To compare the effect of perineal massage in primipara and multipara to avoid extended episiotomy incision

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Abstract-

Background &Aim: Perineal traumas particularly caused following vaginal delivery are associated with short and long term morbidity for women. Therefore, interventions that increase the probability of intact perineum are necessary.The Aim of our study was to compare the effect of perineal massage in primiparaand multipara to avoid extended episiotomy incision.

Material and Method:30 women was selected based on the inclusion and exclusion criteria and were randomly divided in to 2 groups. In experimental group or perineal massage group A (n=15). In control group or non perineal massage group B (n=15). Women in the massage group received massage of the perineum with each contraction during the second stage of labour. At the time of delivery Redda scale was use to assess inflammatory responses in both the groups.

Result : More inflammatory response showed in control group or non perineal massage group. S.D value of group A is ±1.580 which indicates less inflammatory response. S.D value of group B ±1.890, indicates more inflammatory response. P value of analysis is 0.000.

Conclusions: Statistics analysis indicates perineal massage in second stage of labour reduces extent of episiotomy and inflammatory response.Perineal massage appears to have some benefit in reducing 2nd or 3rd degree tears or episiotomies. Perineal massage reduces the

inflammatory responses like (redness, edema, echhymosis) in experimental group or perineal massage group.In control group non perineal massage group have more inflammatory responses and extend of episiotomy or degree of tear also more in control group

Keywords: -Episiotomy,Perineal massage, ,Redda scale.

Introduction

Birth is a process that progresses more smoothly when a woman has familiarity and ease with her perineal area, and perineal massage can facilitate this when initiated up to 6 weeks before the expected delivery time. To do general perineal massage for week ahead of the delivery to help prepare, soften, and stretch the tissues and help the mother become accustomed to the sensations of stretching[1] . An episiotomy is an incision performed between the vagina and the rectum that is used to increase the size of the opening of the vagina to assist in delivery of a baby[1,2]. Episiotomy can be associated with extensions or tears into the muscle of the rectum or even the rectum itself.

Episiotomy is used to enlarge the vagina introitus so as to facilitate easy and safe delivery and minimize overstretching and rupture of the perinealmuscle.At time labour redness, edema, discharge, echhymosis, is seen patient All these factors increases with labour and reach there maximum when Episiotomy given to patient.Due to episiotomy skin become edematous, lacerated, and dischargeFrom site of injury is bloody .Healing or approximation is difficult in grade2, grade3 episiotomy.[3,4]

Prenatal perineal massage has been shown effective in preventing the need for episiotomy and decrease in the amount of tearing a woman has during her birth. The is particularly effective in women over the age of 20 and in women having their first baby. This technique is used to help stretch and prepare the skin of the perineum for birth. Massaging the perineal and vaginal area helps in stretching the tissues in child birth without episiotomy or tearing of skin and muscles. The purpose of our study was to compare the effect of perineal massage in primiparaand multipara to avoid extended episiotomy incision.

Material and Method

Study design:- Experimental study design.
Study duration:-4 months (January 2014-April 2014)
Study done-Ayushman college, Bhopal (Madhya Pradesh)
Source of data:-Ubeja Maternity Hospital, Khandwa (Madhya Pradesh)
Sample criteria:-30 women was selected based on the inclusion and exclusion criteria and were randomly divided in to 2 groups. In experimental group or perineal massage group A (n=15). In control group or non perineal massage group B (n=15).
Inclusion criteria:-
1.Bothprimipara and multipara are considered from 36 week of gestation.
2. women aged 21 to 35 who expected and anticipated the normal birth of a single baby
3.Vertex Presentation of Foetus
4.Single Foetus

Exclusion criteria:-

The women having vulvar varicosities, active genital herpes lesions, yeast infection, or any active vaginal trauma, infection, or sexually transmitted disease.not given consent for perineal massage, on bed-rest for any high-risk condition,known history of hypertension , with placenta praevia.

Procedure:-

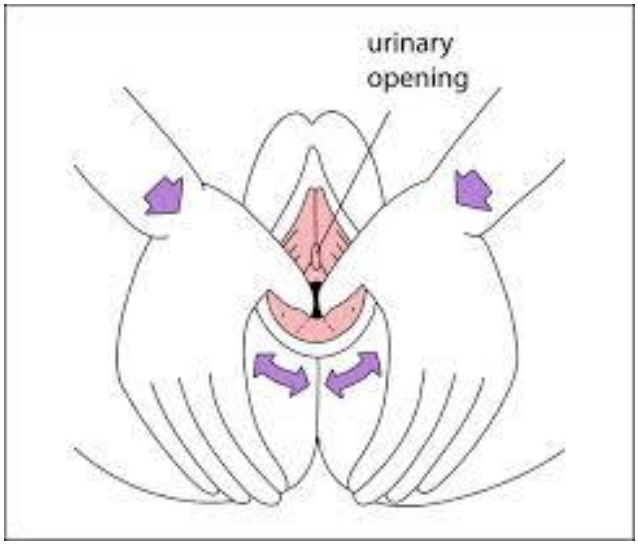
Each patient was explained well about the procedure to be done and its effects. The women were randomly assigned to either the perineal massage group or experimental group (Group A) or the control group non perineal massage group (Group B).The procedure started at time of labour under supervision of consultant gynecologist. Women in the massage group received massage of the perineum with each contraction during the second stage of labour.

Starting position:-The patient in lying position,in a semi-sitting position, squatting against a wall, sitting on the toilet, or standing with one foot up on the edge of the tub or a chair.

Direction:-

In comfortable place and sit or lean back in a comfortable position. Put a lubricant such as KY Jelly, vitamin E oil or pure vegetable oil on thumbs and around the perineum. Place thumbs about 1-1 ½" (3-4 cm) inside vagina Press downwards and to the sides at the same time. Gently and firmly keep stretching until feel a slight burning, tingling, or stinging sensation. Hold the pressure steady at that point with thumbs for about 2 minutes until the area becomes a little numb and don't feel the tingling as much. Keep pressing with thumbs. Slowly and gently massage back and forth over the lower half of vagina, working the lubricant into the tissues. Keep this up for 3-4 minutes. Remember to avoid the urinary opening. As massage, pull gently outwards (forwards) on the lower part of the vagina with thumbs hooked inside (Image 1). This helps stretch the skin as the baby's head will stretch it during birth.

Figure 1-Perineal Massage



At the time of delivery Redda scale (Figure 2) was use to assess inflammatory responses in both the groups.Inredda scale there are five indicator redness, edema, echhymosis, discharge, approximation or healing which showed the inflammatory response[3].

Figure 2-Annexure I

ANNEXURE I-REDDA SCALE for EPISIOTOMY

Points	Redness None	Edema None	Ecchymosis None	Discharge None	Approximation
0	None	None	None	None	Closed
1.	within 0.25cm of incision bilaterally	Less than 10m from incision	within .25cm bilaterally or 0.5cm or bilaterally	serum	Skin separation 3mm or less
2.	Beyond 0.5 cm of incision bilaterally	1-2 cm prom incision	0.25 – 1 cm bilaterally or .5 – 2cm unilaterally	serosanguineous	Skin and subcutaneouss fat separation
3.	Beyond 0.5cm of incision bilaterally	Greater than 2cm from incision	Greater than lcm 1 bilaterally or 2cm in unilaterally	bloody, purulent	skin and subcutaneouss fat and fascial separation

The inflammatory responses assess the extent of incision. More extension of incision shows more value on Redda scale which shows increase inflammatory response.No incision or tear show less inflammatory response.For each participant the length of actual pushing time was calculated from delivery records.Following delivery, information about type of delivery, delivery attendant and perineal status was recorded.Perineal trauma rates involved in the deliveries were compared between the massage group and control group (Figure 3)

Figure 3-Annexure II

Annexure - II

PROFORMA FOR DATA COLLETION

Assessment chart

I. **GENERAL INFORMATION:**

- Name
- Age
- Address
- Occupation
- Referred by

II. **OBSTETRIC HISTORY:**

- Number of previous pregnancy
- Duration of Labour
- Expected Date of pregnancy
- H/O Present pregnancy
- H/o previous pregnancy

PATIENT STATUS AFTER DELIVERY

NAME	STATUS OF DELIVERY	INTACT PERINEUM	DEGREE OF TEAR

Variables :-

Dependent variable – extent of episiotomy incision and reeda scale
Independent variable - perineal massage

Instrumentation :-

Lubricant oil(olive oil),Gloves ,Pillows ,Warm water,Towel rolls.

Result

Statistical Method-

The data were tabulated and analyzed using descriptive and interferential statistics using SPSS version 11.0.Paired sample test were performed.

Table 1-Table showing mean and ± SD values of group A

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
A_Age	15	21	34	26.67	3.599
A_Redness	15	1	3	1.33	.724
A_Edema	15	1	2	1.60	.507
A_Echhymosis	15	1	2	1.60	.507
A_Discharge	15	1	2	1.60	.507
A_Approximation	15	1	2	1.13	.352
Valid N (listwise)	15				

Descriptive analysis of group "A"

Table 2-Table showing mean and ± SD values of group B

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
B_Age	15	23	34	28.07	3.240
B_Redness	15	1	3	2.00	.756
B_Edema	15	1	3	1.80	.775
B_Echhymosis	15	1	3	2.00	.655
B_Discharge	15	2	3	2.53	.516
B_Approximation	15	2	3	2.67	.488
B_Total	15	7	14	11.00	1.890
Valid N (listwise)	15				

Descriptive analysis of group "B"

Table 3-Table indicating mean value of both groups, co-relating between mean age value with value of Reeda scale in both the groups.

B_Age		A_Age	A_Redness	A_Edema	A_Echhymosis	A_Discharge	A_Approximation
	Mean	27.00	1.00	2.00	2.00	1.00	1.00
23	N	1	1	1	1	1	1
	Std. Deviation	.	.	.	.	.	.
	Mean	33.00	2.00	2.00	2.00	2.00	1.00
24	N	2	2	2	2	2	2
	Std. Deviation	1.414	1.414	.000	.000	.000	.000
	Mean	24.50	2.00	1.50	1.50	1.50	1.50
26	N	2	2	2	2	2	2
	Std. Deviation	.707	1.414	.707	.707	.707	.707
	Mean	21.00	1.00	2.00	2.00	1.00	1.00
27	N	1	1	1	1	1	1
	Std. Deviation	.	.	.	.	.	.
	Mean	26.33	1.00	1.67	1.67	2.00	1.00
28	N	3	3	3	3	3	3
	Std. Deviation	3.055	.000	.577	.577	.000	.000

	Mean	29.00	1.00	1.50	1.50	1.50	1.50
29	N	2	2	2	2	2	2
	Std. Deviation	1.414	.000	.707	.707	.707	.707
	Mean	26.00	1.00	1.00	1.00	1.50	1.00
31	N	2	2	2	2	2	2
	Std. Deviation	1.414	.000	.000	.000	.707	.000
	Mean	26.00	2.00	1.00	1.00	2.00	1.00
33	N	1	1	1	1	1	1
	Std. Deviation	.	.	.	.	.	.
	Mean	22.00	1.00	2.00	2.00	1.00	1.00
34	N	1	1	1	1	1	1
	Std. Deviation	.	.	.	.	.	.
	Mean	26.67	1.33	1.60	1.60	1.60	1.13
Total	N	15	15	15	15	15	15
	Std. Deviation	3.599	.724	.507	.507	.507	.352

Mean Analysis of Group "A" and Group "B"

Table 4- Table showing correlation of mean ± sd values of redness of group A and group B with age parameter

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B_Redness		A_Age	A_Redness	A_Edema	A_Echhymosis	A_Discharge	A_Approximation
	Mean	24.50	1.25	1.75	1.75	1.50	1.00
1	N	4	4	4	4	4	4
	Std. Deviation	2.380	.500	.500	.500	.577	.000
	Mean	28.14	1.29	1.57	1.57	1.71	1.29
2	N	7	7	7	7	7	7
	Std. Deviation	2.545	.756	.535	.535	.488	.488
	Mean	26.25	1.50	1.50	1.50	1.50	1.00
3	N	4	4	4	4	4	4
	Std. Deviation	5.500	1.000	.577	.577	.577	.000
	Mean	26.67	1.33	1.60	1.60	1.60	1.13
Total	N	15	15	15	15	15	15
	Std. Deviation	3.599	.724	.507	.507	.507	.352

Mean Analysis of Redness

Table 5-Table showing correlation of mean ± SD values of edema of group A and group B with age parameter**.**

B_Edema		A_Age	A_Redness	A_Edema	A_Echhymosis	A_Discharge	A_Approximation
	Mean	27.67	1.67	1.67	1.67	1.67	1.33
1	N	6	6	6	6	6	6
	Std. Deviation	4.320	1.033	.516	.516	.516	.516
	Mean	25.67	1.17	1.33	1.33	1.50	1.00
2	N	6	6	6	6	6	6
	Std. Deviation	1.751	.408	.516	.516	.548	.000
	Mean	26.67	1.00	2.00	2.00	1.67	1.00
3	N	3	3	3	3	3	3
	Std. Deviation	5.508	.000	.000	.000	.577	.000
	Mean	26.67	1.33	1.60	1.60	1.60	1.13
Total	N	15	15	15	15	15	15
	Std. Deviation	3.599	.724	.507	.507	.507	.352

Mean Analysis of Edema

Table 6-Table showing correlation of mean ± SD values of echhymosis of group A and group B with age parameter.

B_Echhymosis		A_Age	A_Redness	A_Edema	A_Echhymosis	A_Discharge	A_Approximation
1	Mean	27.00	1.00	1.67	1.67	1.67	1.33
	N	3	3	3	3	3	3
	Std. Deviation	4.359	.000	.577	.577	.577	.577
2	Mean	27.67	1.33	1.56	1.56	1.78	1.00
	N	9	9	9	9	9	9
	Std. Deviation	3.391	.707	.527	.527	.441	.000
3	Mean	23.33	1.67	1.67	1.67	1.00	1.33
	N	3	3	3	3	3	3
	Std. Deviation	2.082	1.155	.577	.577	.000	.577
Total	Mean	26.67	1.33	1.60	1.60	1.60	1.13
	N	15	15	15	15	15	15
	Std. Deviation	3.599	.724	.507	.507	.507	.352

Mean Analysis of Echhymosis

Table 7-Table showing correlation of mean ± SD values of discharge of group A and group B with age parameter.

B_Discharge		A_Age	A_Redness	A_Edema	A_Echhymosis	A_Discharge	A_Approximation
2	Mean	25.14	1.29	1.43	1.43	1.43	1.14
	N	7	7	7	7	7	7
	Std. Deviation	3.024	.756	.535	.535	.535	.378
3	Mean	28.00	1.38	1.75	1.75	1.75	1.13
	N	8	8	8	8	8	8
	Std. Deviation	3.703	.744	.463	.463	.463	.354
Total	Mean	26.67	1.33	1.60	1.60	1.60	1.13
	N	15	15	15	15	15	15
	Std. Deviation	3.599	.724	.507	.507	.507	.352

Mean Analysis of Discharge

Table 8- Table showing correlation of mean ± SD values of approximation of group A and group B with age parameter.

B_Approximation		A_Age	A_Redness	A_Edema	A_Echhymosis	A_Discharge	A_Approximation
2	Mean	27.60	1.00	1.60	1.60	1.60	1.00
	N	5	5	5	5	5	5
	Std. Deviation	3.647	.000	.548	.548	.548	.000
3	Mean	26.20	1.50	1.60	1.60	1.60	1.20
	N	10	10	10	10	10	10
	Std. Deviation	3.676	.850	.516	.516	.516	.422
Total	Mean	26.67	1.33	1.60	1.60	1.60	1.13
	N	15	15	15	15	15	15
	Std. Deviation	3.599	.724	.507	.507	.507	.352

Mean Analysis of Approximation

Table 9-Table indicates P-value of Reeda scale is .000 which is less than .05 and is significant. Therefore the null hypothesis is rejected and experimental hypothesis is accepted. Paired sample test performed.

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	A_Age - B_Age	-1.400	5.767	1.489	-4.594	1.794	-.940	14	.363
Pair 2	A_Redness - B_Redness	-.667	.976	.252	-1.207	-.126	-2.646	14	.019
Pair 3	A_Edema - B_Edema	-.200	.862	.223	-.677	.277	-.899	14	.384
Pair 4	A_Echhymosis - B_Echhymosis	-.400	.828	.214	-.859	.059	-1.871	14	.082
Pair 5	A_Discharge - B_Discharge	-.933	.594	.153	-1.262	-.605	-6.089	14	.000
Pair 6	A_Approximation - B_Approximation	-1.533	.516	.133	-1.819	-1.247	-11.500	14	.000
Pair 7	A_Total - B_Total	-3.733	2.404	.621	-5.065	-2.402	-6.014	14	.000

P<0.005 SIGNIFICANT

More inflammatory response showed in control group or non perineal massage group. S.D value of group A is ±1.580 which indicates less inflammatory response(Table 1). S.D value of group B ±1.890 (Table 2), indicates more inflammatory response. Statistics analysis indicates perineal massage in second stage of labour reduces extent of episiotomy and inflammatory response (Table 3,Table 4,Table 5, Table 6, Table 7, Table 8).

P value of analysis is 0.000 which indicates rejection of null hypothesis and acceptance of experimental hypothesis.(Table 9)

Discussion

Result of study showed less inflammatory responses in experimental group due given to perineal massage to pregnant female at the time of second stage of labour.

The result of this study demonstrates an overall benefit for women in the massage group. There was a reduction in 2nd and 3rd degrees tears and episiotomies and a reduction in instrumental deliveries was also noted.

Comparative reduction in perineal trauma among women with spontaneous deliveries.A possible explanation for the benefit of massage on the reduction in rise and improved perineal trauma for older women is that there is less elasticity and supple in the tissues of these women which would prevented the perineum from stretching as easily as in the younger nullipara. This is supported by the increased trauma rate with increased age.[5]Due to perineal massage perineum become softer and supple ,this suppleness of perineum reduces the chases of perineal tear and injury to foetal head. [6] Continuous perineal massage at the time of labour help in preparation for the sensation.Perineal massage also benefit to baby because it lessen the tension, ease the tissue surrounding the baby's head[7]

Perineal massage to experimental group Incidence of perineal trauma is less. Episiotomy incision almost associated with normal delivery. If continuous massage given to patient at time of second stage of labour relaxes the perineal tissue, stretch the perineal muscle and

help in descend of foetus head [8]our results are in accordance with Stam G,Crowther[9] who concluded that Perineal massage for 10 to15 minute in second stage of labour reduces the perineal trauma similar results are found by Albers LL[3]who concluded that genital tract trauma during spontaneous vaginal delivery is less in Patient who receive perineal massage in second stage of labour Bodner-Adler B et al[10] demonstrated that performing perineal massage during pregnancy showed neither a protective nor a detrimental effect on the occurrence of perineal trauma.

The recent prospective observational study of Eogan et al[11] showed that postnatal perineal pain was much reduced in the group of women who practiced antenatal perineal massage compared with the controls (P = 0.029).Shimada et al[12] observed for the comparison of the degree of perineal injury, women in the massage group had less injury than those in the control group.

Conclusion

In control group or nonperineal massage group have more inflammatory responses and extend of episiotomy or degree of tear is also more in control group.

Reduction in perineal trauma reduces the pain and discomfort felt by women in early postnatal period. Perineal massage appears to have some benefit in reducing 2nd or 3rd degree tears or episiotomies.This shows that perineal massage in second stage of labour reduces extent of episiotomy and inflammatory response.

Limitation and recommendations-

1.The limitation of this study is that the sample was limited to 15 in each group. An alternative to increasing the sample size would be to improve the completion rate of daily massage record sheets.

2.Another possible limitation is lack of information about the reliability of assessments perineal trauma.

3.Women with tension or stress during labour.

4.Future of this study is beneficial in case of normal delivery perineal massage in primipara women can reduces the fear of second delivery due to less perineal trauma **.**

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