ISSN 2456-3110
Vol 5 · Issue 5
Sept-Oct 2020

Journal of Ayurveda and Integrated Medical Sciences

www.jaims.in

JAIMS

An International Journal for Researches in Ayurveda and Allied Sciences

Charaka Publications

Indexed

Journal of
Ayurveda and Integrated Medical Sciences
ISSN 2456-3110
ORIGINAL ARTICLE Sept-Oct 2020

A clinical study to evaluate the efficacy of *Murivenna* application on Episiotomy Wound

Dr. Keerthy P[1], Dr. Savita S. Patil[2]

[1]Post Graduate Scholar, [2]Professor, Department of Prasooti tantra and Streeroga, Sri Sri College of Ayurvedic Science and Research, Bengaluru, Karnataka, INDIA.

ABSTRACT

A surgically planned incision on the perineum and the posterior vaginal wall during the second stage of labor is called episiotomy (Perineotomy). It is in fact an inflicted second-degree perineal injury. It is the most common obstetric operation performed. This is done to enlarge the vaginal introitus to facilitate easy and safe delivery of the fetus and to minimize overstretching and rupture of the perineal muscles and fascia thus to reduce the stress and strain on the fetal head. This wound of episiotomy is associated with a delicate area of the female with immense pain and discomfort and seeks appropriate medical care and attention. If ignored, it may lead to puerperal wound infections and delayed healing that can interfere mother-infant interaction, lactation and prolonged hospital stay. Episiotomy wound care should be start immediately after suturing the wound in order to reduce pain and inflammation. The surgical wound of episiotomy can be considered as *Sadyo Vrana*. Different treatment modalities have been told in Ayurveda for *Vrana Chikitsa*. Drugs having *Shodhana* and *Ropana* qualities are essential for healing. In this research study total 30 patients were registered and treated in two groups, group A with application of *Jatyadi Taila* on episiotomy wound after *Ushna Jala Parisheka* as a standard control group and Group B with application of *Murivenna* after *Ushna Jala Parisheka* as a trial group. Encouraging results were observed in *Murivenna*. Study emerges that *Murivenna* possess better pain relieving and tenderness diminishing properties.

Key words: *Episiotomy, Vrana, Jatyadi Taila, Murivenna.*

INTRODUCTION

The most unique aspect of a women's life is reproduction and mother attain uniqueness and true virtue through childbirth. Giving birth to a child is a hardship for every women and woman involved in the process of childbirth awaits intervention by some means, which would shorten the duration of pain and discomfort. Along with a healthy mother, a healthy baby without any iatrogenic injury is the requirement of an obstetrician, hence an episiotomy becomes inevitable at times.

Hence, with due consideration a carefully planned surgical procedure called Episiotomy[1] is performed on the perineum and posterior vaginal wall during the second stage of labor just prior to crowning, ensures an expedited labor and avoiding the perineal tears. This wound of episiotomy is associated with a delicate area of the female with immense pain and discomfort and seeks appropriate medical care and attention. If ignored, it may lead to puerperal wound infections and delayed healing that can interfere mother-infant interaction, lactation and prolonged hospital stay. Puerperal sepsis is one of the major causes of maternal morbidity and mortality. 11.5 percent of the postnatal mothers are dying with puerperal sepsis.[2]

Address for correspondence:
Dr. Keerthy P.
Post Graduate Scholar, Department of Prasooti tantra and Streeroga, Sri Sri College of Ayurvedic Science and Research, Bengaluru, Karnataka, INDIA.
E-mail: keerthy.ponnath@gmail.com

Submission Date: 18/09/2020 Accepted Date: 13/10/2020

Access this article online

Quick Response Code

Website: www.jaims.in

DOI: 10.21760/jaims.5.5.8

ISSN: 2456-3110 **ORIGINAL ARTICLE** Sept-Oct 2020

So episiotomy wound care should be start immediately after suturing the wound in order to reduce pain and inflammation.

Episiotomy is one of the most employed procedures for women delivering in tertiary level public hospitals in India with an overall episiotomy rate of about 70%.[3] According to the statistics, total percentage of normal deliveries with episiotomy in Karnataka is 58.6%. A survey conducted among eleven developing countries including India across the Global Network for Women's and Children's Health Research sites (2003) reported over 90% episiotomy rates among nullipara though overall rate was about 40%.[4] A current medical literature documented that 60% of women with episiotomies reported severe postpartum pain, 25% experienced infection at the site and 20% had problems with intercourse after delivery.[5]

This surgical wound can be considered on the lines of *Sadyovrana* and approached accordingly. Acharya Sushruta has mentioned *Shashti Upakramas* and *Sapta Upakramas* for the complete management of *Vrana*. *Taila* is one among the sixty treatment modalities from classics which has been beneficial for controlling pain and healing of the wound.[6] *Murivenna* - a commonly used *Anubutha Yoga* listed in Kerala Ayurveda pharmacopeia has *Vedhanasthapaka* and *Shothagna* effect.[7] It promotes fast recovery from both fresh and chronic wounds and ulcers. Hence in the present study, the efficacy of *Murivenna* application on episiotomy wound will be observed under aseptic precaution.

Aims and Objectives

1. To evaluate the efficacy of *Murivenna* on episiotomy wound.
2. To reevaluate the efficacy of *Jathyaditaila* on episiotomy wound.
3. To compare the efficacy of Murivenna with *Jatyaditaila* in the management of Episiotomy wound.

Materials and Methods

30 subjects who underwent normal vaginal delivery with episiotomy were selected for study from the IPD of Department of Prasooti Tantra and Streeroga, Sri Sri College of Ayurvedic Science and Research Hospital, Bangalore.

Ethical Clearance and Consent

Institutional ethical committee clearance and signed informed consent from subjects was obtained prior to the commencement of the study.

Sampling method and research design

- It is a single blind comparative clinical study with pre and post test design, where 30 subjects with episiotomy were selected.
- The selected 30 subjects were divided into 2 groups with 15 subjects each.
- A detailed proforma were prepared considering all points pertaining to history, course of labor, wound examination etc.
- The parameters of signs and symptoms were scored on the basis of standard methods and were analyzed statistically.

Inclusion Criteria

- The subjects aged between 20-40 years.
- Both primi and multigravida who underwent vaginal delivery with episiotomy.

Exclusion Criteria

- Subjects below the age of 20 and above the age of 40
- Subjects with HIV, HBsAg, VDRL were excluded
- Any systemic disease that interfere normal wound healing like Diabetes mellitus, Hypertension, blood coagulopathy.
- 3° and 4° perineal tear cases excluded.

Study Design

- Thirty subjects with sutured episiotomy wound following normal vaginal delivery were

ISSN: 2456-3110 ORIGINAL ARTICLE Sept-Oct 2020

categorized in to two equal groups by simple randomization technique.

- The nature of study was explained to each and every subject in detail and written consent was taken.

SN	Group	Group	Medication	No. of patients	Duration
1.	Group A	Control	*Jathyadi Taila*	15	7days
2.	Group B	Trial	*Murivenna*	15	7days

Wound healing was assessed during treatment i.e. on 3rd day.

Follow up: was done on 8th and 15th day

Statistical Analysis

The data collected were analyzed by the SPSS software (Version 20). The following tests were done:

1. Unpaired t test - Objective parameters between the groups.
2. Paired t test - Objective parameters within the group.
3. Manwhitney U test - Subjective parameters between the groups.
4. Wilcoxon Sign Rank Test - Subjective parameter within the group.

Plan of treatment

After *Prakshalana* with *Sukhoshnajala*, sufficient quantity of *Murivenna* was taken on a sterile cotton gauze and applied over the dry wound area under aseptic precaution.

Duration of Treatment: 7 days

Assessment Criteria

Subjective parameters

- Pain
- Pricking sensation at the region of wound.

Objective parameters

- REEDA SCALE[8] (Redness, Edema, Ecchymosis, Discharge, Approximation)

Gradation of Subjective parameter

Grading of Pain

- Grade 0 - No pain
- Grade 1 - Localized pain during movement but tolerable
- Grade 2 - Localized pain during movement which affects the movement
- Grade 3 - Localized pain at rest but not disturbing the sleep

Grading of Pricking sensation

- Grade 0 - No
- Grade 1 - Yes

Gradation of Objective parameter

Grading of REEDA scale

Parameter	Finding	Points
Redness	None	0
	Within 0.25cm of the incision bilaterally	1
	Within 0.50cm of the incision bilaterally	2
	Beyond 0.50cm of the incision bilaterally	3
Edema	None	0
	Perineal <1cm from incision	1
	Perineal / vulvar,1-2cm from the incision	2
	Perineal / vulvar, >2cm from the incision	3
Ecchymosis	None	0
	Within 0.25cm bilaterally or 0.5cm unilaterally	1

ISSN: 2456-3110 **ORIGINAL ARTICLE** Sept-Oct 2020

	Within 1cm bilaterally or 0.5-2cm unilaterally	2
	>1cm bilaterally or >2cm unilaterally	3
Discharge	None	0
	Serous	1
	Serosanguinous	2
	Bloody,Purulent	3
Approximation	Closed	0
	Skin separation <=3mm	1
	Skin andsubcutaneous fat separated	2
	Skin,subcutaneous fat and Fascial layer separation	3
REEDA score = Sum (points for all 5 parameters) Minimum score = 0, Maximun score = 15		

OBSERVATION

In the present study on 30 patients, 76.6% belongs to 20-25yrs, 23.3% belongs to 26-30 yrs of age Healing of wound was appreciable in most of the patients as most of them were young and wound is afresh. It was noted that In young age, skin and muscle tone is good, metabolism is faster and circulation is good. Out of 30 patients 76.66% were primipara and 23.33% were multipara. Maximum number of patients were primi para patients and in primi para there will be rigidity in perineum, same was observed in the present study. All patients received MLE, as mediolateral episiotomy has very less complication when compared to median which is associated with a higher risk of injury to the anal sphincter and rectum. In maximum number of patients babies weigh more than 2.5kg. Increasing weight of baby influence to take episiotomy Pain in episiotomy wound As it is *Vaidyakruta Vrana,* so maximum number of patients had severe pain at the site of episiotomy. Maximum number of patients had pricking sensation in episiotomy wound area, it may be because of the suture material in situ and increased tension in the episiotomy site due to suturing. One subject in group B and Two subjects in group A had gapping of episiotomy wound seen on the 8th day. The reasons noted were as follows In 1st case (primi in Group B) improper hygiene was noted that may contributed to the above said condition. In 2nd case (Primi in Group B) pt. was adopted squatting position while feeding which may lead to the particular condition. In 3rd case (multi in Group B) due to the presence of previous episiotomy scar this event may have taken place.

Table 1: Showing the result of grading based on Subjective and Objective parameter in Group A.

SN	Pain at episiotomy site				Pricking sensation at episiotomy site				REEDA Score			
	Day 0	Day 3	Day 8	Day 15	Day 0	Day 3	Day 8	Day 15	Day 0	Day 3	Day 8	Day 15
1.	1	1	0	0	1	1	0	0	2	2	0	0
2.	2	2	1	0	1	1	0	0	2	2	2	0
3.	3	2	0	0	1	1	0	0	4	3	0	0
4.	3	2	0	0	1	1	0	0	4	4	0	0
5.	3	2	0	0	1	1	0	0	4	2	0	0
6.	3	2	0	0	1	1	0	0	2	2	0	0

ISSN: 2456-3110 **ORIGINAL ARTICLE** Sept-Oct 2020

7.	2	1	0	0	1	1	0	0	3	2	0	0
8.	2	2	0	0	1	1	0	0	2	2	0	0
9.	3	2	1	0	1	0	0	0	3	3	2	0
10.	3	2	0	0	1	1	0	0	3	2	0	0
11.	2	2	0	0	1	1	0	0	4	2	0	0
12.	3	2	0	0	1	1	0	0	2	2	0	0
13.	3	2	0	0	1	1	0	0	3	1	0	0
14 .	2	2	0	0	1	1	0	0	2	2	0	0
15.	2	2	0	0	1	1	0	0	4	2	0	0

Table 2: Showing the result of grading based on Subjective and Objective parameter in Group B.

SN	Pain at episiotomy site				Pricking sensation at episiotomy site				REEDA Score			
	Day 0	Day 3	Day 8	Day 15	Day 0	Day 3	Day 8	Day 15	Day 0	Day 3	Day 8	Day 15
1.	2	1	0	0	1	0	0	0	4	2	0	0
2.	2	1	0	0	1	1	0	0	2	2	0	0
3.	2	1	0	0	1	1	0	0	4	2	0	0
4.	2	1	0	0	1	0	0	0	2	1	0	0
5.	3	1	0	0	1	1	0	0	2	2	0	0
6.	2	1	0	0	1	1	0	0	2	1	0	0
7.	3	2	1	0	1	1	1	0	4	2	0	0
8.	3	2	0	0	1	1	0	0	2	2	0	0
9.	3	2	0	0	1	1	0	0	2	2	0	0
10.	1	1	0	0	1	0	0	0	2	0	2	0
11.	3	2	0	0	1	1	0	0	2	2	0	0
12.	2	1	0	0	1	0	0	0	2	1	0	0
13.	2	1	0	0	1	0	0	0	3	2	0	0
14.	3	1	0	0	1	0	0	0	4	3	0	0

ISSN: 2456-3110 ORIGINAL ARTICLE Sept-Oct 2020

15.	3	2	0	0	1	1	0	0	4	2	0	0

DISCUSSION

Effect of therapy on pain

Effect of *Murivenna* on Pain - There was significant reduction of Pain in group B before and after the treatment with p value 0.001. After the treatment and follow up also the effect on Pain was found but it was statistically not significant with p value 0.317. All the drugs of Murivenna exhibit *Shoolahara* property. There by Murivenna was highly effective in reducing the Pain.

Effect of *Jathyadi taila* on Pain - Here also there was reduction in Pain before and after treatment with p value 0.001 which is highly significant. After the treatment and follow up also the effect on Pain was found but it was statistically not significant with p value 0.157. The drugs like *Jati, Karanja, Yashtimadhu, Kushta, Daruharidra, Abhaya,Tutha* possess *Shoolahara* property. There by *Jathyadi Taila* was effective in reducing the pain.[9]

Comparison between the groups - When we compare effect on Pain between the groups, there is significant reduction in both group, but Group B showed better results on Day 3.

Effect of therapy on wound healing

Effect of *Murivenna* on wound healing - There was significant reduction of REEDA score in group B before and after the treatment with p value 0.000. After the treatment and follow-up also the effect on REEDA score was found but it was statistically not significant with p value 0.334. Drugs like *Karanja, Kumari, Shigru, Paribhadra, Palandu, Narikela Taila, Tamboola* and *Shatavari* of *Murivenna* exhibit *Shothahara, Vranashodhaka* and *Vranaropana* property. There by *Murivenna* was highly effective in wound healing.[10]

Effect of *Jathyadi Taila* on wound healing - Here also there was reduction in Pain before and after treatment with p value 0.000 which is highly significant. After the treatment and follow up also the effect on wound healing was found but it was statistically not significant with p value 0.164. The drugs like *Jati, Karanja, Yashtimadhu, Kushta, Daruharidra, Abhaya, Tutha* possess *Vranashodhaka* and *Vranaropana* property. There by *Jathyadi Taila* was effective in wound healing.[12]

Comparison between the groups - When we compare effect on REEDA score between the groups, there was significant reduction in both group after treatment, but Group B showed better results on Day 3 itself with p value 0.075 but which was not significant statistically.

Mode of action of *Murivenna*

Almost all drugs of *Murivenna* possess *Katu* and *Tiktha Rasa* (drugs like *Palandu, Kumari* and *Vasuka* possess *Madhura Rasa*) / *Katuvipaka / Laghu, Tikshna, Snigdha* and *Ruksha Guna* and all drugs have *Vranashodhana, Vranaropana, Vedanasthapana* and *Shothahara* properties.[11]

Based on *Rasas* - *Katu Rasa* is having properties like *Kaphashamaka* and *Vranaropaka Tiktha Rasa* is having *Pitta Shamaka, Krimihara, Dahaprasamana* and *Kanduhara* properties. Hence due to *Krimihara* action helps it to remove microbes and cleanses the wound, *Dahaprasamana* property which helps to bring about to reduce the burning sensation. *Madhura Rasa* - It has action of *Dhatuvardhana*, *Dahaprasamana, Sandhanakara* and brings about *Varnya* to the skin. The above said properties of the *Rasas* helps in the removal of discharge and reduce the inflammation at the wound site. *Vranaropana* property in these drugs helps in the quick healing of episiotomy wound.

Based on *Gunas* - *Laghu Guna* possess *Lekhana, Ropana* properties *Ruksha Guna* possess *Sthambhana* and *Shoshana* properties. *Snigdha Guna* possess *Mardavakara* and *Varnakara* properties.

Based on *Virya* - *Ushnavirya* is having *Pachana* property (acc. to Dalhana Acharya *Pachanamvranadinam*) *Sheeta* and *Anushna Sheeta* are having properties like *Dahashamaka, Pittashamaka.*

ISSN: 2456-3110 **ORIGINAL ARTICLE** Sept-Oct 2020

Based on *Karma* - All dugs of *Murivenna* have the actions like *Vedanasthapaka, Shothahara, Vranaropaka* and *Vranashodhaka* which will help in the proper healing of the episiotomy wound. All these drugs were processed in the medium of coconut oil which is having properties like *Varnya, Dahashamaka, Pittashamaka, Shoolaprashamana, Vranaropana.* The properties of *Murivenna* such as *Snigdha, Guru, Ushna* are totally opposite to the properties of *Vata*. Thus these properties of *Murivenna* acts against *Vata* and help in subsiding the *Shoola*. *Murivenna* has *Shothahara* actions. 6 drugs in *Murivenna* with *Ushna Veerya* - pacify *Vata*, promote circulation and helps in reducing the localized swelling.

CONCLUSION

The present research work was aimed to find out the effect of *Murivenna* keeping *Jatyadi Taila* as a control drug. Group "A" drug - *Jathyadi Taila* possesses *Vrana Ropana*, *Vedana Sthapana, Shothahara*, *Krimighna* and *Daha Prashamana* properties. Group "B" drug - *Murivenna* also possess *Vrana Ropana, Vedana Sthapana, Shothahar, Dahaprashamana, Kandughna* property and it possesses better pain - relieving properties than *Jatyadi Taila*. The effect of the treatment in both the groups were assessed based on Paired t test, Unpaired t test, Wilcoxon sign rank test and Manwhitney test. *Murivenna* had highly significant results in the subjective and objective criteria as same as *Jatyadi Taila.* It can also be concluded from the t-test that the effect of *Jatyadi Taila* and *Murivenna* upon wound healing was same after treatment. *Murivenna* showed better results than *Jatyadi Taila* on pain at the region of the wound on the 3rd day itself but when we compare statistically, 7 days of *Murivenna* application on episiotomy wound was found to be equally effective with 7 days of *Jathyadi Taila* application. There were no other factors which affected the process of healing noted during the course of treatment.

REFERENCES

1. Bobak, Lowdwermilk, Jensen. Maternity nursing. 4th edition. St.Louis Missouri: Mosby publications;1995.
2. Dutta DC. Text book of Obstetrics including perinatology and Contraception. 9th ed. New Delhi: Jaypee Brothers Medical Publishers; 2018.p.528-531.
3. Saxena RK, Singh SG, Babu KM. Restricted use of episiotomy. J Obstet Gynecol India. 2010;60(5):408–12.
4. Kroop N, Hartwell T, Althabe F. Episiotomy rates from eleven developing countries. Int J Gynaecol Obstet. 2005;91(2):157–9.
5. Nancy Griffin. Avoiding an episiotomy. Safe Mothering 2009 Dec;(75):150-52
6. Srikantha Murthy KR. Susruta Samhita, Chikitsasthana. ch.1, ver.9. Varanasi: Chaukhambha Orientalia; 2008.p.7.
7. Dr. Lalithamma K, editor, Kerala Ayurveda Pharmacopoeia. 2nded. Thiruvananthapuram, Kerala: Kerala Government Ayurvedic Publications;1996.
8. Davidson N. REEDA: Evaluating postpartum healing. J Nurse Midwifery.1974;19:6-9
9. Sharma PV. History of Medicine in India. 1st ed. New Delhi: Indian National Science Academy; 1991.p.71.
10. Sharma PC, Yelne MB, Dennis TJ. Database on Medicinal Plants Used in Ayurveda. 2nd ed. New Delhi: Central council for Research in Ayurveda and Sidha; 2005.vol 6,p.254
11. Raghunathalyer S. Indian medicinal plants, 5th ed. Chennai: Orient Longman; 2004.Vol 1, p.281.
12. Sharma PC, Yelne MB, Dennis TJ. Database on Medicinal Plants Used in Ayurveda. 2nd ed. New Delhi: Central council for Research in Ayurveda and Sidha; 2005.vol 1,p.418

How to cite this article: Dr. Keerthy P, Dr. Savita S. Patil. A clinical study to evaluate the efficacy of Murivenna application on Episiotomy Wound. J Ayurveda Integr Med Sci 2020;5:65-71.
http://dx.doi.org/10.21760/jaims.5.5.8

Source of Support: Nil, **Conflict of Interest:** None declared.

****