



A study to assess the effectiveness of infrared radiation on episiotomy wound healing among postnatal mothers

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Abstract

Background: Perineal trauma is a frequent complication to vaginal delivery especially with episiotomy. Discomfort and pain related to episiotomy interfere with women daily activities during postpartum period.

Objectives: Objectives of the study were to assess the degree of episiotomy wound healing before and after the administration of infrared radiation. To find out the association of infrared radiation on episiotomy wound healing and the selected demographic variables of postnatal mothers who underwent episiotomy.

Materials and methods: This study was pre-experimental study. The study was conducted at Govt. modern maternity Hospital, petlaburz, Hyderabad. Non probability Purposive sampling was used and 60 samples were selected. Structured questionnaire was used to collect the demographic data and episiotomy wound healing among postnatal mothers was assessed by using REEDA Scale.

Results: The intervention (infrared radiation) was provided for 10 minutes for all 60 postnatal mothers who underwent for episiotomy in this study. And the post test was done using the same REEDA scale. The average level of episiotomy wound healing got increased from 12.05 to 7.13 in postnatal mothers. The paired t test statistics (12.94) shows that the promoted in level of episiotomy wound healing as a result of the intervention of infrared radiation is statistically significant at, < 0.01 level. At the end of the study concluded that infrared radiation is effective for episiotomy wound healing.

Discussion: After the pretest, the intervention (infrared radiation) was provided for 10 minutes twice a daily for three days to all 60 postnatal mothers in this study. And the post test was conducted for all the 60 postnatal mothers using the same REEDA scale. After the statistical analysis it was found out that in the post test, around 16(26.67%) had mild infection and 44(73.33%) had moderate infection. There were no postnatal mothers had severe infection in the post test.

Conclusion: The study was conducted to assess the effectiveness of infrared radiation on episiotomy wound healing among postnatal mothers who delivered with episiotomy. The paired 't' value for healing process of episiotomy wound were 12.94 and was significant at 0.01 level. So the infrared radiation on episiotomy wound healing was an effective method to promote and hasten the healing process of episiotomy wound among postnatal mothers who delivered with episiotomy.

Keywords: Effectiveness, infrared radiation therapy, episiotomy wound, healing, postnatal mothers

Introduction

In India the birth rate is very high 56% of women had an episiotomy compared to the 46% of white women. The difference between these percentage (10%) is measure of the excess frequency of episiotomy in Indian women. Pregnancy and childbirth are special events in women lives. The mothers suffer much distress after childbirth due to painful perineum. Perineal pain is most commonly associated with childbirth by vaginal delivery. Pain following episiotomy appears to be universal. The mother undergoing episiotomy may cause greater blood loss in conjunction with delivery. And there is risk of improper wound healing and increased pain during early puerperium. Yet there is little research on the care of this most frequently performed wound. Traditionally midwives are left to manage the episiotomy and perineal wound.

The wound should be assessed for edema, swelling, tenderness and discharge and also for localized pain. Puerperial infections are costly in terms of delayed mother-infant interaction, lactation difficulties, prolonged hospital stay or readmission in hospital and increased financial loss and family disturbance.

Approximately 70% of women with a vaginal delivery experienced some degree of damage to the perineum due to tear or episiotomy and needed stitches. Like any other surgical incision, episiotomy results in some discomfort for

most of postnatal mothers. Although relatively small in size, episiotomy sutures can cause considerable discomfort, because the perineum is an extremely tender area and the muscles of the perineum are involved in so many activities such as sitting, squatting, bending, urinating, Defecating.

Moreover, the investigator through her clinical experience in the maternity ward have seen mothers getting fever during the postnatal period due to infection and delayed wound healing. The perineal pain may increase during postpartum recovery because of episiotomy wound and it may trouble for their daily activities and also it may cause high risk of injury to the anal sphincter and the rectum. The investigator feels that nurses have an important role in the care of perineal wounds following childbirth. So the investigator interested to hasten the healing of episiotomy wound process by the application of infrared radiation, which help the postnatal mothers to relieve from perineal discomfort, early ambulation, early self care activities and minimize hospital stay during the postnatal period.

Method

Using non probability Purposive sampling 60 samples were selected. Structured questionnaire was used to collect the demographic data. Pre test level of episiotomy wound healing among postnatal mothers was assessed by using REEDA Scale. The intervention (infrared radiation) was

provided for 10 minutes for all 60 postnatal mothers who underwent for episiotomy in this study. And the post test was done using the same REEDA scale. The average level of episiotomy wound healing got increased from 12.05 to 7.13 in postnatal mothers. The paired t test statistics (12.94) shows that the promoted in level of episiotomy wound healing as a result of the intervention of infrared radiation is statistically significant at, < 0.01 level. At the end of the study concluded that infrared radiation is effective for episiotomy wound healing.

Keywords

- **Effectiveness:** Is the degree of episiotomy wound healing, which is measured using a REEDA scale (redness, edema, ecchymosis, discharge and approximation of wound) after the administration of infrared radiation.
- **Infrared Radiation Therapy:** Is the exposure of episiotomy wound to infrared radiation for 10 minutes with a distance of 50 cm from the episiotomy wound twice daily for three days to postnatal mother.

- **Episiotomy wound:** Is the surgical incision made on the perineal muscles during normal vaginal delivery.
- **Healing:** Is the process of returning back towards normal position of perineal muscles and skin.

Postnatal mothers: Are the mothers who underwent normal vaginal delivery with episiotomy.

Literature Review [as applicable]

-John e, sheebu e, vimji m, seema s. (2013), judith angelita (2014), ronnie & falcao (2013), karacam (2013), chris kettle (2011)-elicia (2012).

Materials & METHODS

The method of data collection is a method of gathering information from respondent in a standardized fashion. In the present study the investigator intended in collecting the data by using Infrared lamp. The investigator used a REEDA scale to assess the episiotomy wound healing among postnatal mothers who underwent for episiotomy at Govt. modern maternity Hospital, petlaburuz, Hyderabad.

Statistical Analysis [as applicable]

Table 1: Plan for data analysis

Statistics	Data analysis	Objectives
Descriptive Statistics	Frequency percentage Mean and standard deviation Paired 't' test	<ul style="list-style-type: none"> ▪ Assess the degree of episiotomy wound healing before the administration of infrared radiation. ▪ Assess the effectiveness of infrared radiation on healing of episiotomy wound after its administration. ▪ Find out association of infrared radiation on episiotomy wound healing and the selected demographic variables.
Inferential statistics	Chi square test	

Result

Table 2: Paired't' test to evaluate the effectiveness of infrared radiation.

Group	No:	Variation	Mean	Standard Deviation	Difference of pre- test and post test		Paired 't' value
					Mean	Standard Deviation (SD)	
Postnatal mothers who underwent for episiotomy	60	Before infrared radiation	12.05	2.218	4.92	0.256	12.94
		After infrared radiation	7.13	1.962			

DF: 59 Table value: 2.95 p<0.01

Discussion

After the pretest, the intervention (infrared radiation) was provided for 10 minutes twice a daily for three days to all 60 postnatal mothers in this study. And the post test was conducted for all the 60 postnatal mothers using the same REEDA scale. After the statistical analysis it was found out that in the post test, around 16(26.67%) had mild infection and 44(73.33%) had moderate infection. There were no postnatal mothers had severe infection in the post test.

Conclusion

The study was conducted to assess the effectiveness of infrared radiation on episiotomy wound healing among postnatal mothers who delivered with episiotomy. The paired't' value for healing process of episiotomy wound were 12.94 and was significant at 0.01 level. So the infrared

radiation on episiotomy wound healing was an effective method to promote and hasten the healing process of episiotomy wound among postnatal mothers who delivered with episiotomy.

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