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To Study the Effect of Counseling on Early Initiation of Breast Feeding in the First Hour of Life

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Results: In group A (conselled group) 58 % women intiated breast feeding within one hour of birth while in the control group (without conselling) 32 % women did early intiation. The difference was statistically significant. (p= 0.0090)

Verbal counseling is a simple inexpensive intervention that can be easily done during antenatal visits to motivate pregnant women for early intitation of breast feeding but is sadly often overlooked. This study shows that simple measures like verbal counseling can improve the early initiation of breast feeding.

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To Study the Effect of Counseling on Early Initiation of Breast Feeding in the First Hour of Life

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Abstract- In india there are many barriers to initiation of breast feeding within one hour of birth. This study was done with the aim of evaluating whether verbal counseling of pregnant women during the antenatal period can help improve the incidence of early initiation of breast feeding. A prospective, questionnaire based study including 100 pregnant females, was conducted a tertiary care hospital of Delhi. The patients were randomly allotted to two groups. Group A received verbal antenatal counseling regarding benefits of early intiation and group B did not. The proportion of women initiating breast feeding within one hour of birth was then assessed and both groups were compared. Results: In group A (conselled group) 58 % women intiated breast feeding within one hour of birth while in the control group (without conselling) 32 % women did early intiation. The difference was statistically significant. (p= 0.0090)

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I. Introduction

Early initiation of breast feeding has been recommended by the WHO since 1992. It is recommended that women who have had normal vaginal deliveries should begiven their babies to hold with skin contact, for at least 30 minutes,within a half-hour of birth and offered help by a staff member to initiate breastfeeding. At least 50% of mothers who have had caesarean deliveries should be given their babies within half-hour of being able to respond, to hold with skin contact(1).

According to WHO, an estimated 4 million newborn deaths occur every year of which almost all are due to preventable causes, attributed to infections, like, sepsis, meningitis and pneumonia. Early initiation of breastfeeding would be protective against these causes of death (2). Also the findings from aGhana study (3), clearly showed, that ensuring initiation of breastfeeding within 1 hour could cut 22% all neonatal mortality.

With all the evidence of benefits of early initiation of breast feeding present, on a practical level, only about 1 to 23% (4, 5) women are actually following it. Lack of knowledge, experience and support from hospital staff and family, religious rituals, are some of the modifiable causes. Also, effect of anesthesia post a caesarean section, emergency surgeries for the mother or the neonate, ICU/ NICU admissions of the mother or neonate, preterm babies, stillbirths, HIV positive mothers constitute some of the unmodifiable reasons for delay of breastfeeding.

This randomized study was conducted to observe if antenatal (at term) verbal counseling of the mother, regarding early initiation and exclusive breastfeeding, could significantly increase the number of early breast fed babies.

II. Review of Literature

Breastfeeding is the ideal form of infant feeding and is crucial for lifelong health and well-being. Breast fed babies gain nutritional and growth benefits (6), helps develop an enhanced immune system (7) and resistance to disease (8). The benefits are also seen in childhood. Some of these are decreased risk of childhood obesity, some cancers and diabetes (9-11).Breast feeding also has positive effect for the mother as it minimizes postpartum bleeding, by accelerating uterine involution and also facilitates in weight loss (12-13). It also protects against osteoporosis and lowers the risk of breast cancer, ovarian and endometrial cancer (14, 15, 16, 17). Successful establishment of breastfeeding also increases self-confidence and facilitates bonding with baby (18).

Early successful establishment of breastfeeding sustains breastfeeding throughout infancy. Also,it promotes warmth and protection which may reduce the risk of death from hypothermia. It has been observed that the suckling reflex of the newborn is at its height twenty to thirty minutes after birth. If the infant is not fed then the reflex diminishes rapidly only to reappear adequately forty hours later (19). Also, the antibody content of colostrum is at its maximum during the first twelve postpartum hours making it relevant.

Early breastfeeding has a physiological effect on the uterus as well, causing it to contract, thus preventing post-partum hemorrhage (20).It was found that sucking and hand touching by babies stimulates oxytocin release, which is significant for uterine contractions, milk ejection and mother infant relationship and reduction in postpartum bleeding (21).

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The percentage of women initiating breastfeeding in one hour varies all over the world. According to various public health surveys, 23.1% - 63.8% initiated breast feeding in the first hour of life.Early Initiation of Breast feeding within one hour in South Asian countries varies from 24% to 75% (22, 27).

A cross-sectional questionnaire based study was conducted in tertiary care teaching hospital, in Surat district, Gujarat. Out of all deliveries, breast milk was initiated within one hour only by 1.0 percent of mothers.

Breast feeding is not only a natural act, it is also a learned behavior. Extensive research has demonstrated that mothersrequire active support for establishing and sustaining appropriate breast feeding practices. The decision to breastfeed is influenced by many varied factors, like, demographic variables, attitude and knowledge, doctor's advice and involvement and support from family members (23). To ensure that expectant mothers adopt accurate infant feeding practices, antenatal breast feeding education; proper counseling in labor room and maternity ward should be followed.

III. Aims and Objectives

The Main Aims and Objectives of This Study Are

- To establish the proportion of postpartum women practicing early initiation of breast feeding.
- To assess if antenatal verbal maternal counseling improves the percentage of early breast fed infants.
- To educate women regarding the benefits of early and exclusive breast feeding, correct positioning of the mother and the infant to establish successful breast feeding, and regarding maternal health and hygiene with regard to breast feeding.
- To determine other barriers to the same in a tertiary health care set up.

IV. Materials and Methods

a) Methodology

This is a prospective,questionnaire based study, conducted on a population of 100 pregnant females, admitted at term in a tertiary care hospital of Delhi.

- Ethical committee clearance of the tertiary care hospital was obtained.
- The study population was selected after applying inclusion and exclusion criteria. Inclusion criteria: Pregnant females being admitted at term. Exclusion criteria includes patients with :
- Lacerations & tears requiring repair in OT.
- Extended episiotomy
- Prolonged surgery (whenever the average duration of caesarean is greater than one hour)
- Vaginal ICU admission of the mother
- NICU admission of the neonate
- Stillbirths
- HIV positive status of the mother.
- Debilitating medical conditions (such as hepatic encephalopathy)
- The pregnant women in both the groups were asked to fill up aninformed consent form (made both in English and Hindi) stating that they are aware of the survey and willing to participate in it.(Appendix B).
- Those consenting were randomly divided in the following groups:
- Group A (study population): Females admitted at term, prior induction or in first stage of labor were verbally counseled about the benefits of initiation of breast feeding in the first hour of life,correct positioning of the infant and mother to establish successful breast feeding, maternal hygiene and benefits of exclusive breast feeding (special emphasis on first hour of life was given) (Appendix A)
- Group B (reference population): No intervention done.
- After the delivery the participants were asked to fill up questionnaire consisting of 22 questions within 24 to 72 hours of delivery.(Appendix C)
- Null hypothesis for the survey: 'Antenatal maternal counseling has NO effect on initiation of breast feeding in the first hour of life.'
- The results thus obtained were compiled and analyzed statistically using chi-square test as per the SPSS statistical package.
- Confidentiality was maintained.

b) Material Used

i. Consent forms written in Hindi as well in English for the convenience of the patient.(appendix B)
ii. Performa stating the contents of verbal counseling to have a uniform dissipation of information.(appendix A)
iii. A questionnaire consisting of 22 questions.(appendix C)

V. Results

a) Observations

The study was conducted on 100 pregnant females admitted at term, or for induction in a tertiary hospital.

Group A patients (n= 50): Females admitted at term, prior induction or in first stage of labor, were counseled verbally regarding early initiation of breastfeeding. 29 patients initiated breast feeding within one hour of delivery (58%).

GROUP B patients (n=50): were met post-delivery, and were asked to fill a questionnaire (not counseled).

b) Demographic Profile of Patients

	GROUP A(n=50)	GROUP B(n=50)
AGE(years)		
<20	3	1
20-25	21	27
26-30	22	19
>30	4	3
EDUCATION		
ILLITERATE	0	1
PRIMARY(TILL 8TH)	2	1
SECONDARY(TILL 10TH)	6	0
HIGHER SECONDARY	11	7
GRADUATE	21	14
POSTGRADUATE	10	8
PARITY		
PRIMI	32	19
MULTI	18	31
1	32	19
2	16	21
3	2	7
4	0	2
5	0	1
PERIOD OF GESTATION(weeks)		
<36	0	3
36-38	6	17
38-40	34	23
>40	10	7

	GROUP A	GROUP B
MEAN AGE(years)	25.64	25.32
MEAN PARITY	1.4	1.9
MEAN POG(weeks)	39.24	38.38

c) Initiation of Breastfeeding

TABLE 1

Group A

INITIATION OF BREASTFEEDING	NUMBER(PERCENTAGE)
WITHIN 30 MINUTES:	9 (18%)
30 MINUTES TO 1 HOUR:	20 (40%)
1 HOUR TO 3 HOURS:	19 (38%)
3 TO 6 HOURS:	2 (4%)
>6 HOURS:	NONE.

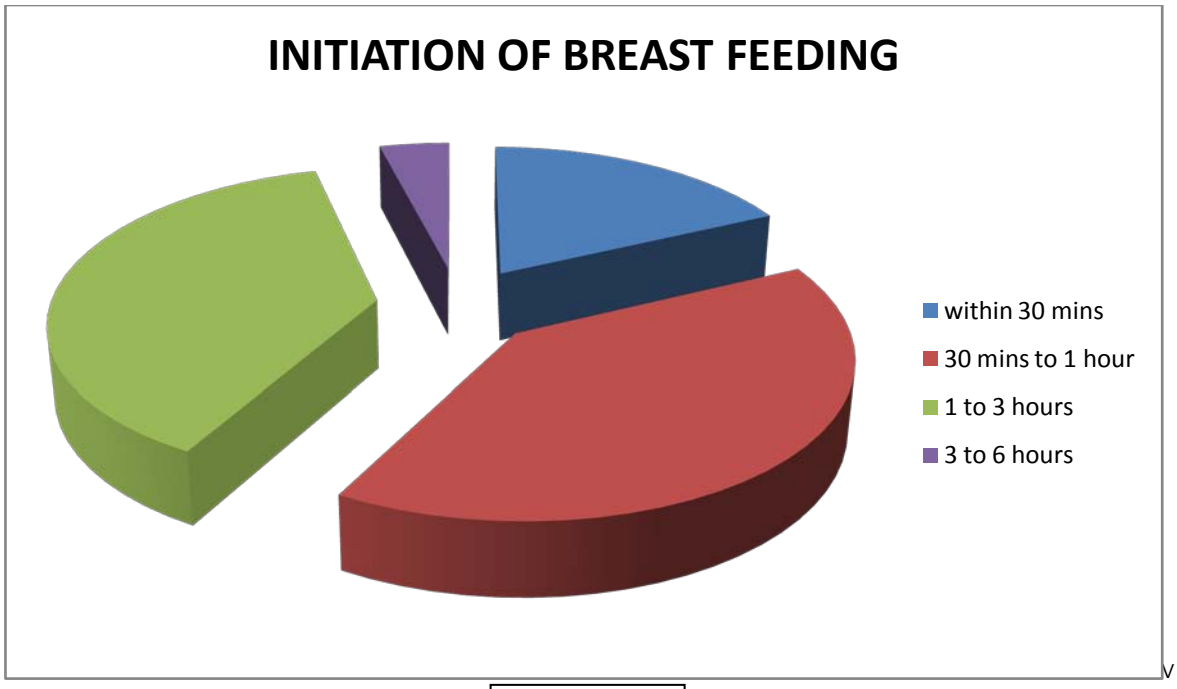

FIGURE 1

TABLE 2

Group B

INITIATION OF BREASTFEEDING	NUMBER(PERCENTAGE)
WITHIN 30 MINUTES	5(10%)
30 MINUTES TO 1 HOUR	11(22%)
1 HOUR TO 3 HOURS	31(62%)
3 TO 6 HOURS	3(6%)
>6 HOURS	None

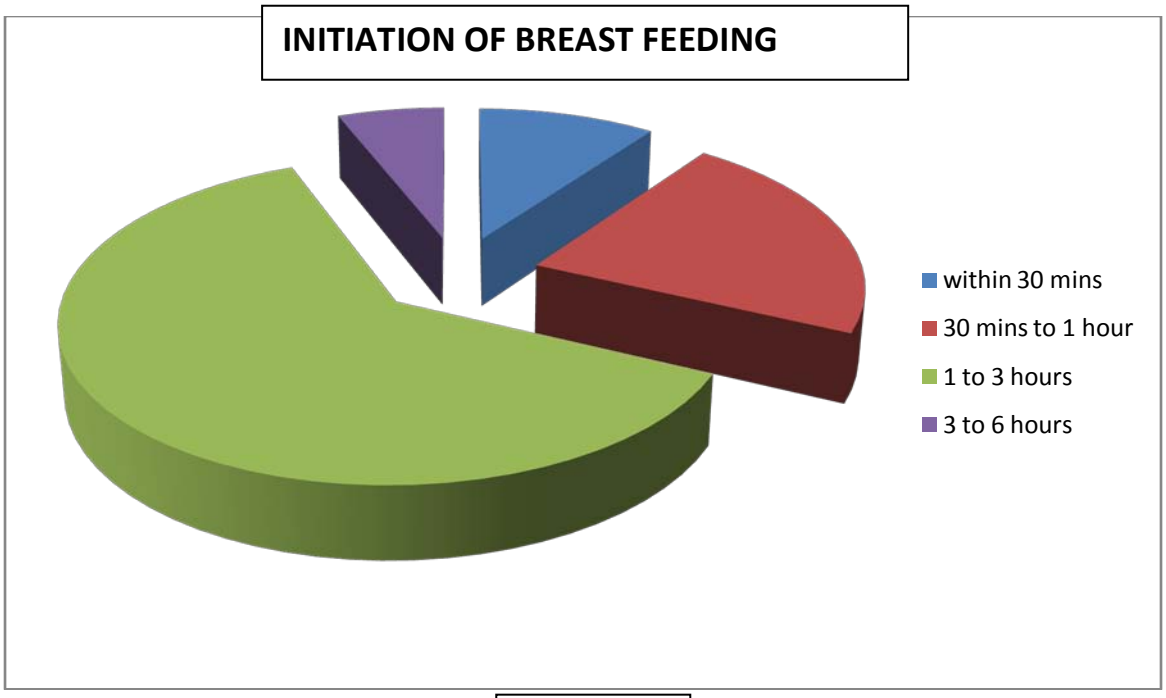

FIGURE 2

TABLE 3

REASONS FOR DELAY(GROUP A):	NUMBER(PERCENTAGE)
1. FATIGUE	6(12%)
2. BABY WAS SEPARATED	15(30%)
3. NO/POOR SECRETIONS	4(8%)
4. MOTHER UNABLE TO LATCH ON THE BABY	2(4%)
REASONS FOR DELAY(GROUP B):	NUMBER(PERCENTAGE)
1. FATIGUE	6(12%)
2. BABY WAS SEPARATED	19(38%)
3. NO/POOR SECRETIONS	2(4%)
4. LACK OF KNOWLEDGE	12(24%)
5. PAIN DUE TO EPISIOTOMY	1(2%)

To find out association between maternal counseling and early initiation, we use the CHI-SQUARE TEST At 95% confidence interval and 1 degree of freedom, the value of chi-square is 6.828, probability value = 0.0090, making the statistically significant ($p < 0.05$)

VI. Results

- In group A, with verbal antenatal counseling, 58% (29) women breastfeeding within one hour of birth (table 1).
- In group B, without counseling, 32% (16) women initiated breastfeeding within one hour of birth (table 2).
- CHI SQUARE test applied on the given data, shows significant relationship between antenatal counseling and early initiation of breastfeeding, with $p=0.0090$ (table 4).
- 90% women in group A were unaware regarding initiation of breastfeeding in the first hour.
- Separation of the baby from mother due to various reasons has been implemented as the main cause for delay in both the study groups (30% in group A and 38% in group B) (table 3).

VII. Discussion

The present study showed 58% antenataly counseled women initiated breastfeeding in the first hour of life. During the course of conducting the study, it was found that there is majorlack of knowledge among Indian females, regarding importance of early initiation as well as how to breastfeed, especially primigravidas.

Also, due to excessive workload, the tertiary hospital setting is unable to provide timely assistance to these females. Above all, in India, societal norms, values and beliefs regarding colostrum and prelacteal feeds as part of rituals, coupled with lack of family support contribute to worsening of the condition, leading to high rates of neonatal mortality.

In assessing various barriers to early initiation, separation of mother and baby, due to constitutional delay in handing over baby, birth asphyxia, maternal pyrexia, have emerged as the main cause. Maternal fatigue, inability to latch on the baby to breast and poor breast secretions are some of the other causes. In group B, lack of knowledge is also a major barrier (24%).

When early initiation of breastfeeding was assessed in the study post antenatal counseling, it was found that 58% women initiated breastfeeding. This percentage is more than the overall early initiation percentage of India, i.e., 23. 4% (NFHS 2005-6). This effect was shown to be statistically significant (p=0.0090).

Even though a positive association between antenatal counseling on the benefits of breastfeeding and increased prevalence of breastfeeding initiation within the first hour of life has been indicated, no other studies focusing specifically on the first hour of life were identified. However, differing results relating to antenatal counseling and the initiation of breastfeeding have been presented in various studies. A randomized controlled trial carried out by MacArthur et al (24), in Birmingham showed that guidance and information on the advantages of breastfeeding in antenatal follow-up clinics among a population of various ethnicities with at least three contacts duringpregnancy were ineffective for increasing the rate of breastfeeding initiation. On the other hand, Fairbank et al (25) indicated that implementation of ante and postnatal support programs, along with antenatal counseling programs among low-income women, had increased the breastfeeding initiation rate. World Health Organization and the United Nations Children's Fund have emphasized that it is important to inform pregnant women about the advantages of breastfeeding during the prenatal period, so that they can make a decision based on facts regarding how to feed their children (26)

A few of the limitations of the present study include a small sample size and restriction to a particular hospital in one region of Delhi. Despite these limitations, the study's main findings are of value; i.e. that women admitted had inadequate knowledge about breast feeding, especially timing and technique (90% females in group A), and that counseling has a significant effect on breastfeeding initiation.

VIII. Conclusion

Inadequate information being given to mothers is a major factor responsible for lowrates of exclusive breastfeeding and earlyinitiation of breast feeding. The lack of experimental research particularly in the Indianmeans that it is unclear what would be the most effective interventionto improve earlyinitiation rates. In this study, despite antenatal and labor room counselingonly about three fifths of mothers initiated breastfeeding within 1st hour of delivery. Implying, thatmeasureshave to be taken to overcome other barriers to early breastfeeding. Practical strategies like provision ofbreastfeeding counselors in the hospital setup, constantcounseling, verbal as well as practical demonstration of correct positioning and attachment to mothers (especially primigravidas) and their immediate relativeswho take care of baby and mothers; by doctors andnurses are essential for increasing early breastfeeding.All pregnant ladies, irrespective of parity, should get antenatal breast feedingcounseling.Frontline workers like nurses and dais should be trained to handover the baby immediately to mothers post-delivery (in absence of medical emergencies) as well as in counseling and supporting mothers in each and every step regarding breastfeeding.

IX. Summary

Early initiation of breastfeeding has been established as a major step for decreasing neonatal mortality and yet the percentage of women following it is very low (23.4% in India; NFHS 2005-2006).At present very little interventions are being followed in our tertiary care hospitals, to promote the same (despite the ongoing baby friendly hospital initiative since 1992). This questionnaire based prospective study was conducted on 100 pregnant females being admitted at term or for induction.50 women were counseled in the antenatal period and 50 were not. In the postnatal period, follow up for early initiation of breastfeeding and its barriers was done. Via this study, antenatal counseling has been shown to have a significant relation to early initiation as well as successful establishment of breastfeeding (58% counseled and only 32% non-counseled women initiated breastfeeding within one hour of birth; p=0.009). Therefore, it can be used as a major intervention for promotion of the same.

X. Suggestions

1. In outpatient clinics of obstetrics and gynecology, videos and charts should be played and displayed, respectively, containing information regarding early initiation, exclusive breastfeeding, how to breastfeed and complementary feeding, for mass coverage.
2. Special breastfeeding counselors should be employed in tertiary hospitals, to help women with the same.
3. Not only verbal, but also practical demonstration of attachment to breast and feeding position should be provided in counseling sessions.

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