

Original Research Article

The first golden hour of breastfeeding: where do we stand?

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Received: 14 October 2018

Accepted: 20 October 2018

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ABSTRACT

Background: Breastfeeding is the corner stone of child survival, nutrition and development and maternal health. The World Health Organization recommends that all neonates be breastfed within one hour of birth. Early initiation of breast feeding (EIBF) is a sentinel indicator for successful breastfeeding. The aim of this study is to assess the practice of early initiation of breastfeeding among babies delivered in our tertiary care teaching unit and to list out the reasons for delay in implementation.

Methods: This study is done on 409 postnatal mothers who delivered in our hospital. All the mother-baby dyads enrolled were interviewed within 12 hours of delivery. Data was collected through clinical records and interview of mothers.

Results: EIBF is seen only in 19.8% of babies. Median time of initiation of breast feed is 110 minutes. Primiparous mothers had a delay in initiation of feed ($p < 0.01$). The mothers who received practical support from health care providers had successful EIBF ($p < 0.01$). The main reasons for delay in feeding were lack of early, uninterrupted skin to skin contact between baby and mother and the separation of mother - baby dyads immediately after delivery.

Conclusions: EIBF rate in our centre is extremely low compared to the national standards of 44.6%. Several gaps in EIBF need to be addressed and a strict institutional protocol need to be followed. Periodic review of EIBF rates needs to be done by every institute to achieve a global target of > 90%.

Keywords: Early initiation of breastfeeding, Infant mortality, Sentinel indicator, Skin to skin contact

INTRODUCTION

Breastfeeding has many health benefits for both the mother and infant. Breast milk contains all the nutrients an infant need in the first six months of life. Breastfeeding protects against diarrhoea and common childhood illnesses such as pneumonia, and may also have long term health benefits, such as reducing the risk of overweight and obesity in childhood and adolescence. Breastfeeding in the first hour of life is associated with prolonged duration of breastfeeding and reduction of infant mortality.¹ Provision of mother's breast milk to

infants within one hour of birth is referred to as "early initiation of breastfeeding" (EIBF) and ensures that the infant receives the colostrum, or "first milk", which is rich in protective factors.

World Health Organisation (WHO) recommends exclusive breastfeeding for the first six months of life, followed by continued breastfeeding with appropriate complementary foods for up to two years and beyond.² In India, 1.2 million children aged 0–59 months die yearly. An estimated 58% of these deaths occur during the neonatal period.³ A meta-analysis of three large trials conducted in Ghana, India and Nepal found that early

initiation of breast feeding was associated with a 44% lower risk of neonatal mortality (RR 0.56; 95% CI 0.40 to 0.79).⁴⁻⁷ More recently, analyses on a large cohort of almost 100000 newborns from three large trials in Ghana, India and Tanzania has shown that, compared with infants who initiated breast feeding within the first hour of life, the risk of neonatal death among children who initiated breast feeding between 2 and 23 hours after birth was 41% higher (RR 1.41; 95% CI 1.24 to 1.62), and 79% higher among those who initiated breast feeding at 24–96 hours of birth (RR 1.79; 95% CI 1.39 to 2.30). Therefore, supporting mothers to initiate breast feeding within 1 hour of delivery is a proven high-impact intervention for neonatal survival.⁸

A new report released by United Nations Children's Fund (UNICEF) and the World Health Organisation (WHO) has ranked Sri Lanka at the top of the list of countries with early initiation of breastfeeding. India ranks 56th (only 44.6% of new-borns were breast fed within 1 hour of birth) among the 76 countries that were analysed. The report says that only two in five new-borns are breastfed within the first hour of life across the world.⁹

National Family Health Survey (NFHS-4) states that 41.6% of babies are breastfed within first hour of life. The early initiation period has doubled as compared to NFHS-3. However, these data also indicate that room for further improvement still exists by capitalising on opportunities and creating awareness at the community level.¹⁰

Since 2006, the Government of India and India's state governments with technical support from UNICEF and other partners have been implementing a comprehensive strategy to support breast feeding.

Recent meta-analyses of health system and community-based studies worldwide indicate that improving individual counselling or group education, supporting immediate breast feeding at delivery, and training health staff in lactation management (three interventions included in the baby friendly hospital initiative) increased the likelihood of early initiation of breast feeding by at least 20%.

WHO guidelines for protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services include- immediate support to initiate and establish breastfeeding, feeding practices and additional needs of infants, creating and enabling environment.

Early initiation of breastfeeding and exclusive breastfeeding is considered "sentinel indicators" for successful breastfeeding. All facilities should routinely track these indicators for each mother- infant pair. Recording of information on these sentinel indicators should be incorporated into the medical charts and collated into relevant registers.

We in our unit, analysed the practice of early initiation of breast feeding and the various factors causing hindrance to its implementation.

METHODS

This is a cross sectional, hospital-based observation study done in a tertiary care mother and child unit, Andhra Pradesh. The study is done over a period of two months- August 2018 to September 2018.

Inclusion criteria

All the babies born in the unit who are fit to be breastfed within the first hour of life are registered.

Exclusion criteria

Babies admitted to Neonatal Intensive Care Unit (NICU) immediately after birth, babies with congenital malformations interfering with feeding, babies of mothers who have medical complications which would prevent early initiation of breastfeeding.

Sample size calculation

A sample size of 379 is estimated with an expected percentage of EIBF being 44% (national average), with a 5% precision level and 95% confidence interval.

All the data was recorded within 12 hours of birth. Data was collected from clinical records and from personal interviews of mothers through the help of a semi-structured questionnaire. A written consent was obtained from all the mothers.

Data was analysed using Statistical Package for Social Sciences (SPSS, version 20). Descriptive data was computed to determine the prevalence of early initiation of breastfeeding. Chi square tests (χ^2) were performed to evaluate the association of the independent variables with the early initiation of breastfeeding. A p value < 0.05 was considered statistically significant.

A total of 478 mother- baby dyads were born during the study period. 63 Mother baby dyads were excluded from the study as they were admitted into the Neonatal Intensive Care unit for reasons which could not allow them to be breastfed within the first hour of life. 6 Mother-baby dyads were excluded due to maternal complications like Eclampsia, Encephalopathy etc. Hence, 409 mother- baby dyads were finally enrolled into the study.

RESULTS

Four hundred and nine women, fulfilling the study criteria, were enrolled during the study. All these postnatal mothers were interviewed within 12 hours of delivery.

Among the 409 dyads studied, 60 % of babies (n=246) were born by Normal vaginal delivery and 40% (n= 163) were born by Lower Segment Caesarean Section (LSCS).

Socio-demographic characteristics of the postnatal mothers are shown in Tables 1 to 3.

Table 1: Socio-demographic characteristics of mothers in relation to the initiation time of breast feeding.

	Initiation of breastfeeding < 1 hour (EARLY) (n= 81)		Initiation of breastfeeding >1 hour (LATE) (n= 328)		P value
	Number	%	Number	%	
Parity					
Primiparous	17	21	127	39	0.00227 (Significant)
Multiparous	64	79	201	61	
Education					
Primary	46	57	189	58	0.8921 (Not significant)
Secondary or greater	35	43	139	42	
Mode of delivery					
Normal vaginal	49	60	197	60	0.9431 (Not significant)
LSCS	32	40	131	40	
Practical Support (Given or Not)					
Yes	17	21	4	1	<0.00001 (Significant)
No	64	79	324	98	

Majority of these women were multiparous (n = 265, 64.7%) and had only primary education (n = 241, 59%). Among the 409 postnatal mothers, the median time of initiation of breastfeeding is 110 min.

Table 2: Educational status of the mother.

Education	%	Number
Primary	58	235
Secondary	34	139
Diploma	4	18
Graduation	3	13
Post-graduation	1	4

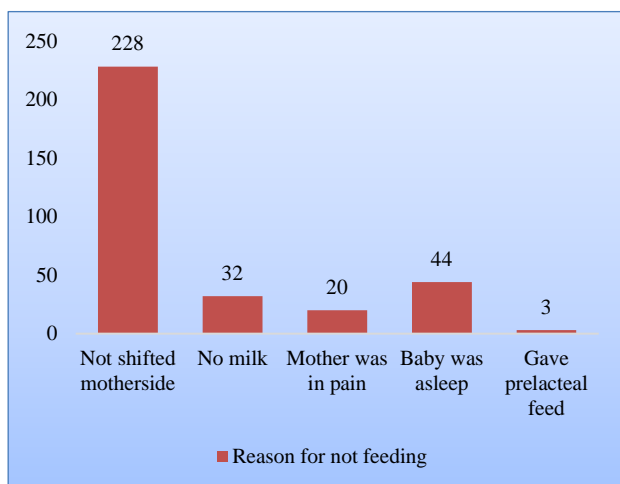


Figure 1: Various barriers in early initiation of breastfeeding.

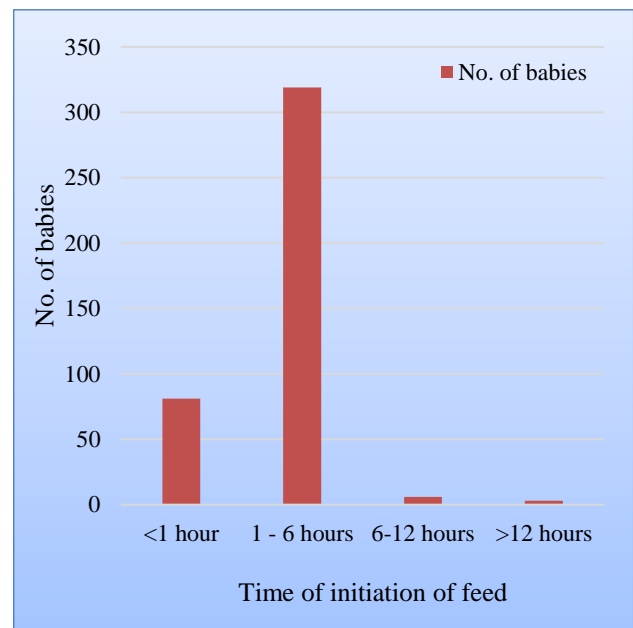


Figure 2: Time of initiation of first breastfeed.

Only 81 (19.8%) women-initiated breastfeeding within 1 hour of delivery. Out of the remaining 328 mothers, most mothers (n = 228, 69.5%) cited delay in rooming in as a major reason for delayed initiation of breastfeeding; other reasons include baby was asleep (n=44; 13.4%), no sufficient milk (n=32; 9.7%), mother in pain (n=20; 6%), introduction of pre lacteal feeds (n=3; 0.9%) and one mother complained she was too tired after delivery to feed the baby (Figure 1).

Table 3: Mode of delivery.

Mode of Delivery	%	Number
Normal	60	246
LSCS	40	163

Table 4 and Figure 2 shows the time of initiation of breastfeed among the various mother-baby dyads. Majority breast fed their babies between 1 and 6 hours of life. Primiparous mothers had a delay in initiation of feed, this relation is statistically significant ($p < 0.01$).

Table 4: Time of initiation of breastfeeding.

Time	%	Number
< 1 hour	19.8	81
1-6 hours	78.2	319
6-12 hours	1.5	6
>12 hours	0.5	3

The mothers who received practical support from health care providers had successful early initiation of breastfeeding ($p < 0.01$). Caesarean section is not significantly associated with a delay in breastfeeding ($p = 0.9431$), in contrast to other studies.

DISCUSSION

India's National Family Health Survey 2015 shows that, in states such as Andhra Pradesh and Telangana, where 92% of deliveries are attended by skilled health providers, high prevalence of births by Caesarean section (40% in Andhra Pradesh and 58% in Telangana) are associated with low rates of early initiation of breast feeding (35.8% in Telangana and 39.2% in Andhra Pradesh).

Gupta et al. reported that 30% of their respondents initiated breast-feeding within one hour of birth.¹¹ Fotedar R et al has shown that 20% women initiated breastfeeding within 1hr, while 30% women initiated breastfeeding their baby after 24 hours.¹² A cross-sectional descriptive study to estimate the prevalence of early initiation breast feeding in Tamilnadu, Southern India revealed 97.5% of the study subjects had been initiated breast feeding within one hour of birth, which is higher than present study, their study sample being only 79 mothers.¹³ A study by Patel A et al has shown that in hospital-delivered infants in India timely initiation of breastfeeding rates was 36.4%.¹⁴ El-Mouzan MI et al reported 23.2% of mothers have breastfed their babies within 1 hour after birth and El-Gilany H et al have found that only 11.4% of mothers initiated breastfeeding within 1 hour after birth in Saudi Arabia.^{15,16} Reports from the Postgraduate Institute of Medical Education and Research, Chandigarh, observed the rates to be 64% and attributed late initiation to be due to Caesarean section.¹⁷ A tertiary centre from Gujarat reported 32.6%, with maternal fatigue and Caesarean section to be common

factors seen in late initiating of breastfeeding.¹⁸ EIBF occurred only in 1.4% of babies and delay in rooming-in was the most common reason associated with delay in initiation in a study done in Jawaharlal Nehru Institute of Post graduate Medical Education and Research (JIPMER).¹⁹ Results from various centres of the world showed a large variation from 1.4% to 97.5%. EIBF rate in present study is 19.8% and is comparable to many studies and the main reason for delayed initiation in present study is delay in rooming-in which is like many other studies. But in contrast to other studies, present study did not show any significant relation to Caesarean section being the cause for delayed initiation.

After in depth interviews with the delivery room personnel, doctors, nurses and auxiliary staff, we have found that the importance of early uninterrupted skin to skin contact between the mother and baby was underrated and overlooked upon. The emphasis was predominantly laid on "Cleaning the baby", weighing, tying baby tags and handing over the baby to the eager attendants which follows a meticulous process of taking foot prints of the baby and signature of the attendants, especially to avoid medico-legal issues. Somewhere during this process, the first golden hour of breastfeeding is being missed. Over and again, it must be emphasized to the nursing and auxiliary staff that early initiation of breastfeeding is a key to successful breastfeeding.

However due to the skewed patient nurse ratio in our hospital, which is about 16:1 in post Caesarean section ward, 20:1 in post normal delivery ward, 5:1 in delivery room and only one auxiliary staff per shift responsible for handing over the babies to attendants, the feasibility of practical support for early initiation of breastfeeding may be difficult. Thereby, a specialised lactation counsellor who provides a practical support to all mothers exclusively for early initiation of breast feeding is the need of the hour. Such lactation counsellors could be one of the staff nurses trained in Infant and Young Child Feeding (IYCF). Such lactation counsellors need to be available round the clock in delivery rooms and operation theatres so as to promote early, uninterrupted skin to skin contact which is essential for early initiation of breastfeeding.

It should be reiterated that Caesarean section is not at all a barrier for early initiation of breastfeeding. The operating room staff including the Anaesthesiology personnel need to extend their support for early uninterrupted skin to skin contact as early as possible for babies born by Caesarean section.

The JIPMER's initiative of "Bonding Angel" programme, which will have a dedicated female nursing student who will bring the mother and baby together soon after delivery for early initiation of breastfeeding is a cost effective, ready to implement intervention that can be followed easily in all mother and child units.²⁰

The Government of India through the National Health Mission has planned to implement in a phasic manner the establishment of Comprehensive Lactation Management Center's (CLMC) in tertiary care medical colleges centres. This facility-based lactation management strategy adopting the procedures of collection, processing, storage and dispensing of donor human milk and mother's own milk along with provision of lactation support to the mothers would be a key component for protecting, promoting, and supporting breastfeeding.²¹

CONCLUSION

EIBF rate in our unit is very low (19.8%) compared to the national standards of 44.6%. Several gaps in EIBF need to be addressed and a strict institutional protocol needs to be followed. A special nurse/ student nurse needs to be identified as a lactation counsellor/bonding angel for every delivery to ensure early initiation of breastfeeding.

A proper record of the early initiation of breastfeeding rates needs to be maintained and periodically reviewed by every institute in to perform better. All the nursing staff and doctors in delivery rooms need to be trained in providing practical support for early initiation of breastfeeding. Feedback from all the mothers prior to their discharge needs to be taken regarding the difficulties faced by them during initiating and establishment of breastfeeding.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Bollipo S, Pagali D, Korrapolu HB, Rahman MA. The first golden hour of breastfeeding: where do we stand? Int J Contemp Pediatr 2018;6:27-32.