



EFFECT OF TOPICAL APPLICATION OF BREAST MILK ON EPISIOTOMY WOUND HEALING- A LITERATURE REVIEW

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ABSTRACT

The investigator's objective is to ascertain the outcome of topical application of breast milk on episiotomy wound healing amidst postnatal women. The procedure used most frequently to lower the likelihood of developing additional complications is an episiotomy. The most common reasons for performing the episiotomy are: rigid perineum, macrosomia, face presentation, breech delivery, shoulder dystocia, forceps delivery, ventouse delivery, and previous perineal surgery. A fiber-rich diet, cold compression, Sitz baths, vitamin C consumption, infrared bulb therapy, betadine, and normal saline are the alternative treatments which are used to heal episiotomy. Breast milk has such healing properties that it accelerates healing and reduces pathogens on the wound surface. When researchers searched for areas of interest, many studies were not available. Therefore, Investigator searched sufficient information from the research studies regarding healing properties of breast milk and topical application of breast milk on episiotomy wound healing.

Keywords: Topical Application, Breast milk, Episiotomy wound healing

INTRODUCTION

In order to facilitate the fetus' easy passage across the birth canal, episiotomies are routinely carried out during second stage of labour. World Health Organization recommended a maximum episiotomy rate of 10%, which was a firm and healthy stance against episiotomy [1]. In India, where the average episiotomy rate is 70%, episiotomies are the most routine procedure for women who deliver in tertiary level public hospitals [2]. Midwives and nurses have a significant role in the care of episiotomies [1].

Local wound treatment and pain reduction are included in episiotomy care. There are many alternative treatments are used for episiotomy wound like apply aloe vera gel, Vitamin C consumption, Infrared therapy, Lavender oil, Betadine, Normal saline and combination of olive oil and honey, etc. [3].

Human breast milk contains antimicrobial compounds, including a variety of substances such as antibodies, lysozymes, polymorph nuclear leukocytes, and bifidus factor, which can be used to treat episiotomy wounds. An immune globulin known as the

IgA antibody guards' wounds against numerous skin infections. White blood cells contain anti-inflammatory properties, while lysozyme destroys bacteria including Enterobacteriaceae and gram-negative bacteria. Factor bifidus reduces epithelial cell adhesion, promotes the growth of helpful bacteria, and competes with cellular receptors for binding to pathogens [4].

The researcher explored numerous reviews of the literature in both printed and electronic databases, including PubMed, Google Scholar, CINHAI, EBSCOhost, MedLine, and numerous journals, to acquire information for the same.

MATERIAL METHODS AND FINDINGS

Researchers divided into the following two subsections after studying a various literature review:

1. Literatures related to topical application of breast milk on episiotomy wound healing.
2. Literatures related to Healing properties of Human Breast milk.

Table 1: Literature Review

<p>Author: Nuraini S, Saadah S, Rismawati S [5] Year: 2019 Country: Tasikmalaya</p>	<p>Objective: To determine that breastfeeding affects postpartum mothers' perineal wound healing at the 1-7 day period.</p>	<p>Methodology: A pre-experimental study was performed on 70 Postnatal mothers selected using Purposive sampling technique. Two doses of topical breast milk were administered to the intervention group: 0.25 cc of breast milk was given with a syringe from 1-3 days, and 2 cc was applied by spreading the milk on cotton from 4-7 days and compressing the lesion for 5 minutes. Antiseptic</p>	<p>Result: A p value of 0.039 was used to support the finding that perineal wound healing scored at 66.7 % with in intervention group compared to 36.7 % with in control group.</p> <p>Conclusion: It was demonstrated that topical breastmilk has a healing effect on</p>
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		soap was used for perineal care in the control group. REEDA scale was used to gather data from day 1 to 7 for perineal wound assessment.	perineal wounds. Future research investigations can use this work as a guide.
Author: Admasari Y, Santoso B, Suherni T, Mashoedi ID, Mardiyono M [6] Year: 2017 Country: Indonesia	Objective: To emphasize the benefits of adopting human milk as an alternative applied topically for postpartum women's perineal wounds.	Methodology: A quasi-experimental study was performed on 30 mothers selected using Accidental sampling technique. The mothers' breast milk was adequately expressed, collected in a spot that was clean, and applied to the perineal wound using cotton swabs. while 10% povidone iodine-dipped cotton was applied as a treatment in the control group. Data were collected using REEDA scale 4 times, period 1 (6-10 hours postpartum), period 2 (20-24 hours postpartum), period 3 (40-48 hours postpartum) and period 4 (7 days postpartum).	Result: The difference between the mean scores for the intervention group's perineal wound healing process and the control group's was 19.77, which was statistically significant ($p = 0.002$). Conclusion: When treating perineal wounds, breast milk performed better than povidone iodine. To expedite the healing of perineal wounds, breast milk is recommended.
Author: M Hables R, S Mahrous E [7] Year: 2020 Country: Egypt	Objective: To investigate that breast milk, coconut oil, and olive oil affect breastfeeding mothers' nipple pain..	Methodology: A quasi-experimental research was conducted with 135 postpartum women recruited through purposive sampling technique. Participants were allocated into three groups at randomly: Employing olive oil in group 1, coconut oil in group 2, and breast milk in group 3. Assigned intervention was used to rub the affected nostril, then allow it to air dry continuously until the 14th day. Predesigned questionnaire and nipple trauma scale were used to gather data at 1st day, 7th day and 14th day.	Result: Olive oil scored 64.4%, coconut scored 57.8%, and breast milk scored 31.1% in the healing of nipple pain, which was supported by a p value of 0.006. Conclusion: Breast milk, olive oil, and coconut oil all had beneficial effects on the treatment of nipple pain, but olive oil had the major impact.
Author: Ismail NI, Hafez SK, Asmaa Ghaly AS [8] Year: 2019 Country: Egypt	Objective: To correlate breast milk, peppermint water, and breast shell as a therapy for painful nipples in postpartum lactating mothers.	Methodology: A quasi-experimental study was directed on total 120 puerperal nursing mothers with nipple injury selected using convenient sampling technique. Study group 1 should apply 2 to 3 drops of expressed milk to their nipple and areola before letting the air dry. Before feeding, study group 2 applied cotton soaked in peppermint water on the areola and nipples. The breast shells should be applied to the breasts, according to study group 3. Visual analogue pain intensity scale, nipple soreness rating, nipple trauma scale, breast feeding observation checklist, and Structured interview schedule were used to gather the data at 3 rd , 7 th and 14 th day of intervention.	Result: The mean score for nipple injury was 4.325 on the first day before intervention and 0.425 on the fourteenth day following intervention, demonstrating a p value of 0.00001. Conclusion: Due to its antibacterial, calming, and numbing properties, peppermint water was much more effective in damaged nipple healing and pain relief. However, peppermint water, breast milk, and breast shell can lessen nipple damage and pain.
Author: Ekta Patel, Dr. Anjali Tiwari [9] Year: 2019 Country: India	Objective: To determine that breastmilk administered topically affects the time the umbilical cord is severed.	Methodology: A quasi experimental research was executed on 80 newborns selected using Convenient non probability sampling technique. breastmilk applies over umbilical cord stump for experimental group participants twice a day and no intervention for control group until cord separated. Performa of selected neonatal variables and an observational checklist for the umbilical cord were used to gather the data every day until the cord was separated for both groups.	Result: Chi square of experimental group was high (11.704) compared to control group chi square (3.452) at p value 0.007. Conclusion: Breastmilk applied topically has an impact on how quickly the umbilical cord separates. It is the quickest, cheapest method to use when trying to separate the umbilical cord.
Author: Lyngdoh D, Kaur S, Kumar P, Gautam V, Ghai S [10] Year: 2018 Country: India	Objective: To compare the effects of human milk and 4 % chlorhexidine as 2 cord care treatments on bacterial growth and other health outcomes.	Methodology: An experimental study was conducted on a total of 105 newborns collected using a randomized sampling technique. Dry cord care, 4% chlorhexidine, and human breast milk are the three groups. Once daily topical applications of human breast milk or 4 % chlorhexidine were made till the cord detached. The umbilical cord was air-exposed and kept dry by the dry cord care group. Planned interviews were used to gather data on the first, third, and fifth days.	Result: At a p value of 0.001, the group receiving dry cord management had the maximum colonization (71.4%), the group receiving breast milk had a medium colonization (22.9%), and the group receiving 4 percent chlorhexidine had the lowest colonization (2.9%). Conclusion: Human breast milk and 4 percent chlorhexidine are both excellent at reducing the colonization of pathogenic bacteria, offering them an acceptable substitute for dry cord care.
Author: Seifi B, Jalali S, Heidari M[11] Year: 2017 Country: Iran	Objective: To assess the impact of breast milk on diaper dermatitis recovery.	Methodology: A clinical trial was done on total 30 infants with diaper dermatitis collected using open study. Apply breast milk thrice a day to the area that is afflicted in the case group, then allow the area to air dry. In the control group, they were instructed to give the baby a warm water bath and pat it dry. Data gathering tools were used to gather data through open study at 1st, 3rd and 5th day.	Result: 20% of the case group's infants failed to respond with mild erythema, while 80% of them had no erythema. Because of the long healing time, 73.3 percent of the neonates in the control group received standard care. Conclusion: An efficient, secure, and

			practical treatment option is breast milk. For the parents in primary health facilities, more educational activities need to be organized.
Author: GharakhaniBahar T, Oshvandi K, Zahra Masoumi S, Mohammadi Y, Moradkhani S, Firozian F [12] Year: 2016 Country: Iran	Objective: To evaluate the relative effects of mint tea bags, mint cream, and breast milk on the lactational healing of broken nipple.	Methodology: A comparative research was conducted on a total of 216 samples with cracked nipples selected using a random sampling technique. For 14 days, treatments were performed at least four times per day. A cracked nipple measuring scale and a demographic questionnaire were used to gather data on the 4th, 8th, and 14th days.	Result: Mean score of mint tea bag group was 0.07, mint cream was 0.69 and breast milk group was 0.09. Conclusion: For the treatment of cracked nipple, breast milk proved more successful than mint tea bags and cream.
Author: Berents TL, Ronnevig J, Soyland E, Gaustad P, Nylander G, Loland BF [13] Year: 2015 Country: Norway	Objective: To evaluate the efficacy of applying fresh human milk vs a lubricant to atopic eczema patches on early childhood.	Methodology: A randomized clinical trial was conducted on total of 18 children selected using convenient sampling technique. The intervention group administers milk to the entire eczema area and wait for absorption. No treatment for control group. Moisturizing lotion was applied to both groups thrice a day for 4 weeks. Bacterial cultures once a weekly for four consecutive weeks was used to gather the data.	Result: 2 children in the intervention group had less infection around them. 3 Children in the control group had less infection at the end. One child's eczema spot disappeared after participation in this trial. Conclusion: Fresh expressed human breast milk treatment has good impact and is a highly safe, simple, at-home procedure.
Author: Ghaemi S, Navaei P, Rahimirad S, Behjati M, Kelishadi R [14] Year: 2012 Country: Iran	Objective: To assess colostrum's ability to prevent newborn conjunctivitis.	Methodology: A random clinical trial was done on a total of 300 preterm newborns who had ocular swabs that were culture-negative. The control group did not receive any therapy, while the neonates in the intervention group were given two drops of colostrum in each eye, while other neonates were received topical ointment of erythromycin. Culture ocular swabs were used to gather the data.	Result: Frequency of relieving conjunctivitis in colostrum group had 68 cases, Topical antibiotic had 69 cases and Control group had 65 cases. Conclusion: For the treatment of neonatal conjunctivitis, colostrum was found as an alternative therapy. It has no negative effects and is easily accessible. There is a need for public education on current consequences.

DISCUSSION

Only two research on the topical use of breast milk on episiotomy wound healing were found by the investigator after searching through numerous literature reviews and studies. Breast milk used topically has been shown by research to hasten the healing of wounds. As a result, the researcher prefers to carry out the study in a certain location.

CONCLUSION

Natural elements in breast milk provide a variety of health-promoting effects. Numerous studies were conducted with the

advantages of breast milk in mind, as the researcher discovered during this investigation. Only a small number of studies were discovered to be related to breast milk application topically on episiotomy wound healing, which is the researcher's area of interest. The researcher noticed that while many studies were carried out to treat the various conditions linked to applying breast milk, such as umbilical cord separation time, nipple soreness, bacterial colonization, traumatic nipple, mucous membrane of mouth and skin, bacterial colonization, and diaper dermatitis. However, researchers

recognized that topical administration of breast milk has a good effect on episiotomy wound healing. None of the investigations were carried out in an Indian context. Therefore, the investigator desired to carry out the research study in a suitable environment through the literature review.

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