Original Research Article

A Comparative Study to Know (Evaluate) the Effectiveness of Back Massage Versus Hot Application on Back Pain During the Active Phase of Labour among the Intranatal Women Admitted in Gian Sagar Medical College & Hospital, Ramnagar, Rajpura, Patiala, Punjab.

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ABSTRACT

Back ground of the study: Childbirth is one of the most painful events that a women is likely to experience, the multidimensional aspect and intensity of which far exceeds disease conditions .Labor pain is the rhythmic pain of increasing severity and frequency due to contraction of the uterus at childbirth.1 Even though, delivery is a natural phenomenon, it has been demonstrated that the accompanying pain is considered severe or extreme in more than half of the cases. The complain about the backache is one of the most common complaints we are getting from the intranatal mothers during the labor. Over the past 20 years there has been an enormous increase in the use of complementary therapy in health care; especially within the hospice movement. The number of people using complementary therapies has seen a dramatic increase in recent years (42%-57.4%).

Aims: The present study aim to know (evaluate) the effectiveness of back massage or hot application on back pain during the active phase of labor among the intranatal women admitted in Gian Sagar Medical College and Hospital, Ram Nagar, Rajpura, Patiala.

Material and Methods: An evaluative approach with post test only design was used for the present study. Sample consisted of 40 intranatal women with back pain (20 hot application group and 20 back massage group), who met the inclusion & exclusion criteria. Assessment was done in terms of confirmation of back pain & intensity of pain by using NRS. Data were analyzed by using descriptive and inferential statistics.

Result: There was a significant difference on pain score between subjects of back massage group and hot application group. Hence back massage was more effective than that of hot application.

Conclusion: There was significant difference found in back massage and hot application i.e. back massage was found to be significantly more effective on back pain as compared to hot application.

Key Words: Back massage, Hot application, Back pain, Labour, Childbirth, Intranatal women.

INTRODUCTION

Childbirth is one of the most painful events that a women is likely to experience, the multidimensional aspect and intensity of which far exceeds disease conditions .Labor pain is the rhythmic pain of increasing severity and frequency due to contraction of the uterus at childbirth (2008). [1] Even though, delivery is a natural phenomenon, it has been demonstrated that the accompanying pain is considered severe or extreme in more than half of the cases. [1]

A study on the back ache during labor the results showed as many as 75.3% of the participants suffered episodes of low back pain during labor. The location of the pain also changed with the progression of labor. The type of low back pain in 54.29% of women in labor was "muscle soreness and pain" So it is necessary to develop

effective nursing interventions to manage it. As researcher found that by relieving the pain we can relieve the anxiety of the women & improve their perception in a positive way. In other words we can say that whose pain is relieved by any non pharmacologic therapy experience less pain, less anxious, had shorter labor & experienced less postnatal depression opposite to that who did not receive any therapy & without any of the complications. (2008) [2]

The investigation concluded that women who received continuous labor support(like reduction of anxiety, giving touch therapy & relieving back pain) were less likely to request analgesia or anesthesia (28% decrease), had fewer cesarean births (26% decrease), fewer instrumental deliveries (41%), and had less dissatisfaction with their birth experience (33% decrease). They also concluded that the reality of labor care like not relieving the back pain, (lack of reduction of anxiety related to childbirth) in many institutions in 2006 is lack of staff, increasing cesarean rates, rising induction rates, growing risk of litigation, fewer vaginal birth after cesarean trials, concerns about pelvic floor damage from pushing, unprecedented elective cesareans, and under-empowered labor nurses. (2003) [3]

Massage is very much helpful technique for reducing the pain during labor. Studies show that women who are massaged during labor pain relax more & report a reduction in the intensity of pain. Comparisons with other forms of treatment and external evaluation are required to help ascertain which types of low-back problems with which types of complicating factors (e.g., levels of stress and activity) will respond best to massage therapy. Massage therapy that is based on physiology which emphasizes the soft-tissue manipulation component of treatment was found to be effective in the non pharmacological management of sub acute low-back pain. [4]

It is stated that another method to relieve the back ache is the use of hot application on back during the pain. Many people have found that hot application will help relieve pain. Heat relaxes muscles & soothes painful areas. There are many ways to apply heat like hot water bottles, hot packs. As the hot application has the effect on vessels by vasodilating the blood vessels & improving the blood supply & relieves the pain. (2001) [5]

Aim of the study

The present study aim to evaluate (know) the effectiveness of back massage or hot application on back pain during the active phase of labor among the intranatal women admitted in Gian Sagar Medical College and Hospital, RamNagar, Rajpura, Patiala.

Objectives

- To assess the level of back pain during the active phase of labor as pre interventional assessment among intranatal women.
- To evaluate the effectiveness of back massage on back pain during the active phase of labor among intranatal women.
- To evaluate the effectiveness of hot application on back pain during the active phase of labor among intranatal women.
- To compare the effectiveness of back massage & hot application on back pain during the active phase of labor among intranatal women.

MATERIALS AND METHODS

A comparative research design was employed in the study as per the objectives. The study was conducted in the labor room of Gian Sagar Medical College and Hospital, Ram Nagar, Rajpura, Patiala, Punjab. The present study population comprised of intranatal mothers present in the labor room of same setting. Purposive sampling technique was used to select sample. Sample size comprised of 40 intranatal women admitted in labor room. 20 women in Group I i.e. back massage group and 20 women in group II i.e. hot application group. The tool of the present study was divided into following 3 sections:

- Section I: Performa to collect socio-demographic data of subjects.
- Section II: Questions regarding the confirmation of back pain.
- Section III: Numerical Rating Scale (Me Caffery & Pasero 1999).

The content validity of tool was determined by the 11 expert's from nursing and medical fields. The tool was reliable as standard tool was used. Reliability of the tool was checked by using split half method correlation coefficient formula. Pilot study was conducted on 6 intranatal women from 12.12.11 to 18.12.11 at labor room to find out the practicability and feasibility of tools. The data was collected from 40 intranatal mothers with back pain (20 in Group I and 20 in Group II) regarding confirmation of back pain during the active phase of labour and effectiveness of back massage and hot application by using questionnaire and Numerical Rating Scale. The collected data was transferred on master data sheet, tabulated and analyzed by using descriptive and inferential statistics i.e. mean, mean difference and standard deviation and t-test to meet the objectives of the study and hypotheses to be tested.

Ethical consideration

Ethical consideration was taken from the Institutional ethical committee of Gian Sagar objects regarding their conducting the pilot study as well as final study. Informed consent form was prepared for the study subjects regarding their willingness to participate in the research project and translated to local language and the purpose for carrying out research project was explained to the participants verbally and assurance of confidentiality was given.

RESULTS

The data collected was edited, tabulated, analyzed, interpreted and findings obtained were presented in the form of tables and diagrams represented under following sections:

Sample Characteristics

Table 1: Distribution of subjects as per their socio-demographic profile, N=40

Socio-demographic characteristics	Back massage		Hot application	
	frequency	% age	frequency	% age
Age (in years)				
18-26	18	90	19	95
27-35	01	05	01	05
>35	01	05	00	00
Parity				
Primipara	14	70	17	95
Secondary para	03	15	01	05
Multipara	03	15	02	00
Occupation				
Housewife	17	85	19	95
Labourer	02	10	01	05
Employees	01	05	00	00
Place of residence				
Urban	03	15	03	15
Rural	17	85	17	85
Others	00	00	00	00
Religion				
Hindu	04	20	07	35
Muslim	00	00	00	00
Sikh	16	80	13	65
Christian	00	00	00	00
Education (Academic Qualification)				
Illiterate	03	15	01	05
Primary	07	35	08	40
>Matric	10	50	11	55
Type of family				
Nuclear	01	05	01	05
Joint	19	95	19	95
Extended	00	00	00	00
Monthly income (in rupees)				
<10,000	16	80	13	65
10,000-15,000	02	10	07	35
>15,000	02	10	00	00
Period of gestation				
37-39	19	95	13	65
39-42	01	05	07	35
>42	00	00	00	00

Table II: To evaluate the effectiveness of back massage on back pain during the active phase of labor among intranatal women. N=40

Assessment	mean	SD	mean difference
Preinterventional	8.25	0.757	2.35
Post interventional	5.9	0.624	
t-test=19.461	df=19	p=2.09	

*Significant at p<0.05 level

Also, paired t-test as a inferential statistics was performed to analyze any significant effectiveness of back massage on back pain during the active phase of labor among the intranatal women. The pre-interventional the subjects n=20, mean=8.25, SD=0.757, the post-interventional the subjects n=20, mean=5.9, SD=0.624 & the calculated value by paired t-test=19.461 & p>0.05=2.09.

Mean score of the intranatal women with the back massage as preinterventional & post interventional assessment.

The above table-II shows that the calculated value is more than the table value at the level of p<0.05 & that is highly significant, that the back massage is effective on the back pain during the active phase of labor among intranatal women.

Table III: To evaluate the effectiveness of hot application on back pain during the active phase of labor among intranatal women. N=40

Assessment	mean	SD	mean difference
Preinterventional	7.95	0.864	0.75
Post interventional	7.2	0.812	
t-test=5.306	df=19	p=2.09	

*Significant at p<0.05 level

Also, paired t-test analysis was performed to analyze any significant effectiveness of hot application on back pain during the active phase of labor among the intranatal women. The pre-interventional the subjects n=20, mean=7.95, SD=0.864, the post-interventional the subjects n=20, mean=7.2, SD=0.812 & the calculated value by paired t-test=5.306 & p>0.05=2.09.

Mean score of the intranatal women with the hot application as preinterventional & post interventional assessment.

The above table- III that the calculated value is more than the table value at the level of p<0.05 & that is significant that the hot application is effective on the back pain during the active phase of labor among intranatal women.

Table IV: To compare the effectiveness of back massage versus hot application on back pain during the active phase of labor among intranatal women. N=40

Groups	mean	SD	mean difference
Back massage	5.9	0.624	1.3
Hot application	7.2	0.812	
t-test=8.556	df=38	p=1.96	

*Significant at p<0.05 level

Also, unpaired t-test analysis was performed to analyze the significant difference between the back massage versus hot application during the active phase of labor among intranatal women. The back massage, the subjects n=20, mean=5.9, SD=0.624, the hot application, the subjects n=20, mean=7.2, SD=0.812 & the calculated value by unpaired t-test=8.556 & p>0.05=1.96

H_1: There will be a significant difference in between the back massage versus hot application on back pain during the active phase of labor among intranatal women.

Comparative Mean score of the intranatal women with the back massage & hot application as preinterventional & post interventional assessment.

The above table- IV that the calculated value is more than the table value at the level of significance p>0.05 thus the H_1 is accepted & there is significant difference in between the back massage versus hot application on back pain during the active phase of labor among the intranatal women.

DISCUSSION

Findings of the present study described as the same sections given in result. It was evident that the application of back massage is effective on back pain during the active phase of labour. These findings are consistent with the study showed that back massage has a significant effect among the 30 parturient mothers, on the back pain during the labor conducted by S. Jayalakshmi et al (2008). [6]

It was evident that the application of hot application is equally effective on back pain during the active phase of labor. These findings are consistent with the finding of the study concluded that hot water and

application of ice pack as hot water group reported less pain among 49 patients, conducted by Conrad Loten et al (2006). [7]

CONCLUSION

In the present study back massage was found to be significantly more effective as compared to hot application on back pain during the active phase of labor.

Recommendations

A similar study can be replicated on a large sample selected from different hospitals for wider generalization of findings and also based on different intervention more studies are required to evaluate the effectiveness of complimentary therapies among the intranatal women to relieve the back pain.

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