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Breast Feeding Practice among Neonates (0-7 Days): A Study in Padma General Hospital Ltd. Dhaka, Bangladesh

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Abstract | **Original Research Article**

Breast milk is the milk produced by the breasts (or mammary glands) of a human female to feed a child. Milk is the primary source of nutrition for newborns before they are able to eat and digest other foods; older infants and toddlers may continue to be breastfed, in combination with other foods from six months of age when solid foods should be introduced. The aim of this study is to identify the socio-demographic profile of the mothers and their relation with the time of initiation of breastfeeding. It was a cross-sectional study conducted in the Post-natal ward in Padma General Hospital Ltd. from April 2012- September 2013. A total of 190 newborn babies of 0-7 day's age old were selected purposively. Data were collected from mothers of the selected babies by structured questionnaire. Among the total 190 mothers 75 (39.47%) started breastfeeding in the first hour of delivery, 85(44.73 %) started within 12 hours, 26 (13.68 %) within 24 hours and 4(2.10 %) within 48 hours. Prelacteal feeding was given to 59 (31.05 %) babies and the form of prelacteal feeding were misry water (33.9 %), artificial milk (30.50 %), honey (18.64%), plain water (13.055 %) and cow's milk (1.05%). Colostrum was given to 177 (93.15%) babies respectively. Medical problem was present in 13.05 % of mothers. Significantly less number of mother with medical problem gave colostrum to their babies ($p<0.05$). Significantly higher number of mothers with vaginal delivery gave breast feeding within one hour of delivery than instrumental or C/S deliveries ($p < 0.05$). Labour was prolonged in 30 % of delivery. Less number of mothers had prolonged labour started breastfeeding within 1st hour and gave colostrum ($p< 0.05$). The present study had. 3.7 % newborn with birth weight < 2kg, 78% with 2-3 kg and 17 % with>3 kg. Significantly more number of low birth weight babies were given breastfeeding within 1 hour, colostrum less number of babies were given prelacteal feeding than other babies ($p<0.05$). In our study Male babies was 48.42% and female babies was 51.64 % respectively. The study concludes that 39.47% mothers started breastfeeding their babies within 1 hour of deliveries, 44.73% started within 1-12 hours of birth, 13.58% within 12-24 hours and 2.10% within 24-48 hours. Colostrum was given by 93.15%, prelacteal feeding by 31.05%. Mothers with vaginal delivery and without prolonged labour gave breastfeeding earlier. More babies with low birth weight were given colostrum and breastfeeding earlier and exclusively.

Keywords: Breastfeeding**,** Colostrum, prelacteal, human milk.

INTRODUCTION

Human milk is a bioactive fluid that evolves from colostrum to mature milk as the infant matures. Breast milk is the unique source of nutrition that plays an important role in the growth, development and survival of infants. This bioactive fluid contains numerous factors and live cells that, in concert, promote the growth and well-being of the breastfeeding infant. There is still a lack of knowledge in newborn care and particularly, about the appropriate interventions including breastfeeding management. Exclusive breastfeeding practice for six months is not so hopeful in South East Asia region and also in our country. Human milk, in addition to its numerous nutrients that make it an ideal food source for the growing term infant. Current research reveals that commercial formula clearly cannot replicate all of the valuable properties that are inherent in human milk [1]. Breast milk is the unique source of nutrition that plays an important role in the growth, development and survival of infants. The benefits of breastfeeding are well established. Breastfeeding is promoted internationally as the preferred method of feeding

infants up to 4-6 months and continued up to two years with the addition of home cooked food. In Bangladesh, only 14 per cent of infants were exclusively breastfed up to 3 months [2]. There are estimated 4 million neonatal deaths worldwide each year. Moreover it is estimated to account for 40% of under-five deaths and two-thirds of infant's deaths. A vast majority of these deaths occur in developing countries where essential newborn care has not been developed properly. The essential newborn care includes cleanliness, thermal protection, early and exclusive breastfeeding, initiation of breathing (resuscitation), eye care, and immunization, management of newborn illness and care of preterm and or low birth weight infant [3]. Early newborn deaths in many countries represent a substantial proportion of infant mortality, often over 30%.These early deaths and the severe sequelae that may develop in some of the babies, who survive, can be greatly reduced through appropriate preventive, diagnostic or early therapeutic interventions. These interventions do not need sophisticated technology. However, there is still a lack of knowledge in newborn care and particularly about breastfeeding management [4]. Breast milk is thought to be the best form of nutrition for neonates and infants. The properties of human milk facilitate the transition of life from in utero to exterior. This dynamic fluid provides a diverse array of bioactive substances to the developing infant during critical periods of brain, immune, and guts development [1]. Clinicians can play a crucial role in a mother's decision to breastfeed and can facilitate her success in lactation. Although a mother may not be aware of the evidence indicating that breast milk contributes to her baby's short- and long-term well-being, she has developed certain attitudes and cultural beliefs about breastfeeding. The issue of bonding between mother and newborn may be a strong factor; however, stronger cultural or social barriers may result in the decision to formula feed. Such issues must be understood for successful counseling. Wagner, Graham, Hope [1] stated that the mother makes her decision regarding breastfeeding prior to delivery in more than 90% of cases; therefore, her choice of infant nutrition should be discussed at the starting of the second trimester and continue as part of an ongoing dialogue during each obstetric visit[1]. Breast-milk is not just a food for babies. It is a living fluid, which protects a baby against infections. For the first year or so of life, a baby's immune system is not fully developed and cannot fight infections as well as an older child's or adults. So a baby needs to be protected by his mother. Breast-milk contains white blood cells and a number of anti-infective factors, which help to protect a baby against infection. Breast-milk also contains antibodies against infections which the mother has had in the past [4].

In Bangladesh, immediate breastfeeding was not traditionally practiced, and exclusive breastfeeding was virtually nonexistent. Mothers tended to discard colostrum (first milk), substituting prelacteal feeds such as sugar water, honey, or oil instead of breast milk as the first feed for all newborn babies. Initiation of breastfeeding by most mothers took place on the third or fourth day. In the event of illness, mothers would cease breastfeeding. Complementary feeding practices were also unsatisfactory, consisting of bulky, energy-thin feeds, with weaning occurring either too early or too late. Such was the state of affairs in Bangladesh in 1979, when the World Health Organization (WHO) and UNICEF held a meeting in Geneva for the first time to emphasize the importance of breastfeeding-the first in a series of important initiatives to address this issue and other child health and nutrition concerns. Before 1980, there was hardly any discussion within the medical profession in Bangladesh of the importance of breastfeeding, let alone of a public health intervention to promote it. But the leadership of global agencies on this important issue had a significant impact on breastfeeding policy and practice in Bangladesh. This case study, describes the origins of the breastfeeding movement in Bangladesh, the government of Bangladesh's support for the initiative, and the partnership that was established among the health professions, United Nations (UN) agencies, bilateral agencies, and the World Bank to change breastfeeding practices. The introduction of breastfeeding contributed to better health and nutritional status among the nation's children within a decade [9].

Objectives

General Objective

To determine the practice of initiation of breast feeding among neonates (0-7 days) in Dhaka Shishu(child) Hospital, Dhaka, Bangladesh

Specific objective

To identify the socio-economic and socio-demographic profile of the mothers and their relation with the time of initiation of breastfeeding

METHODOLOGY AND MATERIALS

A cross sectional descriptive study conducted in the Post-natal ward in Padma General Hospital Ltd. from April 2012- September 2013. All healthy term newborn babies 0-7 day's age born in the Hospital and admitted in postnatal word during the study period were selected as a study subjects. Considering inclusion criteria, we selected 190 study subjects. At the onset of selection of cases, a detailed history of mother about antenatal, natal &postnatal period, history and physical examination of newborn were performed. Neonate who fulfilled the inclusion criteria were enrolled in this study. With prior consent and after explaining the purpose and procedure of the study to the parents, data were collected and recorded in the preformed data collection sheet. All the clinical and laboratory data collected were checked visually and edited meticulously. The data were then entered into the computer based software. SPSS for windows version 12 (Statistical Package for Social Study) were

used for analysis of data. Result was presented as frequency, percentage, means (±SD). Comparison was done by chi-square test for qualitative data. Bar diagram, pie chart was constructed as necessary for easy visual impression. Written informed consent was taken from each mother. Anonymity and confidentiality were strictly warranted. Sample size was calculated.

Inclusion criteria

All healthy term neonate of healthy mother ii) Age 0 to 7 days iii) Irrespective of mode of delivery

Exclusion criteria

Sick neonate- suffering from perinatal asphyxia, septicemia, birth trauma, convulsion, preterm very low birth weight (PVLBW) baby. ii) Newborn with congenital anomaly iii) Baby of Very Sick mother- Suffering from Eclamsia, PPH, Chronic illness (Congenital Heart disease, cor-pulmonale, Bronchial Asthma), psychosis.

Table-I: Distribution of new born by age, education and feeding practice (n=190)

Characteristics of the study subjects	Frequency	Percent
Age		
15-20 years	42	22.10
21-25	92	48.42
26-30	40	21.05
30> years	17	8.95
Total	190	100%
Sex(Babies)		
Male	92	48.42
Female	98	51.68
	Level of education	
No education	58	30.55
Primary	71	37.36
Secondary	52	27.36
Higher Secondary & above	9	4.70
Total	190	100%
Whether colostrum given		
Yes	177	93.15
No	13	6.85
Total	190	100%
Types of prelacteal feeding		
Honey	11	18.64
Misry Water	20	33.89
Plain Water	8	13.55
Cow's Milk	2	1.05
Artificial Milk	18	30.50
Total	59	100%

Table-2: Distribution of mothers by mode of delivery with association with selected conditions (n=190)

Mode of delivery	Frequency	Percent					
Vaginal Delivery	61	32.10					
Forcep delivery	7	3.68					
C/S	122	64.21					
Total	190	100.0					
	Mode of delivery				Chi-square value	df	P value
	Vaginal delivery		Instrumental	C/S			
Breast feeding started at	1 hour	31	3	41	75.36	5	.001
	12 hrs	25	2	58			
	24 hrs	4	2	20			
	48 hrs	1	0	3			
Prelacteal feeding given	Yes	15	2	42	4.952	2	.072
	No	46	5	80			
Colostrum given	Yes	55	7	115	.752	2	.547
	No	6	0	7			

RESULTS

Result was presented as frequency, percentage, means (±SD). Comparison was done by chi-square test for quantitative data. Relation between occupation of mother and initiation of breast feeding, feeding problem, whether prelacteal feeding and colostrums, statistically assessed in the result section.

Table-3: Distribution of mothers by medical problem (sore/crack nipple / flat and inverted nipple) and association with selected conditions (n=190)

Medical problem	Frequency	Percent				
Yes	25	13.15				
No	165	86.85				
Total	190	100.0				
	Medical problem			Chi-square value	df	P value
	yes		No			
Breast feeding started at	1 hour	11	45	4.982	3	.124
	12 hrs.	12	103			
	24 hrs	2	14			
	48 hrs.	1	3			
Prelacteal feeding given	Yes	5	53	.751	1	.315
	No	19	109			
Colostrum given	Yes	22	157	6.124	1	.027
	No	3	6			

Table-4: Distribution of mothers by prolonged labour and association with selected conditions (n=190)

Prolonged labour	Frequency	Percent				
Yes	57	30.00				
No	133	70.00				
Total	190	100.0				
	Prolonged labour			Chi-square value	df	P value
		yes	No			
Breast feeding started at	1 hour	12	33	9.652	2	.026
	12 hrs.	38	86			
	24 hrs	4	12			
	48 hrs.	3	2			
Prelacteal feeding given	Yes	16	43	.754	1	.511
	No	41	90			
Colostrum given	Yes	52	131	5.246	1	.0142
	No	5	2			

Table-5: Distribution of birth weights (baby) and association with selected conditions (n=190)

Birth weight (in Kg)	Frequency	Percent					
<2	7	3.7					
2-3	150	78.9					
>3	33	17.4					
Total	190	100.0					
	Birth weight				Chi-square value	df	P value
		<2 kg	2-3 kg	>3kg			
Breast feeding started at	1 hour	1	50	9	14.135	5	.012
	12 hrs	3	85	17			
	24 hrs	1	10	4			
	48 hrs	2	5	3			
Prelacteal feeding given	Yes	2	42	15	5.82	2	.014
	No	3	108	20			
Colostrum given	Yes	5	150	25	15.421	2	.001
	No	2	7	2			

DISCUSSION

The aim of the present study was to observe the practice of initiation of breast feeding just after birth among infants (0-7 days) in hospital setting. It was also intended to determine the percentage of mother who start breast feeding within one hour of birth, the prevalence of prelacteal feeding and identify the sociodemographic profile of mother. Among the total 190 mothers 75 (39.47%) started breastfeeding in the first hour of delivery, 85(44.73 %) started within 12 hours, 26 (13.68 %) within 24 hours and 4(2.10 %) within 48 hours. Prelacteal feeding was given to 59 (31.05 %) babie and. Colostrum was given to 177 (93.15%) babies respectively. Medical problem was present in 13.05 % of mothers. Labour was prolonged in 30 % of delivery. The present study had 3.7 % newborn with birth weight < 2kg, 78% with 2-3 kg and 17 % with > 3 kg. In present study Male babies was 48.42% and female babies was 51.64 % respectively. This observation was supported by Haider *et al.* [14]. They found that a total of 25% of the mothers failed to breast-feed exclusively despite having been counseled. The author explained the causes of their failure in breastfeeding, such as dominating grandmothers, lack of financial support by their husbands, too much housework, or disinterest [6]. The findings of our study are not supported by the statement of our studies [2, 6, 8]. Talukder stated that colostrum, by tradition, is largely discarded in Bangladesh; prelacteal feeds are given to all newborn babies; initiation of breastfeeding by most mother takes place on the 3rd or 4th day; exclusive breastfeeding for 5 months is almost non-existent [6]. The difference between the findings of Talukder and our findings may be due to the fact that we took data regarding exclusive breastfeeding for only the days mothers remained admitted into the hospital, whereas Talukder stated the situation of whole breastfeeding period. They also stated that the prevalence of prelacteal feeding in Bangladesh was 66.6%. Giasuddin and Kabir noted that the duration of exclusive breast-feeding in Bangladesh is short. They included 5068 mother-child pairs in their study and demonstrated that median duration of full breast-feeding was 3.67 months and 69.9 per cent women gave supplementary food to their babies before reaching six months of age. They concluded that women with higher education, high economic level, lower birth interval and delivery assisted by health personnel had lower duration of breast-feeding[2] .Female children were breastfed for periods about 5 months shorter than male children. Children born to urban mothers were breastfed for shorter durations than children born to rural mothers of all age groups. In Bangladesh the most prevalent form of prelacteal feeding is misry water (33.9%) and closely followed by artificial milk (30.5%). Other forms of prelacteal feedings are honey (18.6%), plain water (12.7%), and cow's milk (4.2%). In most instances poor quality liquids are given to a newborn that increase the risk of introducing early infections. Prelacteal feeding differs from country to country. In India the prelacteal feedings are plain water (48.3%), jaggery with ghee/oil (46.2%), sugar water (28.2%), gripe water (24.1%), jaggery water (20.7%), omum (ajwain) water (6.8%), milk (5.4%), honey (2%), tea (.7%), omum (ajwain) with ghee/oil (.3%). Pre-lacteal feeds are given under the belief that they act as laxatives, cleansing agents or dehydrating agents or as a means of clearing meconium. Unfortunately they are not aware that pre-lacteals could be a source of contamination. The present study also shows that birth weight of newborn significantly affects the exclusive breastfeeding. This finding is consistent with Narayan Nataraj and Bawa. They found in India that primigravida status mother and low birth weight infants adversely affect breastfeeding [8].

Although the age of the mother did not affect significantly, mothers' education level was significantly related with breastfeeding in the present study. Our finding is supported by Ahamed [16] who described that 98% of Bangladesh mothers breastfeed their children from birth and the mean duration of breastfeeding was 27.3 months. Duration of breastfeeding was positively related with the age of women. The duration of breastfeeding decreased with the increase of education of the mother. The author suspected that further decline in the duration of breastfeeding would increase levels of fertility and infant and child mortality [16]. Edmond *et al*. also supported that early initiation of breastfeeding saves more neonatal lives [11].

CONCLUSION

In present study, the total 190 mothers 75 (39.47%) started breastfeeding in the first hour of delivery, 85(44.73 %) started within 12 hours, 26 (13.68 %) within 24 hours and 4(2.10 %) within 48 hours. Prelacteal feeding was given to 59 (31.05 %) babies and the form of prelacteal feeding were misry water (33.9 %), artificial milk (30.50 %), honey (18.64%), plain water (13055 %) and cow's milk (1.05%). Colostrum was given to 177 (93.15%) babies respectively. Medical problem was present in 13.05 % of mothers. Significantly less number of mother with medical problem gave colostrum to their babies ($p<0.05$). Labour was prolonged in 30 % of delivery. The present study had 3.7 % newborn with birth weight < 2kg, 78% with 2-3 kg and 17 % with > 3 kg. Mothers with vaginal delivery and without prolonged labour gave breastfeeding earlier and continued. More babies with low birth weight were given colostrum and breastfeeding earlier.

Limitation of the study

The study was conducted in a tertiary care hospital but in a single place (study) which does not represent the whole country. The center was provided with neonatologists and trained nurses who take care of mother and help breastfeeding in the center. Postnatal

complications in newborn and mother which may affect breastfeeding are less prevalent in tertiary care hospital.

Recommendations

A multicentre study should be carried out to generalize the finding .Mothers of the rural areas should be included in the study.

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