Original article:

Effect of antenatal nipple stimulation on post delivery uterine activity

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Abstract:

Introduction: Nipple stimulation is both an inexpensive and non-medical intervention which allows women greater control over the induction process as well as helpful in post uterine smooth outcomes. The present study is carried out to evaluate the effect of this simple, inexpensive e technique of antenatal nipple stimulation after 37 weeks of gestation and its effect on post delivery uterine activity.

Methodology: All women with 37 completed weeks of gestation and sure of their last menstrual periods were included in the study group. Patient was taught the maneuver; breast was stimulated/massaged, with palmer surface of the hand, between the index and fore fingers for about 5 minutes in downward direction.

Results: After vaginal delivery or LSCS, patients were followed up for a period of 6 weeks and observed for involution of uterus. In the study group of 100 patients in which antenatal nipple stimulation was done 1 patient had subinvolution of uterus where as in control group 3 patients had subinvolution of uterus. None of the patients had any complains of per vaginal bleeding or spotting nor did they have any evidence of retained products of conception.

Conclusion: The present study outlines the importance of breast milk outcome positive response to breast stimulation exercise during prenatal period.

Keywords: Breast stimulation, post uterine activity

Introduction

Labour is a clinical diagnosis defined as the initiation and perpetuation of uterine contractions with the goal of producing progressive cervical effacement and dilatation. The exact mechanisms responsible for this process are currently not well understood. Induction of labour refers to the process where by uterine contractions are initiated by medical or surgical means before the onset of spontaneous labour. The appropriate and timely intervention is base upon accurate identification of fetus at risk. Induction is indicated when the benefits to either mother or fetus out way those of continuing the pregnancy.[1]

Breast stimulation has been suggested as an effective means of inducing labour. It is both an inexpensive and non-medical intervention which allows women greater control over the induction process. It is also indeed a very simple procedure that can be practiced even by uneducated class of women without any difficulty. Breast massage and nipple stimulation have been shown to facilitate the release of oxytocin from the posterior pituitary gland. The most commonly prescribed technique involves gently massaging the brease or applying warm compresses to the breasts for one hour, three times a day. [2]

Human m ilk is the preferred feeding for all infants, including premature and sick newborns. With rare exceptions. Benefits of breast feeding extend to mothers by improving post partum recovery, partial birth control and reduced risk of ovarian and breast

cancers. For successful implementation, breast feeding should be encouraged and supported prenatally, perinatally and postnatally. Early breast feeding in all babies, irrespective of the mode of delivery and avoidance of prelacteal and prolacteal feeds are essential to establish successful breast feeding. The motivation and preparation of brest should start during antenatal period. Willingness, keenness, knowledge and confidence in mother are crucial for successful establishment of breast feeding. During the first few days, when lactation is not fully established, the mother is often anxious that her baby is not getting adequate nourishment. Introduction of bottle feeding, would lead to nipple confusion and the baby will refuse breast feeding because the mechanism of sucking at bottle teat and breast are totally different. [3] The present study is carried out to evaluate the effect of this simple, inexpensive e technique of antenatal nipple stimulation after 37 weeks of gestation and its effect on post delivery uterine activity

Materials and methods

The present study was carried out prospectively in ANC OPD of Government General Hospital.

Methodology of data collection

- Written and informed consent of the patient was taken
- A prospective study was carried out on 200 booked patients at term.
- Prior examination was done to exclude any inverted or cracked nipple and appropriate treatment was instituted.
- Daily stimulation of breast (nipple), 3 times a day (anytime of the day) preferably during bathing after 37 weeks of pregnancy was introduced in randomly selected 100 pregnant women (case group)
- The remaining 100 women formed the control group where stimulation of breast (nipple) was not being done.
- In the above two groups effects of stimulation of breast and its outcome on labour especially over post uterine activities was studied.
- Comparative study was done in both the groups
- Statistically data was interpreted to suggested relevant recommendation.

Inclusion criterria

All women with 37 completed weeks of gestation and sure of their last menstrual periods were included in the study group.

Gestational age was determined by the best obstetric estimate of date of confinement, with the use of a reliable menstrual history (normal, predictable, cyclic, spontaneous menses), no recent use of oral contraceptives, an early pregnancy test, an early vaginal estimation of uterine size, fetal heart auscultation at 20 weeks, and obstetric sonograms.

Exclusion criteria

- Mothers with less than 37 weeks of gestation.
- Low Amniotic Fluid Index.
- Mothers with fetus showing intra uterine growth restriction
- Mothers with pregnancy induced hypertension.
- Mother with congenital anomaly babies.
- Mother with previous LSCS or any other surgery on uterus,
- Any other high risk pregnancy.

Methods:

The selected patients from cases were taught the following maneuver

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- Detailed history was taken and thorough clinical examination was performed.
- Patient was taught the maneuver; breast was stimulated/massaged, with palmer surface of the hand, between the index and fore fingers for about 5 minutes in downward direction.
- The patient was then asked to rest for 3-4 minutes.
- Above mentioned procedure was repeated 3 times a day.
- This maneuver had to be followed by the patient after 37 weeks of pregnancy without any risk factor,
- This was repeated till 40 weeks of gestation
- Patient was admitted in the ward, at the completion of 40 weeks of gestation (by date or by scan).
- Patient was kept under observation from 40 to 41 weeks of gestation.
- During this period, patient was evaluated in terms of amount of liquor, baby weight, NST, biophysical profile..

Observations and results

Table 1: Incidence of sub involution of uterus

SR. NO.		CLASS (n=100)	CONTROL (n=100)	Fisher Exact Test -P
	Number of patients having uterine hyper stimulation	01	03	0.311 Not Significant

After vaginal delivery or LSCS, patients were followed up for a period of 6 weeks and observed for involution of uterus. In the study group of 100 patients in which antenatal nipple stimulation was done 1 patient had subinvolution of uterus where as in control group 3 patients had subinvolution of uterus. None of the patients had any complains of per vaginal bleeding or spotting nor did they have any evidence of retained products of conception.

Table 2: Incidence of postpartum hemorrhage

SR. NO.		CLASS (n=100)	CONTROL (n=100)	Fisher Exact Test P
	Number of patients having postpartum haemmorhage	01	03	0.311 Not Significant

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In this study group of 100 patients in which antenatal nipple stimulation was done 1 patient had atonic PPH following vaginal delivery , where as in control group 3 patients had evidence of atonic PPH. All cases of PPH were managed accordingly and there was no maternal mortality.

Discussion:

Breast stimulation has been suggested as an effective means of inducing labour. It is both an inexpensive and non-medical intervention which allows women greater control over the induction process. It is not clear how breast stimulation increases uterine contractions; however it has been shown to be effective for contraction stress tests and for the augmentation of labour. Breast massage and nipple stimulation have been shown to facilitate the release of oxytocin from the posterior pituitary gland. The most commonly prescribed technique involves gently massaging the breast or applying warm compresses to the breasts for one hour, three times a day. Oxytocin is released, and studies have demonstrated an abnormal fetal heart rate (FHR) tracing similar to that occurring in oxytocin challenge testing in higher-risk pregnancies. This abnormal rate may be caused by a reduction in placental perfusion and fetal hypoxia. It has been suggested that nipple stimulation causes release of endogenous oxytocin causing uterine contractions. Nipple stimulation in addition to producing uterine contractions also causes improvement is Bishop's score which helps in successful induction of labour by making the cervix favorable. Nipple stimulation can also be used for augmentation of uterine activity in case of hypotonic uterine action. Breast stimulation as a means of labour induction allows women greater control over the induction process and has the advantage of being a natural and inexpensive non-medical methods.[4,5]

Mother's milk is the universally acknowledge ideal and complete food for her baby. The milk is produced as a result of the interaction between hormones and reflexes. The present study also deals with the effect of antenatal nipple stimulation after 37 weeks of gestation on initiation of breast feeding after delivery. [6,7] This study was conducted at Sassoon General Hospital in which 100 cases were included as per the inclusion criteria and in whom antenatal breast stimulation was advised. Gestational age was determined by the best obstetric estimate of date of confinement, with the use of a reliable menstrual history (normal, predictable, cyclic, spontaneous menses), no recent use of oral contraceptives, an early pregnancy test, an early vaginal estimation of uterine size, fetal heart auscultation at 20 weeks, and obstetric sonograms. In control group of 100 patients no intervention was done.[6]

In the study conducted by Adewole et. Al. 1993a and 1993b, experimental group was subjected to unilateral self breast stimulation 1 hour per day for 3 days and there was no intervention in the control group. In the study conducted by Chayen 1986 in experimental group induction of labour using an electric breast pump, (250 Hg of negative pressure) alternating e very 15 minutes from left to right nipple and in control group oxytocin infusion was done.6

After vaginal delivery or LSCS, patients were followed up for a period of 6 weeks and observed for involution of uterus. In the study group of 100 patients in which antenatal nipple stimulation was done 1 patient had subinvolution of uterus where as in control group 3 patients had subinvolution of uterus. None of the patients had any complains of per vaginal bleeding or spotting nor did they have any evidence of retained products of conception. In this

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Conclusion:

The present study outlines the importance of breast milk outcome positive response to breast stimulation exercise during prenatal period.

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