"Effectiveness of Ice massage on LI4(hegu) point on labour pain during active phase of labour among mothers in labour room, at S.V.S Hospital, yenogonda Mahabubnagar, Telangana."

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Abstract: Ice massage is a safe and natural holistic method that can have an extremely positive effect in active phase of the labour in reducing the pain. It is a very simple hand method, nonˆinvasive technique that is similar to acupressure. It has only application of ice on LI4 point, it is the area which is located in the webbing between the thumb and the forefinger which affects the part of large intestine which surrounds a portion of the uterus. **Objectives:** 1. Assess the level of Labour pain among Mothers during the active Phase of labour in Control and Experimental group. 2. Assess the effectiveness of ice massage on the LI4(hegu) point on level of Labour pain among Mothers during the active Phase of labour in experimental group. 3. Evaluate the effectiveness of ice massage on the LI4(hegu) point by comparing the Pretest and Posttest levels of Labour pain in Experimental and Control group. 4. Find out the association between the effectiveness of ice massage on LI4(hegu) point in reduction of labour pain during the active phase of labour among mothers in labour room with their selected demographic variables. **Methodology:** The investigator has chosen and conducted study in labour room, S.V.S hospital located at yenugonda, Mahabubnagar district, Telangana. The data collection procedure was carried out after obtaining permission from the institutional ethics committee. The true experimental design was selected to evaluate the effectiveness of ice massage on LI4(hegu) point in the reduction of labour pain during active phase of labour among mothers in labour room 30 mothers were selected among them 15 in experimental group and 15 in control group who were in active phase of labour. **Results:** The results shows that, 2 (13.3%) were under severe pain level in pre test in post test found nil. 12 (80%) were under very sever pain in pretest whereas in posttest found nil. 1 (6.7%) was under intense pain level in posttest were found nil. **Conclusion:** In regards to in experimental group, 2 (13.3%) were under severe pain level in pretest whereas 8 (53.3%) were severe pain level in posttest, 12 (80%) were under very severe pain level in pretest whereas in posttest were found nil, 1 (6.7%) were under intense pain level in pretest whereas in posttest were found nil, moderate pain level in pretest were found nil whereas 7 (46.7%) were under moderate pain level in posttest. These differences indicate that ice massage was highly affected in Mothers in labour room in experimental group.

Introduction:

Ice massage is a safe and natural holistic method that can have an extremely positive effect in active phase of the labour in reducing the pain. It is a very simple hand method, nonˆinvasive technique that is similar to accupressurre. It has only application of ice on LI4 point, it is the area which is located in the webbing between the thumb and the forefinger which affects the part of large intestine which surrounds a portion of the uterus.

Ice massaging is an effective and completely safe technique for inducing labour naturally and getting labour pain relief without drugs. It doesn't include any negative side effects or pose potential harm to the mothers or the unborn baby.

It is known to help in a number of positive ways by reducing stress and tension, increasing blood circulation aiding in removal of toxic wastes, providing relief from head, shoulder, aches, increasing energy level, increased in general well-being and helping the pregnant women to have a normal and safe birthing experience.

Need for the study:

According to world Health Organization (2019-2020) World Wide caesarean section rates continue to evoke 68% of all births throughout the world. Across India, According to National Family Health Survey (NFHS Phase-4 and phase-5) the reports found that the C-section rate in India is 27.2% higher than the WHO recommended limit, where the normal limit is 10% and overall rate of caesarean sections is about 74.2%. In Telangana, as per Ministry of Health and Family Welfare, the reports shows that there is increased Caesarean section childbirths in 2019-2020 for about 64.4%. As per WHO, 70-80% of births could be potentially be natural deliveries with proper awareness.

Denny-Brown et al showed that cold temperature effectively blocks Nerve Conduction in sensory fibres, when compared to some other non-pharmacological methods to reduce labour pain. 51% Ice massage, touch and massage by 23%, by Music therapy-10%, Warm Application by 9% and reflexology by 7%.

Most women think that pain is going to be a major part of giving birth, Health Professionals can help to reduce Women's fears by giving precise, accurate and relevant information before hands on Mothers. There are various non-Pharmacological methods that reduces pain, among them Ice massage is effective and comfortable in reducing the Labour pain when applied on Li4 point during the active phase of Labour.

Problem Statement: "Effectiveness of Ice massage on LI4(hegu) point on labour pain during active phase of labour among mothers in labour room, at S.V.S Hospital, yenogonda Mahabubnagar, Telangana."

Objectives of the study:

❖ Assess the level of Labour pain among Mothers during the active Phase of labour in Control and Experimental group.

❖ Assess the effectiveness of ice massage on the LI4(hegu) point on level of Labour pain among Mothers during the active Phase of labour in experimental group.

❖ Evaluate the effectiveness of ice massage on the LI4(hegu) point by comparing the Pretest and Posttest levels of Labour pain in Experimental and Control group.

❖ Find out the association between the effectiveness of ice massage on LI4(hegu) point in reduction of labour pain during the active phase of labour among mothers in labour room with their selected demographic variables.

Operational Definitions:

❖ Effectiveness: It refers to the extent of the reduction of labour pain after ice massage by using visual analogue scale.

❖ Ice Massage: It refers to an external therapy applied on the acupressure point within 3 to 4 mm of the web of the skin between the thumb and the forefinger by using ice.

❖ LI4(hegu) point: It refers to the area which is located in the webbing between the thumb and the

forefinger which affects the part of the large intestine which surrounds a portion of the uterus.

❖ Labour pain: It refers to the extent of pain expressed by the mother during labour observed by using visual Analogue scale.

Delimitation:

❖ The study is delimited to mothers who are in the active phase of labour, admitted and available in labour room, SVS Hospitals.

❖ The study is delimited to the mothers above 34weeks of Gestational age.

Research design: True experimental design was selected to evaluate the effectiveness of ice massage on LI4 (hegu) point in the reduction of labour pain during active phase of labour among mothers in labour room.

Setting of the study: The study was conducted study in Labour room, S.V.S Hospital located at Yenugonda, Mahabubnagar district, Telangana. The researcher felt that most of the mother's experience pain and stay in Labour for longer duration, Ice massage on Li4 point can reduce the pain and during active phase of labour. The investigator took this area for research study. Based on the investigator familiarity with the setting and availability of subjects, the present study was conducted in labour room at S.V.S Hospital, Mahabubnagar. Telangana.

Population: The target population is the group of population that the researcher aims to study and to whom the study findings will be generalized. Population of the present study were the mothers who are in Active Phase of Labour in labour room, SVS hospital.

Sample: Mother who are in active phase of labour and the sample size was 30 mothers, 15 in Experimental group and 15 in Control group, who were in Active phase of Labour, admitted in the Labour room at S.V.S. hospital.

Sampling technique: Simple randomized sampling method was selected based on the feasibility and criteria.

Inclusive criteria:

The inclusion criteria for sample selection includes

❖ Mothers who are at term >34 weeks of pregnancy.

❖ Mothers who are in active phase of labour.

❖ Primi, multipara mothers not more than 3 children.

❖ Mothers who are available during the period of data collection.

❖ Mothers who are willing to participate in this study.

Exclusive criteria

❖ Gestational age less than 34 weeks.

❖ Mothers with complications like gestational hypertension, Eclampsia, CPD, Malpresentation.

❖ Mothers who are getting any Pharmacological or non-pharmacological methods for pain reduction in Labour.

Description of the tool: Tool was a written device that a researcher uses to collect the data. The tool was given to 8 nursing experts for content validity with regard to the adequacy and relevance of content and suggestions were incorporate. The tool was titled as effectiveness of ice massage on li4 (HEGU) point in the reduction of labour pain during active phase of labour among mothers in labour room. It is 30 minutes procedure and discussion about Visual Analogue scale.

In order assess the pain Visual Analouge Scale to the mothers who are in Active phase of labour was prepared based on the objectives. The tool consists of 2 parts A and B, A consist of items of demographic data such age, education, occupation, food habits, type of family, area of residence, gestational age, number of Children, Mode of delivery in Previous pregnancy, History of Prolonged Labour, Previous

history of Abortions, previous information and source of information on Ice massage. Part-B consist of Assessment of labour pain by Visual Analouge scale. **Content validity of tool:** The tool was given to eight experts comprising of three doctors and five nursing educators from the department of Obstetrics and Gynaecological Nursing. Then the content has been corrected and validated by experts.

Reliability: The reliability was established with test-retest method it was used by Karl Pearson's correlation coefficient. Computed from the score on obtain "r" value is r = 0.91and the tool was highly reliable for the study.

Plan for data analysis: Frequency and percentage of distribution of labour pain score of mothers in labour room both in control group and experimental group.

The frequency and percentage based on labour pain scores among mothers in labour room in control group. No pain indicates the score between 0-1, mild pain indicates the score between 2-3, moderate pain indicates the score between 4-5, severe pain indicates the score between 6-7, very severe pain indicates the score between 8-9 and intense pain indicates the score of 10 on visual analog scale. All of the mothers 15 (100%) were under severe pain level in pretest whereas 13 (86.7%) were severe pain level in post test and moderate pain level in pretest were found nil whereas 2 (13.3%) were under moderate pain level in posttest. There is a slight difference between pretest and posttest labour pains course was observed among mothers in labour room in control group.

The frequency and percentage based on labour pain scores among mothers in labour room in experimental group. No pain indicates the score between 0-1, mild pain indicates the score between 2-3, moderate pain indicates the score between 4-5, severe pain indicates

the score between 6-7, very severe pain indicates the score between 8-9 and intense pain indicates the score of 10 on visual analog scale.

2(13.3%) were under severe pain level in pretest whereas 8 (53.3%) were severe pain level in posttest, 12 (80%) were under very sever pain level in pretest whereas in posttest were found in nil, 1 (6.7%) were under intense pain level in pretest whereas in posttest were found nil, moderate pain level in pretest were found nil whereas 7 (46.7%) were under moderate pain level in posttest. These differences indicate that ice massage was highly affected in mothers in labour room experimental group.

Table-1: Pre test and post test mean labour room scores and paired t-test of significance among the mothers in labour room in control group. (N_2=15)

Labour pain scores	Pre test	Post test
Mean	6.73	6.13
Standard Deviation	0.46	0.64
Paired t-test	4.58	

14df   Table t-value 2.97   P<0.001

The table no. 1 that the pretest mean labour pain score was 6.73 with 0.46 standard deviation and that of posttest was 6.13 with 0.64 standard deviation. The calculated 't' value was 4.58, which is higher than the table 't' value 2.97 at 14df with 0.001 level of significance. It shows that there is significant difference (p<0.001) in pretest and posttest labour pain scores in control group mothers.

Table-2: Pretest and posttest mean labour pain scores and paired t-test of significance among the mothers in labour room in experimental group.   (N_1=15)

Labour pain scores	Pre test	Post test
Mean	8.33	5.53
Standard Deviation	0.98	0.74
Paired t-test	19.34	

Association between pretest and posttest labour pain scores of Mothers in labour room with number of children.

The table no 9.8 showed that association between pretest and posttest labour pain scores among Mothers in labour room with number of children. For pretest the table value of $\chi 2$ at 0.05 level of significance with 6 df is 12.59, as the calculated value of $\chi 2$ (14.69) was more than the table value that shows there was significant association between the pretest level of labour pain scores among Mothers in labour room with number of children. For posttest the table value of $\chi 2$ at 0.05 level of significance with 3df is 7.82, as the calculated value of $\chi 2$ (11.36) was more than the table value that shows there was significant association between the posttest level of labour pain among Mothers in labour room with number of children in experimental group.

Association between pre test and post test labour pain scores of Mothers in labour room with Gestational age.   **(N_1=15)**

Number of children of mothers in experimental group	Level of Labour pain											
	Pre test							Post test				
	Severe pain		Very severe pain		Intense pain		Total Fre	Moderate pain		Severe pain		Total Fre
	F	%	F	%	F	%		F	%	F	%	%
None	0	0%	3	20%	0	0%	3	1	6.7%	2	13.3%	3
One	1	6.7%	3	20%	0	0%	4	2	13.3%	2	13.3%	4
Two	1	6.7%	3	20%	0	0%	4	4	26.7%	0	0%	4
More than 3	0	0%	3	20%	1	6.7%	4	0	0%	4	26.7%	4
Total	2	13.3%	12	80%	1	6.7%	15	7	46.7%	8	53.3%	15

Pre test $\chi 2$ = 14.69   6df   **P< 0.05**

Post test $\chi 2$ =11.36   3df   **P<0.05**

Association between pre test and post test labour pain scores among Mothers in labour room with gestational age at the time of delivery. For pre test the table value of $\chi 2$ at 0.05 level of significance with 6df is 12.59, as the calculated value of $\chi 2$ (16.88) was more than the table value that shows there was significant association between the pre test level of labour pain scores among Mothers in labour room with gestational age. For post test the table value of $\chi 2$ at 0.05 level of significance with 3df is 7.82, as the calculated value of $\chi 2$ (8.65) was more than the table value that shows there was significant association between the post test level of labour pain among Mothers in labour room with gestational age of mother in experimental group.

Discussion: In regard with the experimental group 2 (13.3%) were under severe pain level in pretest whereas 8(53.3%) were severe pain level in posttest, 12(80%) were under very severe pain level in pretest whereas in posttest were found in nil, 1(6.7%) were under intense pain level on pretest whereas in post test were found nil, moderate pain level in pretest were nil whereas 7(46.7%) were under moderate pain level in posttest. These differences indicate that ice massage was highly affected in mothers in labour room in experimental group.

Conclusion: In regards to in experimental group, 2 (13.3%) were under severe pain level in pretest whereas 8 (53.3%) were severe pain level in posttest, 12 (80%) were under very severe pain level in pretest whereas in posttest were found nil, 1 (6.7%) were under intense pain level in pretest whereas in posttest were found nil, moderate pain level in pretest were found nil whereas 7 (46.7%) were under moderate pain level in posttest. These differences indicate that ice massage was highly affected in Mothers in labour room in experimental group.

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