

Determinant of Early Initiation of Breastfeeding in a Tertiary Neonatal Unit

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Abstract

Introduction: Initiation of breastfeeding within one hour of birth is an important determinant of successful breastfeeding. National Family and Health Survey -3(NFHS-3) reported that only 23.4% of children <3 years were breastfed within one hour of birth. **Objectives:** the purpose of this study is to study the determinant of initiation of breastfeeding within one hour of birth. **Setting:** Tertiary –level neonatal unit. **Material and Methods:** All mothers admitted in in the postnatal ward were eligible for inclusion; mothers of sick and /or preterm infants were excluded. Enrolled mothers were interviewed between 24 and 72 hours after delivery. **Results:** The proportion of mothers who initiated breast feeding within one hour of delivery was 32%, between 1-6 hrs were 47% and between 6 to 48 hrs were 21%. Maternal age, education, socioeconomic status, occupation and antenatal or labor room counseling did not influence the initiation of breast feeding within one hour of delivery in univariate analysis. On multivariate analysis, admission in the general ward and delivery by caesarean section were found to be significantly associated with not initiating breastfeeding within one hour (adjusted ORs: 8.79, 2.48 to 31.08, $p=0.001$ and 6.79, 4.07 to 22.02 $p=0.001$ respectively). Only about 13% of the infants received prelacteal feeds. **Conclusion:** Mothers delivering by caesarean section or admitted in the general ward were at high risk of not initiating breastfeeding within one hour. Innovative strategies are required to ensure timely ignition of breastfeeding.

Key words: Breastfeeding, Caesarean section, prelacteal feeds, time of initiation.

Introduction

Breast feeding is the best way of providing ideal food for the optimal growth & development of an infant. It also protects babies from common diseases like ARI & diarrhoeal diseases. It is not only beneficial to the baby but also beneficial to the mother, family, society and a nation as a whole.

Early initiation of breastfeeding has been shown to be associated with a higher prevalence of subsequent breastfeeding¹. Initiation of breastfeeding within 1st hour of birth is the first and most vital steps towards reducing infant and under five mortality and foremost

unacceptably high neonatal mortality rate in developing countries like India and Nepal. According to global data out of all 10.9 million under five deaths 4 million deaths occur Neonatal period. One third of which is due to infection, we can prevent this mortality by one of the cheapest and safest method i.e. by exclusive breastfeeding. According to National family & health Survey-3(NHFs-3) only 23.4% neonates were breastfed early in India like wise according to NDHS survey 2006 only 35.4% of newborn were initiate breastfeeding early in Nepal.

To enable mothers to establish and sustain exclusive breast feeding for 6 months WHO and UNICEF recommend:

- a. Initiation of breast feeding within 1st hr.
- b. Exclusive breast feeding.
- c. Breast feeding on demand.
- d. No use of artificial nipples, pacifier or teats.

While breast feeding is a natural act, it is also a learned behaviour. Extensive research has demonstrated that mothers and other caregivers require active support for establishing and sustaining appropriate breast feeding practices. The decision to breast feeding is influenced by diverse factors including demographic variables, attitude and knowledge, physician endorsement support from the family members² to ensure that expectant mothers make a truly informed decision about infant feeding; prenatal breast feeding education, breast feeding counselling in labour room, postnatal ward and maternity ward should be practised in each step. Extensive researches document the impact of specific health care practices and hospital routines on breast feeding outcomes. Practices that promote successful breast feeding includes early initiation of breast feeding³, continuous rooming in⁴, demand feeding⁵, avoidance of unnecessary formula supplementation⁶, avoidance of artificial nipples⁷, availability of knowledgeable staff⁸, correct breast feeding technique⁹ and appropriate support in the post discharge period.

Despite the documented rationale for breast feeding by BFHI, the hospital itself as a barrier for breast feeding remains widespread. Common practices that interfere with successful lactation include delayed initiation of breast feeding, separation of mother and baby, restricted feeding, use of formula feeding, routings use of pacifiers, insufficient guidance in correct breast feeding techniques and exclusive alliance between hospitals and formula companies. Any maternal or infant factor that limit exclusive breastfeeding should be identified early and solve the problems immediately offer the best chance of successful lactation.

Objective

To study the *determinants* of initiation of breastfeeding within one hour of birth.

Material and methods

This was the Hospital based cross sectional study conducted at Tertiary level neonatal unit of All India Institute of Medical Sciences (AIIMS), New Delhi; in maternity wards including postnatal ward and private wards. A total of 100 mothers who had delivered at AIIMS over a period of two months (May-June 2007) were taken for the study. Informed verbal consent was

taken from all mothers. They were interviewed by using standard questionnaire which was pretested. The time of interview ranged from 24-72 hrs of delivery. Data were analysed by using EPI-INFO software. Inclusion criteria: Mothers who gave birth to singleton baby at term gestation. Exclusion criteria: Preterm babies, sick term babies who required NICU admission, severe congenital anomalies and multiple births

Results

A total of 100 mothers delivering at AIIMS were enrolled in the study. More than half (56%) of mothers were of 25-29 yrs of age group. Only 2% of mothers were >35 years and none of them were below 20 years. More than one third (34%) had secondary school education. Almost two thirds (67%) of mothers were from lower middle class family. Almost half (49%) of mothers delivered vaginally. Eighty percent of mothers were house wives.

Thirty two percent (32%) of mothers initiated early breast feeding (within 1st hr. of delivery), 88% of mothers initiate breast feeding within first 12 hrs. 75% of mothers were counselled for the early initiation of breast feeding, where as 7% of mothers never received breast feeding counselling till the time of interview.

Only one third of mothers initiated breast feeding within one hour of birth but more than ninety five percent of mothers start breastfeeding within twenty four hours of delivery.

Almost 30% had given prelacteal feeding. Among these more than half (56.6%) received formula feeding in the form of prelacteal feeding indicating wide use of formula feeding in the hospital. About seventy six (76.6%) of infants received prelacteal feeding at 1-6 hrs of life, whereas only 16.7% of neonates received prelacteal feeding within 1st hr of birth, indicating that there is large scope of avoiding prelacteal feeding by avoidance of giving formula feeding and early initiation of breast feeding by giving early breast feeding counselling and supporting the mother for breast feeding.

Results were analysed and on multivariate analysis: Delivery by caesarean section was found to be significantly associated with not initiating breastfeeding within one hour of birth. (OR 6.79, 4.07 to 22.07 $p=0.001$). Like wise on multivariate analysis; admission in general ward was also found to be significantly associated with not initiating breastfeeding within one hour of birth (OR: 8.79, 2.48 to 31.08, $p=0.001$). All others variables i.e. mother's age, maternal education, maternal occupation and socioeconomic status was insignificantly associated with early initiation of breast feeding. Similarly mothers who underwent caesarean

section were giving significantly more prelacteal feeding to their babies ($p=0.0001$). Other factors i.e. maternal age group, maternal education, maternal occupation and socioeconomic condition were not significantly associated for prelacteal feeding. Only two thirds (66.7%) of mothers received breastfeeding counselling from doctors during ANC period.

Table 1: Showing Demographic Variables of Mothers.

1. Maternal Age Group	Percentage
20-24	26(26%)
25-29 years	56(56%)
30-34 years	16(16%)
>35years	2(2%)
2. Maternal Education	Percentage
Metrics	34(34%)
Intermediate	22(22%)
Graduation	25(25%)
Postgraduate	19(19%)
3. Socioeconomic Status	Percentage
Upper-class	2(2%)
Upper-Middleclass	4(4%)
Middleclass	19(19%)
Lower middleclass	6(6%)
Lower/Poor class	8(8%)
4. Mode of Delivery	Percentage
SVD	49(49%)
C-section	47(47%)
Forceps	4(4%)

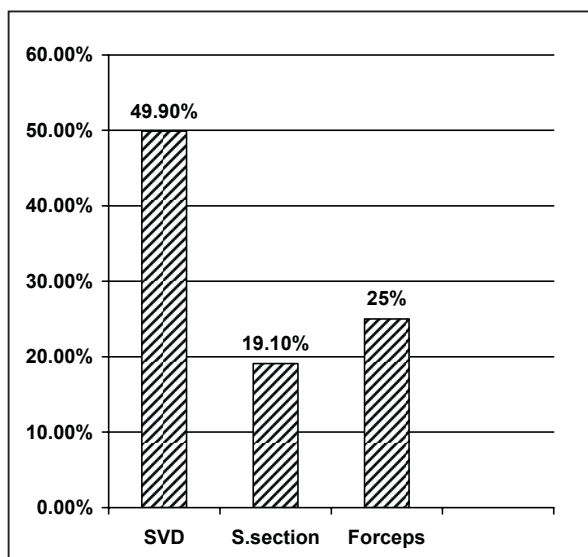


Fig 2: Showing propitiations of Mothers who Initiated Breastfeeding within 1st hour of Delivery According to Mode of Delivery.

Discussion

In India steps taken for the protection and promotion of the practice of breast feeding have been effective and breast feeding is almost universal. However the message that early initiation of breast feeding, avoidance of prelacteal feeding and exclusive breast feeding up to six months and gradual introduction of semisolid feeds has not been as effectively communicated. Data from literature shows a significant level of exclusive breast feeding only till three months i.e. 55.2%, by six months exclusive breast feeding drop to 19%.government of India is making an extensive effort to promote and support breast feeding. Breast feeding component is incorporated in the national nutrition goals for the 10th 5 year plan. The goal for the 10th plan is to:

1. Enhanced early initiation of breast feeding from the current level of 15.8% (as per NFHS-II) to 50%.

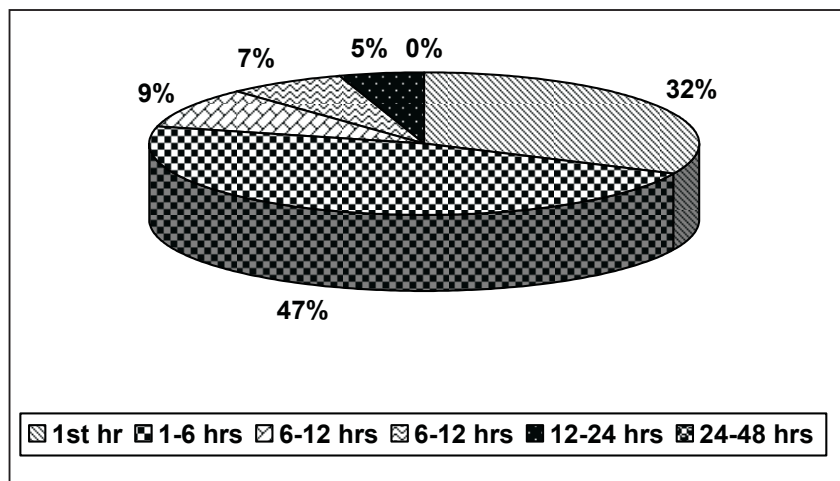


Fig 1: Showing Time of Initiation of Breastfeeding.

- Enhanced the exclusive breast feeding rate for children up to the age of 6 months from the current rate of 55% at 3 months (as per NHFS-II) to 80%.

In our study 32% of mothers initiated early breast feeding within 1st hr of delivery, and 95% of mothers had initiated breast feeding within 1st 24 hrs of delivery. Study by Ajay Vatsayan et.al.¹⁰ in Simla found only 10.3%, but almost similar percentage of mothers (92.21%) started breast feeding within 1st 24 hrs of delivery. Kameshwara rao et. al.¹¹ in their study which was found to be similar to our study showed 39.5% of mothers practiced exclusive breast feeding practices. Similar finding have also been observed by Ram et al.¹² i.e. 85.5% of infants were put on breast milk within first 24 hours after their birth. Similarly K.S.Negi¹³ observed 80.3% of the mothers initiated breastfeeding within 7-18 hours after delivery. Taneja¹⁴ found that exclusive breast feeding was not so common (26.4%) as water was started to be given in most infants in the first month itself. So much of a difference in studies regarding early initiation of breast feeding could be due to difference in hospital and community setup.

This study we observed that, caesarean section was found to be a significant cause of delayed initiation of breast feeding (19.9% vs. 44.9%, $p=0.00030$). A similar type of finding was observed by Vatsayan et.al¹⁰ also observed similar correlation between caesarean section and a decreased rate of initiation of early breast feeding (only 8% of mothers undergoing caesarean section initiated breast feeding within 1st 8 hrs of delivery, $p=0.000$). Similar type of findings was also observed by Pandit N.Yeswant¹⁵. These findings suggest that more and more support should be given for mothers who underwent caesarean section for early initiation of breast feeding.

No others factors in this study like; maternal age, maternal education, maternal occupation and socioeconomic status were correlated significantly with early initiation of breast feeding. similar finding was observed by Ajaya Vatsayan¹⁰. The finding that education and breastfeeding counselling of mothers is not conclusively linked to the initiation of breastfeeding may be due to other confounding factors as mother-in-law preferences, delayed rooming in of the child or simply personal attitude despite education.

In our study we found that only 13% of mothers gave prelacteal feeding. Chhabra et al¹⁶ also demonstrated from their study that in an urban resettlement colony of Delhi, 76.9% infants received prelacteal feeding. Devdas et al¹⁷ also noted 87.9% nursing mothers gave sugar water, honey mixed with water, milk or jaggary as prelacteal feeding. A study conducted by Anuradha Goyle¹⁸ also found 96.6% of mothers used prelacteal

feeds. Such differences could be due to difference in study location (This study being hospital based and others being community based) and the presence of more dedicated hospital staff in this hospital. Among 13% of the prelacteal feeding group, 70% of mothers gave animal milk, 23% of mothers gave honey, 7% of mothers gave ghutti as 1st feeding. Anuradha et.al¹⁸ found that plain water (48.3%) and jaggary with ghee 46.2% as a form of prelacteal feeding. This shows that there is further scope of increasing early initiation of breastfeeding by further counselling of mothers and their caregivers.

Conclusion

Despite antenatal and labour room counselling only about one thirds of mothers initiated breastfeeding within 1st hour of delivery. Mothers delivering by caesarean section and admitted in general wards were at high risk of not initiating breastfeeding within the 1st hour. Innovative strategies like provision of breastfeeding counsellors in the hospital setup, constant counselling to mothers and their immediate relatives who take care of baby and mothers; by doctors and nurses are essential for increasing early breastfeeding. As physicians and other medical personnel play an important role in the initiation of early breast feeding and prolongation of exclusive breast, their skill about breast feeding should be upgraded by giving periodic trainings and conducting workshops. Cent percent of pregnant ladies should get antenatal breast feeding counselling in the ANC period itself, similarly they should be counselled and supported in each and every step regarding breast feeding. As most of the mothers are giving formula feeding as a prelacteal feedings, it should be discouraged.

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