single hospital.

The duration of intervention was restricted to a short period, which may not reflect long-term healing outcomes.

Environmental and personal hygiene practices at home could not be fully controlled.

Recommendations

Similar studies can be conducted with a larger sample size for better generalization.

Future research may evaluate the effectiveness of medicated sitz bath over a longer duration.

Comparative studies can be done between medicated and non-medicated sitz baths.

Studies can be replicated in different hospital and community settings.

Research can explore the effect of sitz bath on pain relief and maternal comfort in addition to wound healing.

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Conflict of Interest: There are no conflicts of interest to declare in this study.

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