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BACK MASSAGE IN LABOR- A TIME HONORED PRACTICE

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ABSTRACT Childbirth is a desired but painful and stressful event in a woman's life. Labor pain is considered as one of the most intense forms of pain. Now-a-days, quite a large number of pregnant women choose c-section for the fear of labor pain. Labor pain can be reduced by some pharmacological methods. Back massage is an old non-pharmachological method of reducing labor pain. This is a simple, safe, and acceptable method especially in lowresource settings like most of our facilities. Hence this study was done to reduce the intensity of labor pain, which may lead to increase in the rate of vaginal childbirth.

KEYWORDS : Childbirth, labor pain, back massage

INTRODUCTION:

Childbirth is a painful and stressful event in a woman's Life. Pregnant women commonly worry about pain during labor and childbirth (1). During labor the increased anxiety level inmother enhances the pain perception, increases the labor duration and secretion of catecholamine which reduces the blood flow in the uterus. This decreases the effectiveness ofuterine contractions and increases the labor duration (2, 3). Duration of laboris one of theimportant factors which affectthe pregnancy outcomesand maternal and neonatal complications.Due to prolongation of labor; there are risks of choking, neural and physical damages, even fetaland neonatal death. In addition, the mother remains at risk of infection, postpartum hemorrhage andpsychological distress (4,6). The rate of cesarean section isalso increased.

Uterine massage is an ancient method that women in laborhad received and experienced relaxation through it for thousands ofyears. But in modern labor rooms, no accurate evaluation has been conducted (7). Uterine massage can decrease the childbirth painby increasing the release of endorphins andoxytocin. It also causes reduction in secretion of the adrenaline and nor adrenaline, which in turn reduces the childbirth duration by increasing the uterine contractions (8,11). In earlier studies on the effect of massage on labor duration, inconsistent results have been reported (9,10). In modern labor rooms, no accurate evaluation on uterine massage has been conducted.

The complications caused by prolonged labor in mother and fetus areenormous and the massage for shortening of duration of labor in simple, affordable, safe andmore acceptable for pregnant women.

The causes of labor pain can be either physical or psychological. Physical factors includeuterine contractions, cervical dilatation, cervical effacement etc. Psychological factorsinclude fear and anxiety, previous experiences, ignorance & illiteracy, inadequate support, inadequate knowledge, etc.

Pain perceived during labor may be different for each woman (12). A woman's experience of labor pain is influenced by many factors, including her past experience of pain, her coping abilities, the birth environment and psychological factors (13).

Pain impulses during the first stage of labor are transmitted via T10 to T12 and L1spinal nerve segments and accessory lower thoracic and upper lumbar sympathetic nerves.These nerves originate in the uterine body and cervix (14). Pain impulses during the second stage of labor are transmitted via the pudendal nerve through S2 to S4 spinal nerve segments and the parasympathetic system. Pain experienced during the third stage of labor and the after pains of the early postpartum period are uterine, similar to the pain experienced early in the first stage of labor.

Massage is the systematic manipulation of the soft tissues of the body, particularly themuscles, tendons and skin. It also relaxes tense muscles, thereby promoting general relaxation. Sacral massage also has physical benefits as it enhances the circulation and increases venous and lymphatic flow. Massage evokes an atmosphere of acceptance, respect for the body and being cared for.It also stimulatesthe body to release endorphin, which is natural pain killing substances and enhances production of oxytocin, decreases stress hormones and neurological excitability.

RATIONALEOF THE STUDY:

There are inconsistent results about the effectiveness of massage therapy to decrease labor duration in the studies conducted earlier. This study will try to find the effectiveness and usefulness of back massage in minimizing labor pain in our set up.

AIM:

The aim of the present study was to investigate the effect of massage therapy provided by the partner, doula and midwives on labor pain and duration.

MATERIALS AND METHODS:

Study Design: Quasi experimental study

Type Of Sampling: Simple random sampling (SRS)

Study Population: Cases admitted in a maternity based private hospital situated in Dhaka City

Sample Size: 100

Ethical Clearance: Taken from Hospital Authority

INDEPENDENT VARIABLE:

The independent variable of the study was back massage which was given during firststage of labor.

DEPENDENT VARIABLE:

Lowering labor pain

CONFOUNDING VARIABLE:

Age, education, occupation of mother, parity and previous obstetric mishaps.

RESEARCH SETTING:

Sample and sampling technique:

A non-probability sampling by using purposive sampling technique was used to select a sample of 100 pregnant women in first stage of labor admitted in a private clinic.

Pregnant women in the intervention group received back massage for at least 30minutes and the control group women received only the routine care. Finally, infant information was completed after the delivery. During the labor, one of the midwife personnel in the shift was monitoring the labor process and the childbirth was performed by the person not involved in the parturient control process.

INCLUSION CRITERIA -

First adequate explanations about the study were given to the pregnant women and written introduction letter was received from them. Women who fulfilled the following criteria were included in the study:

1) Admitted In Labor Room And In First Stage Of Labor

2) Willing To Participate In The Study
3) Singletone Live Fetus
4) Available During Data Collection.

EXCLUSION CRITERIA:

1) Pregnancy with medical disorder e.g PE, GDM, DVT
2) Pregnancy complications - placental abruption, placenta praevia.
3) Record of previous surgery on the uterus.

TOOLS FOR DATA COLLECTION:

1) A Structured Interviewing Questionnaire was developed by the researchers to collect data after extensive literature review related to:

a) demographic characteristics (age, socio-economic condition, dwellers of community, educational level); and
b) obstetrical data.

2) Visual Analogue Scale (VAS, adopted from Wewers and Lowe 1990) (15) is used to assess discomforts as headache, backache, joint pain and muscle cramppain scores. It consists of a blank line anchored at each end of the line by adjectives thatdescribe the extremes of pain. The anchoring adjectives commonly used are no pain, described as zero score and severe pain (worst possible pain) described as the top score i.e. 10 on the scale. The validity of this scale is concurrent, though its reliability is not confirmed by any report. The woman is asked to place a mark on the line that bestindicates the pain she is experiencing. The dimensions measured by this scale are sensory andaffective. This tool takes 2 to 5 minutes to be completed. It was divided into three main parts: the first part is graded from 0-3.5 cm which reflects mild pain, the second part is graded from 4-7.5 cm for moderate pain, and the third part is graded from 8-10 cm for severe pain. Thesescores were recorded before and after intervention.

RESULTS

Table 1 : Patient's Demographic Profile:

Table 1(a): Age Of The Patients:

Age Range	Number(N=100)	Percentage (%)
15-20 years	3	3
21-25 years	20	20
26-30 years	54	54
31-35 years	21	21
36-40 years	2	2

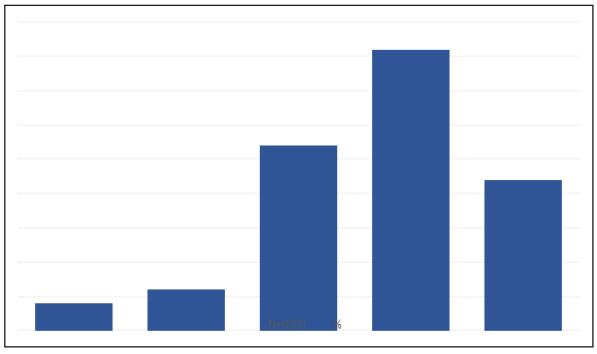
Table 1(b): Socio-economic Condition:

Depending On Yearly Income Of The Patient's Family:

Income range (Annual)	Number(N=100)	Percentage (%)
<1,80,000 TK	4	4
>1,80,000 - 3,00,000 TK	17	17
>3,00,000-4,20,000 TK	49	49
>4,20,000-5,40,000 TK	26	26
>5,40,000 TK	2	2

Table-1(c) Dwellers Of Community (n=100)

Urban	68
Rural	32



Educational Status : Figure 1

Table-2: Obstetric History: Parity

Obs. history	n	Percentage (%)
Nulli-parity	35	35
Multi-parity	50	50
Previous pregnancy mishap	15	15

Table 2 Shows 50 % Are Multiparous

Table-3: Level Of Pain Before And After Intervention

Level of Pain	Score	Before Massage (%)	After Massage (%)
Mild	0-3	3	40
Moderate	4-6	72	60
Severe	7-10	25	0

Table-3 shows % distribution of labor pain before and after back massage according to modified labor pain relief tool (n=100)

Table-4: Pain Score Before And After Back Massage Therapy Among Pregnant Women According To Gravida (n=100)

Gravida	n	Before back massage	After back massage
Primigravida	50	8	6
Multigravida	50	6	2

Maximum score=10

Table-5: Mode Of Delivery After Intervention (n=100)

Mode of care	n	Normal Delivery	C-section
Routine care	50	15	35
Back massage received	50	20	30

Table 6: Neonatal Outcome

	n=100	Percentage (%)
Uneventful	81	81
Neonatal morbidity		
a. TTN	1	1
b. Perinatal asphyxia	2	2
c. Oesophageal atresia	1	1
Neonatal mortality	0	0
Dropout	15	15

Neonatal outcome was mostly uneventful (81%)

RESULTS:

It can be concluded that back massage had significant impact on reduction of labor pain.

DISCUSSION:

As observed, the participants in the study were homogeneous in terms of all studied variables. The first objective was to assess the level of labor pain among pregnant women, to identify the need of back massage. The findings of this study revealed that, before back massage majority, ie 72% women had moderate level of pain, followed by 25% women who had severe pain, and 3% women had mild pain, according to Modified Labor Pain Relief Tool. After back massage, the level of pain was reduced, in such a way that majority of pregnant women (60%) had moderate pain whereas 40% were having mild pain and none had severe pain. Thus it can be concluded that after back massage, the pain reduced to the level of moderate and mild pain. A similar study conducted by Deepika Sethi and Seema Barnabas (2016) revealed that the majority of women had moderate pain followed by severe pain and least had mild pain(16). The findings of this report support the findings of our study.

The second objective was to determine the relationship of gravida with pain before andafter back massage therapy. According to gravida, highest pain score was in primi-gravid patients, both before and after back massage therapy.In the present study, investigators collected the data individually from pregnant women twice before and after the back massage. Back massage was found effective as evidenced by lower post-test score of pain than the pre-test score of pain.

CONCLUSION:

The experience of labor is complex and subjective. Several factors affect a woman's perception of labor, making each experience unique. However, as a consistent finding, labor pain is ranked high on the pain rating scale when compared to other painful experiences of life. There are techniques to minimize the intensity of such a pain. In the context of Bangladesh, back massage could be a very useful tool in giving some relief from this dreadful nightmare of parturient mothers.

Like many previous studies done on subject, the findings of this study

also showed that back massage has a significant role in reducing labor pain. Moreover, it is a noninvasive, safe, accessible and low cost method, requiring minimum skills. We can use it as a tool for respectful maternity care.

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