



A COMPREHENSIVE ANALYSIS OF INFRARED LIGHT THERAPY FOR WOUND HEALING AMONG POSTNATAL MOTHERS

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ABSTRACT:

Both becoming pregnant and giving birth are momentous occurrences in a woman's life. After giving birth, the postpartum period is a particularly important moment for caring women who have had an episiotomy, which is a distressing and painful surgery that takes place during this time. Therefore, the purpose of this research was to evaluate the impact of infrared light treatment on episiotomy wound restorative in addition to pain alleviation in postpartum women. Women who have episiotomies and use infrared light treatment on the wounds recover from the procedure more quickly and have less pain than those who do not use the therapy. The female participants were divided into two groups at random. Whereas, every even number was allocated to the research group, and every odd number was given to the control group, which did not get any additional treatment outside the standard regular care (applying infrared lamp therapy and normal routine care). A structured interview schedule, an observational checklist for the REEDA Scale, and a self-reported Numerical Pain Rating Scale were used to gather the data for this study. The REEDA total score was statistically significant, and the restorative process was completed in less than four days. As a result, the researchers came to the conclusion that infrared light treatment is an effective method of wound care for episiotomies performed on postpartum women. Based on the findings of the research, it was suggested that postpartum care for women should include infrared therapy as a primary component due to the vital role it plays in enhancing women's quality of life during the postpartum period.

Key Words: *Episiotomy, Infrared therapy, Restorative, Pain relief*

INTRODUCTION:

Despite this, pregnancy is a life-altering experience for women, and one of the side effects of this is a delicate perineum that may cause significant discomfort after delivery. The process of giving birth is a miraculous natural occurrence that is unique to every woman who has or will have children. When a new mother has perineal trauma as a consequence of the labour and delivery process, the postpartum period may prove to be much more stressful for her [1]. This moment is mostly characterised by ecstasy. Child labour is seen to be a great way to end the gestational period and start a new life time [2], despite the agony and sensitivity it causes the children involved. An episiotomy is a technique that entails making an incision in the perineum in order to expand the vaginal entrance in preparation for an episiotomy. This treatment is routinely done for almost all women in order to aid facilitate a secure and straightforward labour, in especially for the woman's first birth. This incision takes place either during the second phase of labour or shortly before the labour begins. Episiotomy may be performed in a variety of ways, including the medio-lateral, median, lateral, and J-shaped procedures. The most common approach among them is called a medio-lateral episiotomy [3].

In industrialised nations, the number of episiotomies performed is decreasing, however in poor countries, the number is still rather large. The World Health Organization has advocated for episiotomies to be performed only when medically necessary, despite the fact that the research strongly demonstrates that these operations are associated with consequences later in the lives of mothers [4]. Its prevalence is higher in the United States and Canada than it is in Europe. It is preferable to do an episiotomy on an individualised basis rather than as a routine procedure [5].

This is due to the fact that an episiotomy prevents more significant birthing injuries from occurring. It is the only surgical treatment in obstetrics that may be performed without the patient's consent. Episiotomies are thought to provide a number of benefits, including the ability to make clean incisions next to the perineum and a reduction in the number of perineal tears, especially third-grade perineal cuts. They can be easily repaired and have a better chance of recovery than tears. It is thought that they maintain muscular relaxation of the pelvic floor and perineum, which results in an enhanced sexual role as well as a reduced risk of faecal and/or urine incontinence [6, 7]. In addition,

episiotomy may cause less common complications such as pain, edoema, bleeding, hematoma, infection, and mental distress. These complications are listed in descending order of likelihood. It would seem that most people experience discomfort after having an episiotomy. Episiotomies were often performed on women during the beginning of the puerperium [8] because there was a risk that the lesion might not heal properly. Episiotomies are routinely performed by obstetricians, which is unfortunate since it was formerly believed that doing so would speed up the second phase of delivery and reduce the risk of impulsive perineal damage [9].

During the postpartum period, there is a wide variety of treatment options available to facilitate the healing of episiotomy wounds. Among them are the following: the use of cold compresses, the local application of dry heat (also known as infrared treatment), the use of sitz baths, the performance of kegel exercises, and perineal care [10]. Infrared rays have a curative impact on the body by increasing blood flow and decreasing sensations of discomfort. This will assist to bring about the resolution of inflammation by increasing the availability of oxygen and nutrients that are available to the tissues. It will also expedite the elimination of waste products and speed up the process. The calming impact that heat has on the surface sensory nerve endings is very definitely responsible for the pain alleviation that occurs when the heat is just modest. In addition to this, it helps to relax the muscles and facilitates the release of any muscle spasms that may have been caused by an injury or inflammation [11].

Infrared therapy is an appropriate substitute intervention for those who have episiotomy injury, and it has the biological outcome on cutaneous vasodilation as a result of the release of chemical vasodilators, histamine, and parallel ingredient, along with the potential for a direct consequence on blood vessels [11, 12]. During the postpartum period, one of the primary responsibilities of health workers should be to offer comfort to the mother, assist in the relief of pain, and avoid infection. As a result, accelerating the healing of the incision caused by the episiotomy is one of the primary concerns after a normal birth. The nurse has the primary obligation of identifying women who have had episiotomy and providing them with the vital, effective, and educational care they need. They have the primary responsibility of providing care and health attention to women during the gestational, obstetrical, and postpartum phases of pregnancy, and their goal is to improve the maternal and

neonatal outcomes by preventing and/or reducing complications that arise during or after childbirth [13, 14].

In this region, a large number of different kinds of activities are carried out. However, nurses and midwives have a responsibility to understand the significance of the care they provide and the possible influence—both good and negative—that the recommended therapy might have on the healing process. As a result, it is now their obligation to find the means of avoiding and minimising maternal morbidity as well as the means of healing pain in a manner that is efficient with regard to financial resources.

SIGNIFICANCE OF THE STUDY:

This surgical operation is carried out on a huge scale all around the world. 27 percent of women worldwide have had an episiotomy, with 54 percent of those women being nulliparous and 6 percent of those women being multiparous. In underdeveloped nations, the percentage of episiotomies performed varies anywhere from fifty to ninety percent. The monotonous episiotomy has been a recognised method of medical practise for a good number of years in quite a few different nations [15]. In underdeveloped nations, like Egypt, regular episiotomy assisted vaginal birth is a widespread practise. Episiotomies are performed to facilitate vaginal delivery. Episiotomies are performed more often than necessary because obstetricians believe that they may avoid pelvic floor relaxation and associated scream, which can lead to urine incontinence, and speed up vaginal delivery [16]. This idea is responsible for the prevalence of regular episiotomies.

OBJECTIVE OF STUDY:

As a consequence of this, the current investigation was carried out to evaluate the impact of infrared light treatment on episiotomy wound restorative in addition to pain alleviation among postpartum ladies.

OBSERVATIONS:

Table 1: The study subjects' distribution along with their socio-demographic characteristics

Variables	Study group (n = 40)		Control group (n = 40)		χ^2 (p value)	
	N	%	N	%		
Age group (years)	< 21	5	12.5	7	17.5	1.366 .713
	21-	28	70.0	23	57.5	
	26-	4	10.0	6	15.0	
	≥ 30-40	3	7.5	4	10.0	
	Mean & SD	24.3 ± 1.7		23 ± 3.4		
Educational level	Illiterate	3	7.5	4	10.0	0.914 .9224
	Read & write	7	17.5	5	12.5	
	Basic education	10	25.0	8	20.0	
	Secondary school	15	37.5	17	42.5	
	University	5	12.5	6	15.0	
Residence	Rural	18	45.0	13	32.5	1.31
	Urban	22	55.0	27	67.5	.251
Occupational Status	House wife	18	45.0	15	37.5	1.73
	Manual	15	37.5	13	32.5	.420
	Professional	7	17.5	12	30.0	
Type of family	Nuclear	16	40.0	13	32.5	0.486
	Extended	24	60.0	27	67.5	.48

Episiotomy is one of the most frequent surgical operations in the field of obstetrics, and it is performed during the last portion of the second phase of the delivery process [22]. The mother who undergoes this procedure is classified as having greater blood loss in combination with labour, and there is a risk of improper wound restorative and increased pain during the early postpartum period. In addition, the mother is at a greater risk of having an adverse reaction to the anaesthesia. It is anticipated that the provision of an abundance of care measures would facilitate perineal healing [23, 24]. Therefore, the purpose of this research was to evaluate the impact of infrared light treatment on episiotomy wound restorative in addition to pain alleviation among postpartum women.

The study groups of women who participated in this research were comparable in terms of their features, and the vast majority of them had never been pregnant before. As a result of the fact that education tends to increase women's levels of autonomy, as well as increased levels of self-reliance and the competencies necessary to make choices about their own health, It is likely to be said that women with higher levels of education look for better health care. In the current research, slightly more than one third of moms in both groups lived in rural regions and had a secondary education or lower. This is shown in the study group by the women's willingness to cooperate, accept, and carry out the

infra-red treatment. Additionally, in terms of the occupations of the women, the research discovered that the majority of the women in both groups were housewives.

At this time, there is no available scientific data to support the use of regular episiotomy care as a means of preventing cerebral haemorrhage or any other issues that may arise during the process of giving birth. In light of this, it is imperative that the influence that poverty has on the accessibility of certain resources for the treatment of episiotomy be taken into account [25]. According to the findings of this survey, a lower proportion of women living in rural areas than those living in urban areas had a poor socioeconomic status. This result is consistent with a research that was carried out in Iraq by Ahmed H.M. (2015), [26] which claimed that roughly 62.4% of the population studied belonged to a lower socioeconomic status that was very poor. This result is consistent with the findings of the study. It's possible that this is attributable to the fact that both nations had a low income per person.

Concerning the origins of women's episiotomy care information, the present study found that approximately half of the women studied obtained their knowledge about episiotomy care from members of their own families, followed by neighbours or friends, then the media, and finally private medical practitioners. It is possible that it is due to the fact that around two thirds of the people who participated in the research were living as part of an extended family. When two or more women of reproductive age from various generations of the same family get together and talk about their prior experiences, including prenatal and postnatal care, they are said to be part of an extended family. In contrast, Oluwasola T. (2017) [27] found that 65.5% of respondents had a continuous perception of episiotomy, and the primary source of knowledge was the health personnel. These results are in agreement with their findings. The incongruity of the findings may be ascribed to the variations in culture as well as the crucial role that families have in Arab nations on the health of women, as well as on the transformation of information and the sharing of their experiences.

Instructions for necessary episiotomy care should be followed by mothers in order to make a full recovery from this relatively minor operation. Whereas, the majority of them often do not prevent the tugging pain from perineal stitches in the postpartum period, which is discomfort that hinders with their ability to

relax and sleep, as well as with their ability to eat and sit comfortably while holding their infant [28].

The present research shown that restorative took place within four days, and that they achieved excellent healing sooner and quicker than the control group, which made use of the usual treatment of episiotomy. Therefore, using an infra-red light as a treatment strategy for episiotomy wound restorative is preferable than using the other method. This result is comparable to the findings of a study conducted in India by Nethravathi et al. (2015) [29], which stated that after intervention revealed a significant great percentage of mothers at puerperium (92.64 percent) had healthier wound restorative within four days, in contrast to none of the mothers in the control group. However, these findings are at odds with those of an earlier Egyptian research that was carried out in (2012). That study found that, contrary to the common belief, episiotomy restoration may begin as early as two weeks after the procedure and take anywhere from four to six months to complete.

An intervention research was carried out by Kaur (2013) [12] to assess the impact of dry heat (Hair Drier) against moist heat (Sitz Bath) on pain and wound restorative at episiotomy region among postnatal women hospitalised in Nehru Hospital, Chandigarh. This study was identical to the present study. Whereas, after the intervention, the patients who were given the dry heat had a lower level of pain intensity compared to those who were given the sitz bath in group two. In spite of the fact that the results of the current study showed that the mean and standard deviation of episiotomy pain score among participants in the control group was significantly higher in comparison to the study group across all three days of observation I and II, there was a statistically significant difference between the two groups.

As a final point, it should be stated that the future of nursing should assert that nursing has a dangerous involvement in healthcare reform and the burdens for a safe, quality, patient-centered, reachable, and affordable healthcare system. This assertion is warranted by the fact that technological developments are constantly increasing the difficulties posed by health care means and new health care trends. In addition, the nursing profession must place a greater focus on modernisms in order to enhance the nursing care practises. It is an exciting moment to be a part of the developments taking on in the medical field right now. The role of nurses as healthcare professionals is

growing and expanding as a result of alterations in the manner in which care is delivered, advancements in technology capabilities, and rising levels of patient expectations. As a result of this development, nurses will need to ensure that they have access to the most recent information in order to effectively evaluate and care for their patients.

CONCLUSION:

It was evident from the data that the study hypothesis was accepted and validated, where the researchers hypothesised that postpartum women who used infrared light treatment on episiotomy wounds would demonstrate quicker wound healing than those who used conventional routine care. This was the case. Therefore, infrared treatment has the potential to serve as an efficient method of management for health care professionals in their day-to-day work caring for postpartum moms.

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