Breast feeding Status of Infants Born in a Baby Friendly Hospital Up to 180 days of life

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Abstract

Background : Initiation of breast-feeding (BF) within 1 hour after birth has been associated with reduced neonatal mortality. Baby Friendly Hospital Initiative has profound effects on appropriate practice of BF and thus helps to reduce infant mortality and morbidity.

Objective : This study was conducted in the Department of Gynae and Obstetrics and Department of Paediatrics of Shaheed Suhrawardy Medical College Hospital (ShMCH), Dhaka, to observe the rate of exclusive breast feeding and home-based compliance.

Methodology : Hundred (100) term babies of normal birth weight irrespective of sex, born in ShSMCH by normal vaginal delivery (NVD) or caesarian section were included. Data was collected from the mother with a pretested questionnaire at the postnatal period, at 6th week, 14th week and 6th month (180 days) of age.

Result : The mean age of studied newborn (100) was 20±19.5 hours. All the infants started breast feeding after birth and among them 56% initiated with in 1 hour. Difficulty in breast feeding was found in 36(36.0%) infants, which was resolved mostly (94%) by nurse. Exclusive breastfeeding (EBF) was found in 100% of infants during discharge from hospital. During 1st and 2nd follow up we found 95 (95.0%) and 89 (89.0%) infants respectively were exclusively breastfed. In 3rd follow up at completed 6th month (180 days) 78 (78.0%) infants were exclusively breast fed. In our study 5 (5%) and 6 (6%) infants received supplementary food in 1st follow up and in 2nd follow up respectively. In the last follow up the number were 11 (11%) and the total number was 22 (22%).

Conclusion : Exclusive breast feeding up to completion of 6 months (180 days) was found in 78.0% of infants. Maternal and relative's misperception of baby's crying due to insufficient breast milk and joining to job outside home were the causes of introduction of formula milk in the 1st, 2nd and 3rd visit respectively.

Keywords : Exclusive breastfeeding, Baby friendly hospital

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Introduction

The international Baby Friendly Hospital Initiative (BFHI) is a global effort launched by WHO and UNICEF in 1991 in response to the Innocenti Declaration (1990) aims at improving the care of pregnant women, mothers and newborns at health facilities that provide maternity services for protecting, promoting, and supporting breastfeeding, in accordance with the International Code of Marketing of Breast-milk Substitutes. Since that time, more than 20,000 health care facilities in more than 150 countries around the world have achieved Baby-Friendly certification from their national certifying body by implementing the 10 Steps to Successful Breastfeeding and ending the practice of distributing free or low-cost breast milk substitutes. Bangladesh also had tried to implement the BFHI program since it's beginning to promote and protect maternal and child health by ensuring support the breastfeeding in maternity care facilities.

Breastfeeding is universally accepted as the best method of feeding babies. But in the 20th century breast milk met with competition from industrial substitutes and mothers were drawn to prepackaged foods. Hospital practices were also cited for resulting in a decline in breastfeeding such as practices included mother and baby separation. The consequences of a decrease in breastfeeding result in an increase in morbidity and mortality of children. The risk of

mortality was higher in partially and non-breastfed infants compared to exclusively breastfed infants 0–5 months of age. Children 6–11 and 12–23 months of age who were not breastfed had 1.8- and 2.0-fold higher risk of mortality, respectively, when compared to those who were breastfed.[2] Ultimately the decline in breastfeeding was the cause for concern and worldwide effort to protect, promote and support breastfeeding, thus 10 steps of Baby Friendly Hospital initiative has been come in front.

Evidence from developed and developing countries indicates that the BFHI has had a direct impact on breastfeeding rates at the hospital level. Bangladesh has strong culture of breastfeeding, but many aspects of infant and young child feeding are far from optimal.[3] Infant should be breastfed within half an hour of birth and exclusively breastfed for the first 6 months of life.[3]

Recent research has shown that under 5 mortalities can be reduced by 13% with optimal breastfeeding.[3] In our country the initiation of breastfeeding is often delayed. Forty two percent of infants start breast feeding within an hour and 64% of infants are breastfed exclusively for 6 months.[3,4] About 60% infants were given complementary feeding timely but 44.4% of babies were given before 6 months of age.[4] Breast milk has been recognized as perfect infant food, it provides so many important benefits to both the mother and the infant. It ensures nutrition, optimum growth, and development, reduces morbidity and mortality of infants, and also establishes bonding between mother and child.[5-7]

Analysis of data from 57 hospitals in Oregon, United States, showed that breastfeeding rates at 2 days, and 2 weeks postpartum increased with the institution's implementation of the 10 Steps.[8,9] Similarly, results of the United States Infant Feeding Practices II Study indicate that mothers who experienced no Baby-Friendly practices in-hospital were 13 times more likely to stop breastfeeding before 6 months of age than mothers who experienced specific Baby-Friendly practices.[10]

Suhrawardy Medical College Hospital also serve the purpose of BFHI which are actively protect, promote, encourage, and support breastfeeding through education of health care workers in maternity and neonatal services following the 10 steps of BFHI. Every mother who has been delivered here gets help for breastfeeding. These efforts may help mother to breast feed exclusively for 6 months and help infants to grow optimally.

Therefore, we would like to find out how much positive effect of the hospital practice on BF status in infants born in Shaheed Suhrawardy Medical College Hospital as a BFH.

Materials And Methods

Study protocol and subject

This Longitudinal observational study was conducted at the Department of Gynae and Obstetrics and Department of Paediatrics of Shaheed Suhrawardy Medical College Hospital, Dhaka from January 2019 to 30th June 2019. The subjects were term babies of normal body weight irrespective of sex, born in ShSMCH by NVD or cesarean section. Total 100 term newborn having normal birth weight aged 1 to 72hours were included in this study. Term but sick baby requiring hospitalization and whose mother deny participating in this study were excluded.

After the delivery of a baby in Obstetrics department, purpose of the study was explained to the mother or caregiver and written consent was taken to participate in the study. After taking history and performing physical examination, a baby was included or excluded as per inclusion / exclusion criteria. The information of the study population was collected in a pretested proforma of structured questionnaire. As the hospital is a BFH, all the mothers were helped to learn proper BF technique. All mothers were advised to attend the breastfeeding corner if they have any difficulty in breast feeding. Follow up and further data collection was done at 6th week, 14th week and at 6th months of age when baby was attending at EPI center and Breast feeding corner of ShSMCH.

Statistical analysis was carried out by using the Statistical Package for Social Sciences version 20 for Windows (SPSS Inc., Chicago, Illinois, USA). The mean values were calculated by frequencies and percentages

This study was approved by the Institutional Ethical Review Board Shaheed Suhrawardy Medical College and Hospital, Dhaka, Bangladesh.

Operational definitions

Exclusive Breast feeding (EBF)

EBF means giving baby breast milk only, not even a drop of water or other food till 6 (six) months of age, medicine can be given when indicated.

Complimentary feeding

Getting the baby accustomed to other foods besides breast milk is termed complimentary feeding should be given after completion of 6 (six) months (180 days).

Supplementary Feedings

Feedings provided in place of breastfeeding, prior to 6 (six) months, (the recommended duration of exclusive feeding), is defined as supplementary feeding.

Results

Among the studied population 61(61%) infants were included during 1st 24 hours of age, 31(31%) during the 2nd and 8(8%) during the 3rd day of life. The mean age was 20.02±19.54 hours. Fifty-five (55%) were Male and forty-five (45%) were

female child. (Table-I)

Table I : Distribution of the infants by age & gender (n=100)

Demographic variables	Number (N)	Percentage (%)
Age (in hours) at inclusion in the study		
1-24	61	61.0
25-48	31	31.0
49-72	8	8.0
Mean±SD	20.02	±19.54
Range (min, max)	1	,72
Sex		
Male	55	55.0
Female	45	45.0

All the studied infants were given breast feeding after birth. Among them 56(56%) were given within 1 hour and 44(44%) were given after 1 hour of birth. (Table II)

Table II: Distribution of infants by the time of initiation of breast feeding (n=100)

Time of Initiation of breast feeding	Number	Percentage (%)
Within 1 hour	56	56.0
After 1 hour	44	44.0

In this study, it was found 36 (36%) mother had some shorts of difficulty in breast feeding and 56 (56.0%) mother received help for establishing BF from hospital staff. (Table III)

Table III : Distribution of mothers by difficulty in breast feeding and received help from hospital staff for establishing BF (n=100)

	Difficulty in breast feeding(n=100)		Received help from hospital staff(n=100)	
	Yes	**No**	**Yes**	**No**
Number	36	64	56	44
(%)	36%	64%	56%	44%

During 3rd follow up we found, exclusive breast feeding was found in 78 (78.0%) infants up to 6 months (180 days) shown in Table IV.

Table IV : Distribution of the infants by breast feeding up to completed 6 months (n=100)

Breast feeding status	Number	Percentage (%)
Exclusive breast feeding (EBF)	78	78.0
Not exclusive breast feeding	22	22.0

In our study children, we found that supplementary food was received by 5 (22.7%), 6 (27.2.%) and 11(49.9%) infants in 1st, 2nd and in last follow up respectively. Most of the infants received supplementary food after 3 months of age (Table V)

Table V : Distribution of the infants by the time when supplementary food was started (n=22*)

When the supplementary food started	Number of population	Percentage (%)
Follow up -1 (at 6th week)		
1-15 days	2	9.1
16-30 days	3	13.6
31-42 days	0	0.0
Follow up -2 (at 14th week)		
43-58days	3	13.6
59-73 days	2	9.1
74 days -98 days	1	4.5
Follow up -3 (at 180 days)		
99-114 days	5	22.7
115-129 days	2	9.1
130-145 days	3	13.6
146-160 days	1	4.5
161 days –180 days	0	0.0

*Not exclusive breast-feeding population

In the studied populations the causes of supplementation were crying of the baby due to insufficient breast milk in the 1st and 2nd follow up visit was 3 (13.6%) and 4 (18.2%) respectively. But in the 3rd visit it was mainly due to mother's job outside the house 8 (36.4%). (Table VI)

Table VI : Distribution of the infants cause of supplementary feeding (n=22*)

Cause of supplementary feeding	Number	Percentage (%)
Follow up -1		
Baby cries for feed	3	13.6
Insufficient breast milk	2	9.1
Follow up -2		
Insufficient breast milk	4	18.2
Service of mother	2	9.1
Follow up -3		
Baby cries for feed	1	4.5
Elder sibs also BF	1	4.5
Insufficient breast milk	1	4.5
Service of mother	8	36.4

*Not exclusive breast feeding population

Discussion

This Longitudinal observational study was carried out with an aim to observe the rates of exclusive breast feeding up to

completed 6 months and home-based compliance of BF (by 3 follow up visits) in infants born in a Baby Friendly Hospital.

In this study total 100 term newborn having normal birth weight aged 1 to 72hours were included and kept under follow up to 6 month (180 days) of age. The mean age was found 20±19.5 hours. Follow up was done at 6th week, 14th week and at 180 days. Among the studied population 61(61%) infants were included during 1st 24 hours of age, 31(31%) during the 2nd and 8(8%) during the 3rd day of life. The mean age was 20.02±19.54 hours.

In our study it was observed that 55% infants were male and male to female ratio was 1:1.2. Cesar et al. reported 53.0% and 50.0% infants were male in group I and group II respectively in their study.[11] Chudasama et al. also observed slight male preponderance similar to our study that is 55.0% male and 45.0% female infants in their study.[12] There were slightly more male infants than female infants also observed by Tan.[13]

In our country, initiation of breastfeeding is often delayed without any reason (might be the lack of knowledge about the importance of giving 1st breastmilk with in 1 hour of birth). Several studies showed that in our country, 42% of infants start breast feeding within 1 hour of birth and 64% of infants are breastfed exclusively for 6 months.[3,4] In our study 56.0% infants-initiated breast feeding with in 1 hour of birth. Lee et al. reported that the overall percentage of breastfed infants was particularly low (9.6%), 36.1% had already given up breastfeeding and were being formula-fed (FFBF), 54.3% have been exclusively formula-fed immediate after birth.[14] Saka found that breastfeeding initiation within 1 hour was done mostly by those who had vaginal delivery (69%), while for all who delayed (more than one hour and more than a day) 43% had caesarean section.[15] In another study, Mullany et al. found only 3.4% breast-fed within the first hour after birth, but breast-feeding within the first 24 hours was 56.6% and within first 48 hours was 83.1% commonly.[16]

In this study it was observed that total 56% infants-mother face difficulties to initiation of breast feeding and received help for establishing BF from hospital staff. Difficulty in breast feeding was found in 36.0% population in a study by Chudasama et al.[12] A study on Breastfeeding in South Gujarat Region of India, found 18.0% mothers reported some initial difficulty in breastfeeding, which was less than our study.[17]

In our study, exclusive breast feeding was found in 78.0% infants up to completed 6 months. Diallo et al. found that 44.8% infants were exclusively breastfed at any period before their enrolment in their study while 55.2% infants were not. Only 15.5% infants were exclusively breastfed up to 6 months of age.[18] In another study Chudasama et al. mentioned that 80% children were exclusively breastfed, which is closely similar to the present study.[12]

In this study it was observed that number of infants received supplementary food was 5,6 and 11 at 1 st,2nd and 3rd follow up respectively. Most the infants received supplementary food after 3 months of age. Giashuddin and Kabir showed that 69.9% women gave supplementary food to their babies before reaching 6 months of age.[19]

In our study number of exclusively breastfeed infants were 95 (95.0%) in the 1st follow up at 6th week of age , 89 (89.0%) and 78 (78.0%) in the 2nd and 3rd follow up respectively, and 17 (17%) infants received mixed feeding - formula milk as well as breast milk. No baby was only on artificial milk. Study done by Cesar et al. showed breast milk was given alone in 5.9%, breast milk and formula milk in 15.1% and other fluids alone (completely weaned) 78.9%.[20]

As Supplementary feeding breast milk plus side-by-side use of infant formula and other non-milk feeds was practiced by 39.0% mothers surveyed compared to EBF 34.0% and predominant breastfeeding 28.0% found by Onah et al.[21] In another study Senbanjo et al. reported that 66.6% children were given infant formula feeds, of which 84.5% children were introduced to infant formula feeds before the age of 6 months.[22]

In this study it was observed that in 1st and 2nd follow up the cause of supplementation was misperception of mother and relatives that crying of baby means insufficient breast milk. In 3rd follow up, cause of supplementation was job of the mother outside of her house.

Conclusion

In this study we found that more than half of the infants (56.0%) initiated breast feeding with in 1 hour of birth. Difficulty in breast feeding overcome by doctor and nurses of the hospital. Exclusive breast feeding up to 6 months was found in 78.0% of infants, which is better than National Exclusive breast-feeding rate (64.0%). Most the infants received supplementary food after 3 months of age. Causes of supplementation were mostly crying of baby in early month and job of the mother at later month. Therefore, influence of BFHI was good in maintaining EBF in babies who was delivered in this BFH.

Limitation of the study

The study population was selected from only one selected hospital in Dhaka city and sample size is small. As well as this study was conducted for a very short period. Therefore, the results of the study might not be reflected the exact scenario of our country.

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