International Journal of Community Medicine and Public Health
Hardanahalli RS et al. Int J Community Med Public Health. 2016 Feb;3(2):455-458
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20160431

Research Article

Breast feeding assessment in early neonatal period

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Received: 24 November 2015
Accepted: 18 December 2015

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ABSTRACT

Background: Breast feeding will have a profound impact on child's survival, health, nutrition and development. Optimal breastfeeding practices can save lives of more than 1.5 million under five children every year. Therefore, adequate breast feeding in new-borns is important for proper growth & development. The objective of the study was to assess the breast feeding adequacy for early neonates using the UNICEF breastfeeding assessment tool and to provide early and appropriate intervention for breast feeding inadequacy.
Methods: A cross-sectional study was conducted in the post natal wards of 2 hospitals i.e., Kempegowda Institute of Medical Sciences Hospital and Corporation Referral Hospital, Bangalore, India. 234 mothers and infants were included in the study. Breast feeding assessment was done using UNICEF assessment tool and appropriate intervention was provided.
Results: The present study showed that 12.2% and 6.4% of mothers from KIMS and corporation referral hospital respectively had inadequate breast feeding. All the mothers were given health education regarding correct feeding practices.
Conclusions: UNICEF breast feeding assessment tool is an easy and good indicator to assess the breast feeding in early neonates. Assessment of breast feeding during early neonatal period is essential to intervene at the earliest possible, if there are any problems with regards to milk secretion, feeding and sucking practices.

Keywords: Assessment, Breast feeding, Neonates, Health education

INTRODUCTION

Breast milk is the ideal food for healthy growth and development of infants. The biological importance of breast milk is known to man from ancient times. The survival of infants depends on breastfeeding in the early months of life. WHO & UNICEF recommends initiation of breastfeeding within first hour after birth and exclusive breastfeeding for first 6 months as it provides all the nutrients, vitamins & minerals an infant needs for growth during first six months and carries antibodies from mother that help combat diseases & stimulates their immune system and response to vaccination. Therefore, breast feeding will have a profound impact on the child's survival, health, nutrition & development. As per WHO, optimal breastfeeding practices can save lives of more than 1 million under five children every year.[1]

The adequacy of breastfeeding determines its effectiveness. UNICEF has developed a breastfeeding assessment tool, using which the adequacy of breastfeeding can be easily assessed from simple observations like colour of the infant, alertness & tone, percentage weight loss of infant in the first 5 days of life, urine output, stool frequency, number of feeds in 24 hours, behaviour of the infant during and after feeds and use of dummy/nipple shields/formula etc.[2] These observations can be made according to the simple

checklist and can be practised in any health care setting starting from Primary Health Centre. If any one or more of the criteria are not met, breastfeeding is considered inadequate and appropriate intervention can be provided at the earliest possible. This tool can thus, effectively screen and detect inadequate breastfeeding; following which corrective measures can be taken up immediately in the form of imparting health education on correct method of breastfeeding including repositioning & attachment as well as methods to increase lactation. Similarly, any medical intervention needed for cracked nipples & inverted nipples can be given.

The present study was done to assess the breast feeding adequacy for early neonates using the UNICEF breastfeeding assessment tool and thereby provide early and appropriate intervention, wherever needed.

The objective of the study was to assess the breast feeding adequacy for early neonates using the UNICEF breastfeeding assessment tool and to provide early and appropriate intervention for breast feeding inadequacy.

METHODS

A descriptive study was conducted in the post natal wards of 2 hospitals i.e., Kempegowda Institute of Medical Sciences Hospital (KIMSH), Bangalore, India which is a private hospital and Corporation Referral Hospital, Banashankari, Bangalore, India which is a Government hospital for a period of 6 months from July 2014 to December 2014. During this period, 111 mothers from KIMS Hospital & 123 mothers from Corporation Referral Hospital, who consented for participating in the study, were included.

In both the study hospitals, the socio-demographic details of all the study subjects, date & type of delivery, sex and birth weight of the baby were recorded using a standard proforma. Breast feeding assessment was done among 3 to 5 days old neonates using UNICEF breast feeding assessment tool.[2] The neonates were observed for their colour, alertness & tone and were weighed using the standard scale and their weights were recorded. The mothers were interviewed regarding the baby's urine output, appearance & frequency of stools, number of feeds in past 24 hours, baby's behaviour during & after feeds, sucking pattern during feeds & length of feeding. The mothers were also asked regarding the comfort of feeding, shape of the nipples and use of any dummy/nipple shield.

All the parameters were recorded in every neonate and if, there were any criteria which showed inadequate breastfeeding, than, appropriate intervention was provided.

RESULTS

Table 1: Socio-demographic details of the postnatal mothers.

Parameters	Corporation hospital (n=123)	KIMS hospital (n=111)	Total (%)
Age group			
<20 years	11	6	17 (7.3)
20-30 years	112	102	214(91.4)
>30 years	0	3	3 (1.3)
Socioeconomic status			
I	1	7	8 (3.4)
II	16	57	73 (31.2)
III	49	38	87 (37.2)
IV	41	9	50 (21.4)
V	16	0	16 (6.8)
Birth order			
1	67	60	127(54.3)
2	34	36	70 (29.9)
3	20	12	32 (13.7)
4	2	3	5 (2.1)
Sex of infant			
Male	81	67	148(63.2)
Female	42	44	86 (36.8)
Delivery			
FTND	99	71	170(72.6)
LSCS	24	40	64 (27.4)
Initiation of breastfeeding (FTND)			
<1 hour of birth	94	64	158(92.9)
>1 hour of birth	5	7	12 (7.1)
Pre-lacteal feeds	5	1	6 (2.6)

The present study included 234 subjects, 111 from KIMS Hospital and 123 from Corporation referral hospital. Majority of the mothers in both the study hospitals were in the age group of 20-30 years, most of them had studied up to high school and belonged to lower socio-economic status (Table 1).

The birth order of the child was 1or 2 for most of the mothers (84.2%) and majority (72.6%) of the babies were delivered normally on full term. 63.2% delivered male babies and 36.8% delivered female babies. Most of the mothers (92.9%) had initiated breast feeding within 1 hour after birth in full term normal delivery and few mothers (2.6%) had given pre-lacteal feeds in the form of honey, sugar water and warm water (Table 1).

6.3% of the study subjects from KIMS Hospital and 11. 4% from Corporation referral hospital had inadequate breastfeeding. The commonly observed parameters for

inadequacy of breast feeding were inadequate urine output, weight loss of >10% of birth weight, inadequate milk production, use of dummy/ formula feeds, cracked nipples and inverted nipples (Table 2).

The inadequacy of breast feeding was higher in Government hospital when compared to the private medical college teaching hospital, which was statistically significant (Table 3).

All the study subjects who had inadequate breast feeding were given appropriate intervention in the form of health education on correct method of breastfeeding including repositioning and attachment, as well as methods to increase lactation such as continued breast feeding, demand feeding, proper nutrition and increased fluid intake. The mothers who had cracked nipples were given appropriate antibiotics & symptomatic treatment and syringing was done for inverted nipples.

Table 2: Parameters showing inadequate breastfeeding.

Parameters	BMH(n=123)	KIMS(n=111)
	No. (%)	No. (%)
Weight loss >10%	11 (8.94)	5 (4.5)
Inadequate urine output	3 (2.4)	2 (1.8)
Inadequate stool frequency	1 (0.8)	Nil
Inadequate milk production	8 (6.5)	4 (3.6)
Cracked nipples	1 (0.8)	1 (0.9)
Inverted nipples	1 (0.8)	1 (0.9)
Use of dummy/formula	5 (4.1)	1 (0.9)
Total	14 (11.4)*	7 (6.3)*

*Multiple responses

Table 3: Breastfeeding inadequacy and intervention.

No.	Birth order	Wt. loss (%)	Problem	Intervention
Corporation hospital				
1	3	11.6	Inadequate milk production	Health education
2	1	15.4	Inadequate milk production	Health education
3	1	13.0	Inadequate milk production	Health education
4	1	11.1	Cracked nipple	Expressed breast milk, antibiotics & Health Education
5	2	12.6	Inadequate milk production	Health education
6	1	9.1	Inadequate urine output	Health education
7	1	18.1	Inadequate milk production	Health education
8	1	15.4	Inadequate milk production	Health education
9	1	13.8	Inverted nipple both sides	Syringing
10	1	10.4	Inadequate milk production	Health education
11	1	9.0	Inadequate urine output	Health education
12	1	10.2	Inadequate milk production	Health education
13	3	9.3	Inadequate urine output	Health education
14	1	9.8	Inadequate stool frequency	Health education
KIMS Hospital				
1	1	11.1	Inadequate milk production	Health education
2	3	10.2	Inverted nipples	Syringing
3	1	11.4	Baby not suckling properly	Health education
4	2	9.0	Inadequate urine output	Health education
5	2	10.2	Inadequate milk production	Health education
6	3	10.8	Inadequate milk production	Health education
7	2	8.4	Inadequate urine output	Health education

Health education was given to all mothers regarding exclusive breast feeding for 6 months and the mothers were advised to come to hospital, if they had any problems related to breast feeding.

DISCUSSION

Breastfeeding promotion is a key child survival strategy. Promotion of early initiation of breastfeeding has the potential to make a major contribution to the achievement of the child survival millennium development goal; 22%

of neonatal deaths could be saved if all infants were breastfed within the first hour.[3] Furthermore, the recent neonatal survival series from UNICEF included breastfeeding in its recommended package of interventions to reduce neonatal mortality.[4]

Breast feeding has become a public health imperative, since it has a profound impact on child's survival, health, nutrition and development. Breast milk is safe, orally administered at required temperature, which provides all the nutrients the new born requires for its proper growth and development at no cost. Therefore, every mother has to initiate breastfeeding within first hour after birth; exclusively breastfeed for first 6 months & continue breastfeeding for 2 years or more.[5] To continue exclusive breastfeeding, it is important to educate the mothers regarding baby-friendly practices. It was seen in a study conducted in Georgia, that, the mothers who did not experience baby friendly practices were 12 times more likely to stop breastfeeding early than the mothers who experienced baby-friendly practices (breastfeeding initiation within 1 hour of birth, giving only breast milk, rooming in, breastfeeding on demand, no pacifiers, fostering breastfeeding support groups).[6]

Another study from Japan, demonstrated that frequent suckling in the first days of life has numerous beneficial effects on the breast-fed, full-term new born like adequate meconium passage and minimum weight loss.[7] Another study in California, showed that suboptimal infant breastfeeding behaviour (SIBB) was significantly associated with the risk of excess infant weight loss.[8] A study reported from Italy, also showed that, more optimal latching process behaviour of the baby (rooting, gaping, sealing, and sucking behaviour) are related to lower levels of reported pain in the breast and sore nipples.[9]

The above studies showed that, effectiveness of breast feeding is determined by various parameters and it is important to assess the adequacy of breastfeeding in mother-infant pairs and provide appropriate interventions in cases where problems with breastfeeding are noticed, at the earliest possible. This can be comprehensively assessed by UNICEF assessment tool at any health care setting as it uses a simple checklist to find out whether the baby is being breast fed adequately.

CONCLUSION

UNICEF breast feeding assessment tool is a simple device, which can be effectively used at all levels of health care delivery system to detect the inadequacy of breast feeding at the earliest possible time. This will help the health care provider to provide appropriate and simple interventions, so as to increase the rates of breastfeeding adequacy and thereby, it can go a long way in reducing morbidity and mortality in infants.

ACKNOWLEDGEMENT

The authors have not taken help for any statistical analysis from anybody. So, kindly remove the acknowledgment.

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: Hardanahalli RS, Banerjee R, Srikanth J, Pradeep Kumar PD, Reddy IS. Breast feeding assessment in early neonatal period. Int J Community Med Public Health 2016;3:455-8.