



Research Article

A QUASI EXPERIMENTAL STUDY TO ASSESS AND EVALUATE THE EFFECTIVENESS OF INFRARED LIGHT THERAPY AND TOPICAL OINTMENT ON DEGREE OF EPISIOTOMY WOUND HEALING AMONG POSTNATAL MOTHERS IN A SELECTED HOSPITAL, DELHI

Tsering Tsomo and Lavanya Nandan

Nightingale Institute of Nursing

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ABSTRACT

A quasi experimental study to assess and evaluate the effectiveness of Infrared light therapy and Topical ointment on degree of episiotomy wound healing among postnatal mothers in a selected hospital, Delhi was under taken by Ms. Tsering Tsomo for partial fulfillment of the requirement for the Degree of Master of Science in Nursing at Nightingale Institute of Nursing, Noida, Chaudhary Charan Singh University during the year 2014-2016.

The objectives of this study were to: (i) To assess and evaluate the degree of episiotomy wound healing among postnatal mothers before and after administration of infrared light therapy. (ii) To assess and evaluate the degree of episiotomy wound healing among postnatal mothers before and after administration of topical ointment. (iii) To compare the effectiveness of administration of infrared light therapy and topical ointment with regard to degree of episiotomy wound healing among postnatal mothers.

The conceptual framework of the study was based on Widenbach's Prescriptive Theory. The research approach adopted for the study was evaluative research approach with pre test post test design.

The study was conducted in post natal ward of ESI Hospital Basaidarapur on 40 post natal mothers, who were selected by purposive sampling technique. There were 20 post natal mothers in Infrared light therapy group and 20 were in Topical ointment group.

Standardized REEDA scale was used to assess the degree of episiotomy wound of post natal mothers. Content validity was done by seven experts from the field of obstetrics and gynecology nursing.

Data was collected from 12.02.16 to 29.02.16 at ESI hospital Basaidarapur for Infrared light therapy and Topical ointment therapy. Degree of episiotomy wound healing of Postnatal mother's were assessed by using standardized REEDA scale during the procedure. Pre test was done on the first day and the post test was done to assess the degree of episiotomy wound healing during the procedure with the interventions (Infrared Light Therapy and Topical Ointment) on the third day.

The collected data was organized, tabulated and analyzed using descriptive and inferential statistics in terms of frequency, percentage, mean, mean difference, median, standard deviation, standard deviation difference, standard error of mean difference and t-value which were used to compare the effectiveness of the two interventions.

The major findings of the study reveal that both the treatments, Infrared Light Therapy and Topical Ointment were effective in healing the episiotomy wound of the post natal mothers. Whereas the Infrared Light Therapy was found to be more effective than Topical Ointment in healing the episiotomy wound among the post natal mothers. As per the researcher, the treatments are simple, economic and effective means in healing the episiotomy wound among the post natal mothers.

The findings of the study have several implications on nursing practice. Based on the findings, recommendations for future research were also made.

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INTRODUCTION

"A healthy woman who delivers spontaneously performs a job that cannot be improved upon."

- Aidan Mac

Background of the Study

Pregnancy and child birth are special events in women's lives. The mothers suffer much distress after child birth due to painful perineum. Perineal pain is most commonly associated with child birth by vaginal delivery. Pain following episiotomy appears to be universal.

The mother undergoing episiotomy is characterized by greater blood loss in conjunction with delivery, and there is a risk of improper wound healing and increased pain during early puerperium.

Puerperium is a period when great changes take place in a woman's physical and mental setup that may pose a challenge to postnatal women in various ways. The concern of health personnel during this period should be to provide comfort to her, help her to prevent infection and to improve the wound healing process. Enhancing healing of episiotomy wound is one of the major concerns after a normal delivery.

*Corresponding author: **Tsering Tsomo**
Nightingale Institute of Nursing

According to the American college of Obstetrics and Gynecology, approximately one in three women having a vaginal delivery also have an episiotomy.

According to J. Reproductive Medicine 2006, the incidence of episiotomy in India is 95%. It is particularly high in private sector hospitals (91.8) and tertiary care set up (80.7%).

Need of the Study

The postnatal mothers who had undergone episiotomy, they are more prone to get puerperal infection during early postnatal period. So the researcher felt that by providing infrared light can minimize the puerperal infection and promote episiotomy wound healing process.

Hiremath DA and Hiremath LD. 2006 Gupta M C and Mahajan BK (2003) reported that, in Delhi, the main cause of maternal mortality was sepsis which accounts to 28%. In developed countries, maternal mortality varies from 4-20/1000 births. In developing countries, the maternal mortality is 20-30 times higher than developed countries. One of the main cause of maternal mortality in India was sepsis (15%).

Based on the above mentioned studies and the personal experience of the investigator during her clinical field posting, found that in many hospitals episiotomy care involves several practices such as perineal wash, sitz bath, applications of infrared light, antibiotics etc to relieve excruciating pain, add comfort and promote faster wound healing. Hence the investigator is interested to find out the effectiveness of infrared lamp therapy and topical ointment on episiotomy wound healing.

Problem Statement

A Quasi Experimental Study to Assess and Evaluate the Effectiveness of Infrared Light Therapy and Topical Ointment on Degree of Episiotomy Wound Healing Among Postnatal Mothers in a Selected Hospital, Delhi.

Objectives of the Study

- To assess and evaluate the degree of episiotomy wound healing among postnatal mothers before and after administration of infrared light therapy.
- To assess and evaluate the degree of episiotomy wound healing among postnatal mothers before and after administration of topical ointment.
- To compare the effectiveness of administration of infrared light therapy and topical ointment with regard to degree of episiotomy wound healing among postnatal mothers.

METHODOLOGY

Research Approach and Research Design

Experimental research approach with quasi experimental- non equivalent group design was adopted to accomplish the objectives of the study.

Setting of the Study

The present study conducted at *ESI Model hospital Basai Dharapur* for both the treatment. This hospital provides MCH services to registered or unregistered mothers who are ESI insured.

Population

In the present study, population refers to the postnatal mothers who delivered vaginally with episiotomy.

Sample and Sample Size

In this study, Sample consists of post natal mothers who delivered vaginally with episiotomy admitted in postnatal ward of ESI hospital.

The sample size consists of:-40 postnatal mothers
Infrared light therapy – 20 postnatal mothers
Topical ointment – 20 postnatal mothers

Sampling Technique

In the present study, sample selection was done by using purposive sampling technique.

Inclusion Criteria

- Postnatal mothers admitted with episiotomy
- Postnatal mothers willing to participate
- Postnatal mothers present on the day of study

Exclusion Criteria

- Postnatal mothers without episiotomy
- Postnatal mothers with infection

Description of the Tools

Interview schedule for demographic data

This tool was prepared to collect data of the postnatal mothers. Its consists of 10 items on: age, education, occupation, religion, family income, type of family, marital status, duration of marriage, type of delivery and number of children.

Standardized REEDA scale

The REEDA Scale (Redness, Edema, Ecchymosis, Discharge, Approximation) is a scale for grading the severity of perineal trauma associated with episiotomy or laceration associated with delivery.

The REEDA (Redness, Edema, Ecchymosis, Discharge, Approximation) scale is a tool that assess the inflammatory process and tissue healing in the perineal trauma; through the evaluation of five items of healing:- Redness (hyperaemia), Edema, ecchymosis, discharge and approximation of the wound. For each assessed item a score ranging from 0 to 3 can be assigned by healthcare provider. A higher score indicates a greater level of tissue trauma. The maximum value of 15 indicates the worst perineal healing outcome.

Points	Redness	Oedema	Ecchymosis	Discharge	Approximation
0	None	None	None	None	Close
1	Within 0.25 cm of the incision bilaterally	Perineal, less than 1 cm from incision	Within 0.25 cm bilaterally or 0.5 cm unilaterally	Serum	Skin separation 3 mm or less
2	Within 0.5 cm of the incision bilaterally	Perineal and/or between 1 to 2 cm from the incision	Between 0.25 cm to 1 cm bilaterally or between 0.5 to 2 cm unilaterally	Serosan-guinous	Skin and subcutaneous fat separation
3	Beyond 0.5 cm of the incision bilaterally	Perineal and/or vulvar; greater than 2 cm from incision	Greater than 1 cm bilaterally or 2 cm unilaterally	Bloody, purulent	Skin, subcutaneous fat and fascial layer separation
Score					Total

Fig 2 Standardized REEDA Scale

Section- I

Description of demographic characteristics
Frequency and percentage distribution of demographic characteristics of postnatal mothers **N=40**

S. No.	Demographic Data	Infrared light therapy		Topical ointment	
		Frequency	Percentage	Frequency	Percentage
1.	Age in years				
	<20years	2	10	4	20
	21-30 years	16	80	15	75
	31years and above	02	10	1	5
2.	Educational qualification				
	Illiterate	0	0	1	5
	Primary school	2	10	3	15
	secondary school	5	25	5	25
	Higher secondary school	5	25	8	40
	Graduate and above	8	40	3	15
3.	Occupation				
	Housewife	15	85	17	85
	Private sector	5	15	3	15
	Government sector	0	0	0	0
4.	Religion				
	Hindu	17	85	18	90
	Muslim	2	10	1	5
	Christian	0	0	0	0
	Others	1	5	1	5
5.	Family income				
	<10000	15	75	9	45
	10001-15000	5	25	8	40
	Above 15000	0	0	3	15
6.	Type of family				
	Nuclear family	8	40	8	40
	Joint family	12	60	12	60
	Extended family	0	0	0	0
7.	Marital status				
	Married	20	100	20	100
	Unmarried	0	0	0	0
	Widowed	0	0	0	0
8.	Duration of marriage				
	Less than 5 years	17	85	14	70
	6-10 years	1	5	4	20
	11 years and above	2	10	2	10
9.	Number of children				
	1	12	60	14	70
	2	7	35	5	25
	More than 2	1	5	1	5

Analysis of the data showed the following findings:

- Majority 80% samples were in age group of (21-30) years in infrared light therapy group. Majority 75% samples were in age group of (21-30) years in topical ointment group.
- Majority 40% samples were having graduate and above in infrared light therapy group, and majority 40% were having higher secondary education in topical ointment group.
- Majority 75% samples were housewife in infrared light therapy group.
- Majority 85% samples were housewife in topical ointment group.
- Majority 85% samples were Hindu in infrared light therapy group.
- Majority 90% samples were Hindu in topical ointment group.
- Majority 75% samples were having family income of <10000 in infrared light therapy group.
- Majority 45% samples were having family income of <10000 in topical ointment group.
- Majority 60% samples belong to joint family in infrared light therapy group.

- Majority 60% samples belong to joint family in topical ointment group.
- Majority 100% samples were married in infrared light therapy group.
- Majority 100% samples were married in topical ointment group.
- Majority 85% samples were having duration of marriage of less than 5 years in infrared light therapy group.
- Majority 70% samples were having duration of marriage of less than 5 years in topical ointment group.
- Majority 60% samples were having 1 child in infrared light therapy group.
- Majority 70% samples were having 1 child in topical ointment group.

SECTION: II Findings related to the degree of episiotomy wound healing scores among postnatal mothers before and after administration of infrared light therapy group and topical ointment group.

Majority 100% (20) were having healed episiotomy wound in infrared light therapy group and 60% (12) were having moderately healed episiotomy wound and 40% (8) were having mildly healed episiotomy wound in topical ointment group in posttest.

SECTION: III Findings related to the degree of episiotomy wound healing among postnatal mothers before and after administration of infrared light therapy.

The pre-test mean score and post-test mean score was 14.05 and 3 respectively.

The calculated 't' value was 81.5775 at 0.05 level significance. This finding revealed that there was a significant difference exists among pre-test and post-test among group receiving infrared light therapy.

SECTION-IV Findings related to the degree of episiotomy wound healing among postnatal mothers before and after administration of topical ointment.

The pre-test mean score and post-test mean score was 13.55 and 9.65 respectively.

The calculated 't' value was 15.70 at 0.05 level significance. This finding revealed that there was a significant difference exists among pre-test and post-test among group receiving topical ointment.

SECTION-V Findings related to the post test scores of degree of episiotomy wound healing among postnatal mothers with episiotomy in infrared light therapy group and topical ointment group.

The post-test mean score of group receiving infrared light therapy and post-test mean score of group receiving topical ointment was 3 and 9.65 respectively.

The calculated 't' value was 16.0086 at 0.05 level significance. This finding revealed that there was significant difference exists among post-test scores of group receiving infrared light therapy and topical ointment.

Nursing Implications

Several implications can be drawn from the present study with regard to Nursing education, Nursing practice, Nursing administration and Nursing research.

Nursing Education

- Community nurses should also be given continuing education to update their knowledge and practice to impart required care to the postnatal mothers so to maintain their healthy life and to reduce the maternal mortality and morbidity rate by minimising the postnatal infection rate in the country.

Nursing Practice

- Nurses can demonstrate the postnatal mothers regarding perineal care practice.

Nursing Administration

- The nurse administrator should organize in service education programme for the nurses to teach them about use of infrared light therapy for episiotomy wound healing.

Nursing Research

- There is need of more researches to be perform on the same to know the actual effects/ benefits of such interventions like infrared light therapy so to bring awareness among the nurses and to reduce the maternal morbidity rate.

Limitations

The limitations of the study were,

- The study was confined to a small sample size that is only 40 patients in a selected hospital, which limits the generalization of the findings.
- This study is limited to the Postnatal mothers who had normal vaginal delivery with episiotomy.
- The study is limited to the selected hospital of Delhi.

CONCLUSION

The following conclusion are drawn from the findings of the study

- Majority of the samples i.e. postnatal mothers were in the age group of (21-30) years and maximum of the postnatal mothers were having only 1 child in both the groups.
- Finding of the present study reveals that, both the treatment were effective in treating episiotomy wound among the postnatal mothers.
- However, it was found that the infrared light therapy was more effective than the tropical ointment as evidenced from significance difference exist between post test scores of infrared light therapy and topical ointment.
- Findings also revealed that the infrared therapy also helps in reducing the pain and the discomfort arising from the episiotomy wound.

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