

Original Articles

Infant Feeding Practice of Mother attending Pediatric out Patients Department in A Tertiary Care Center

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Abstract

Background: *Appropriate breastfeeding and complementary feeding practices are the fundamental to children's nutrition, health and survival during the first year of life. WHO and UNICEF have articulated a global strategy for poor infant feeding practices directly and indirectly contributes to under nutrition, morbidity and mortality in infant.*

Objective: *This study was designed to determine the breast feeding (BF) and complementary feeding (CF) practices in study population.*

Methodology: *This descriptive cross sectional study was carried out in Pediatrics out patients department (OPD) of Shahid Suhrawardy Medical College and Hospital, from January 2009 to December 2009. Feeding history of total 250 babies age >6 months to <1 year was taken from mothers.*

Results: *Among 250 total babies, prelacteal feed was given in 29.2%(73/250), colostrum was given in 79.2%(198/250) and exclusive breast feeding upto six months was given in 24%(60/250) babies. CF was started in 242 babies and it was too early before six months in 29.6%(74/250) cases. Amount of CF was adequate in 66.9%(162/242) and composition of CF was good enough in 58.3%(141/242) babies.*

Conclusion: *In this study CF was introduced before 6 months in one third babies and amount was inadequate in same numbers of children. There is need for promotion and protection of optimal infant feeding practices for improving nutritional status of our children.*

Key words: *Exclusive Breast Feeding, Complementary feeding(CF), Infant feeding practices (IFP)*

Introduction:

Optimal infant and young child feeding practices rank among the most effective intervention to improve child health^{1,2}. In 2006 an estimated 9.5 million children died before their fifth birthday and two thirds of these death occurred in the first year of life^{2,3}. Undernutrition is associated with at least 35% of child death. Around

32% of children less than 5 years of age in developing countries are stunted and 10% are wasted. It is estimated that sub-optimal breast feeding, especially non-exclusive breastfeeding in the first 6 month of life, resulting in 1.4 million death and 10% of the disease burden in children younger than 5 years^{4,5}.

World Health Organization (WHO) recommends exclusive breast feeding (BF) for first 6 months of life and continuation of BF for 2 years^{6,7,8}. WHO and UNICEF have articulated a global strategy for poor practices language is directly and indirectly contributes to under nutrition, morbidity and mortality in infant^{8,9}. The recent data estimates of global burden of malnutrition in under 5 children is 178 million from which 1/3 of all children are stunted, 112 million are under weight, 55 million are wasted, 19 million having

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severe acute malnutrition and 13 million born each year with intrauterine growth retardation^{4,5,6}. Infant feeding practice (IFP) constitutes a major component of child caring practices apart from socio-culture, economic and demographic factors^{9,10,11}. According to WHO and UNICEF exclusive breast feeding means receives only breast milk from his or her mother or wet nurse or expressed breast milk and no other liquids or solids or even water with the exception of oral rehydration solution, and medicine for six months.^{1,2,12} Complementary feeding (CF) is defined as the process starting when breast feeding is no longer sufficient to meet the nutritional requirement of infant and therefore other food and liquids are added along breast milk. The target range for CF is generally taken from six months of age even though BF may continue beyond two years.^{2,3,13}

Objectives:

Objectives of the study were to determine the Breast Feeding and Complementary feeding practices in study population. These includes pre lacteal, colostrum and exclusive breast feeding practice in the study population and time of introduction along with composition of complementary food.

Methodology:

This descriptive cross sectional study was carried out in Pediatrics out patients department (OPD) of Shahid Surhawardy Medical College and Hospital from January 2009 to December 2009. Total 250 babies were included in this study. Babies attended in OPD of more than six months and less than one year age group of both sex accompanied by their mother were enrolled in this study. Children who were very sick, age less than six months or more than one year and the children of those mothers who were not agreed to include in the study were excluded. All the parents and guardians of the enrolled children were informed about the purpose of the study and informed written consent was obtained. Structured questionnaire information regarding demographic data; containing, detailed feeding history was taken by 24 hour recall method. Amount of CF was measured and consistency was assessed by using spoon. Foods that stay in the spoon are thick and the foods that not stay in the spoon are thin. CF composed of adequate protein along with carbohydrate and fat were labeled as good enough in composition. Clearance was taken from ethical review committee.

Results:

Among 250 babies 56%(140/250) were female and 44%(110/250) were male. Mean age of the children was around eight months. The educational status of mothers showed that majority of them 54%(135/250) were below SSC level and no schooling in 02%(5/250) (Table-I). Seventy six percentage (190/250) of the respondents mothers were house wife and 24% (60/250) were working mother. Pre lacteal feed was given in 29.2%(73/250), colostrum was given in 79.2%(198/250) and exclusive breast feeding was given in only 24%(60/250) babies shown in Table-II. Among total 250 babies CF was introduced in 242 babies and CF was started before 6 months of age in 29.6%(74/250) babies, after six months of age in 67.2%(168/250) and in 3.2%(8/250) babies were not started CF at all (Table-III). After analyzing feeding history of those 242 cases who started CF, we found that amount of CF was adequate in 66.9%(162/242) and not adequate in 33.1%(80/242) cases. Composition of CF was good enough in 58.3%(141/242) and not good enough in 41.7%(101/242) cases. In about two third of case 63.2%(153/242) CF was thin in consistency and it was found thick in only 36.8%(89/242) cases shown in Table-IV.

Table I

Distribution of Mother's by Educational status (n-250)

Mothers education	No	(%)
< 10 Class	135	54
10 Class passed	60	24
12 Class Passed	30	12
Graduation	20	08
No education	05	02

Table-II

Distribution of babies by Breast feeding status (n-250)

Breast Feeding status	No	(%)
Prelacteal feed given	73	29.2
Clostrum given	198	79.2
Exclusive BF upto 6 months	60	24.0

Table-III

Distribution of babies by time of starting CF (n-250)

Time of starting CF	No (n)	(%)
< 6 months of age	74	29.6
> 6 months of age	168	67.2
Not yet started	08	3.2

Table-IV

Distribution of babies by status of Complementary Feeding (n-242)

Quality of CF	Status of CF	No	%
Amount	Appropriate	162	66.9
	Not appropriate	80	33.1
Composition	Good enough	141	58.3
	Not good enough	101	41.7
Consistency	Thick	89	36.8
	Thin	153	63.2

Discussion:

Appropriate breastfeeding and complementary feeding practices are the fundamental to children’s nutrition, health and survival during the first years of life^{4,12}. In Our study result showed colostrum was given in 79% and exclusive breast feeding upto six month of age was found in only 24% cases. Talukder et al study on infant feeding practices showed that 100% mothers breast-fed their infant from birth to 1 year almost every day^{9,13}. Other study showed that the duration of exclusive BF in Bangladesh is low^{13,14}. Exclusive breast feeding rate in India is about 46%. At 6-8 months only 54% of BF and 75% of non BF are initiated into CF feeds ^{11,15, 17}. Other studies showed that bottle containing various kinds of milk and starchy food were added to 60% of infant diets by 3 months, and 80% by 5 months of age^{2,13, 14}. Siddarth, Ghosh, Khan & Liaqut showed in their study about 92% of mothers gave colostrums to their infants and only 8% of them gave prelacteal food ^{6,7,9,12}. In our study majority of the babies got colostrums and prelacteal food was given in minimum cases. Studies in Nigeria showed that better educated mother breast feed for a shorter time or planned to cease breast feeding after a shorter period than mother those who had little education or no formal training ^{5,6}. Mothers education plays a vital role and increased respectively to

knowledge and awareness related to nutritional requirements of their infants^{6, 9,13}. Krugar, Khan & Kumar in their study showed there is an statistically significant association between the nutrition status of infants and educational status of mother (p<0.001) ^{8,9,10}. In our study education status of the mother was mostly less than 10 class which might impact on CF. Khan, Kumar & Rayhan found complementary foods were introduced too soon or too late and CF was given mostly in diluted form, family food such as rice and vegetables were given in 30% and 40% respectively from six month to one year ^{9,10,18}. The frequency and amounts of food that was offered may be less than required or their consistency or energy density may be inappropriate in relation to the child’s needs ^{12,19}. In our study we found that amount of CF was not adequate in 33.1% cases, composition of CF was not good enough in 41.7% cases and in majority of case (63.2%) CF was thin in consistency means less energy dense. Cultural factor and taboos have a powerful influence on feeding practices and eating pattern^{1,8,19}. In our study we did not looked for such other factors. Improvement of maternal educational status & further campaigns and awareness building program among mothers regarding infant feeding practice may play a lot to improve nutritional status of our children.

Conclusion

In this study CF was introduced before 6 month of age in one third babies and amount of CF was inadequate in same numbers of children. Composition of CF was not good enough in 41.7% cases and consistency was thin energy poor in 63.2% cases.

Recommendation

To achieve MDG 4 we have to improve infant feeding practice a lot by effective campaign on infant feeding practice and thereby child nutrition.

References:

1. World Health Organization: *Infant and young child feeding: model chapter for textbooks for medical students and allied health professionals*. France: World Health Organization; 2009.
2. World Health Organization: *The Gobar burden of disease 2004 update*. Geneva, World Health Organization; 2008.
3. World Health Organization: *Infant and young Child feeding Counselling: An Integreated Course*.

- Participants Manual. Geneva, Switzerland: World Health Organization; 2006.
4. Dadhch J P and Agarwal RK. Mainstreaming early and exclusive breast feeding for improving child survival, *Indian Pediatrics* 2009; 48: 11-17
 5. Falar M, Jooste PL, Mqoqi NP, Benale AJ. Breast feeding and complementary feeding practices in a Swaziland population. *Arf J Health Sci* 2000 ; 7: 51-54.
 6. Siddarth, Ramji. Impact of infant and young children feeding and caring practices. On nutrition status and health. *Indian J Med* 2007; 91: 624-26.
 7. Ghosh R, Mascil. Taylor CG, Rosetta L, Longitudinal study of the frequency and duration of breast feeding in rural Bangladeshi women. *Am J Hum Biol*, 2006;15: 630-35
 8. Kruger R, Gericke G. A quantitative exploration of rural feeding and weaning practice knowledge and attitudes on nutrition. *Public Health Nutrition* 2003; 27:224-22.
 9. Khan MS. Breast feeding and weaning practices in rural India, *Asia Pac Report J* 1990; 5; 71-88.
 10. Kumer D, Goel NK. Poonam C, Misra, Mison , Influence of Infant –feeding Practices on Nutritional Status of Under –five Children. *I J Paediatrics* 2006; 73: 417- 20.
 11. Brown LV, Zeitlin MF, Peterson KE, Chowdhury AM, Rogers BL, Weld LH et al. Evaluation of the impacts of weaning food massage on infant feeding practices and child growth in rural Bangladesh, *Am J Clin Nutr* 1992;56: 994-1003.
 12. Liaqat P, Rizvi MA, Qavyum A, Ahmed H. Association between complementary feeding practice and mothers education status in Islamabad, *J Hum Nutr Diet* 2007;20:340-4.
 13. Talukder MQK, Das DK, Selta GE. Infant Feeding practices in rural Bangladesh, *Indian J Pediatr* 1992; 59: 573-7.
 14. Giashuddin MS, Kabir M. Duration of breast-feeding in Bangladesh. *Indian J Med Res* 2004 ; 119:103-05.
 15. Shaha KK, Frongillo E , Alam D S, Arifeen SE, Persson LA, Rasmussen KM. Appropriate infant feeding practices result in better growth of infants and young children in rural Bangladesh. *American J Clinical Nutrition* 2008; 87:1852-59.
 16. Kapur D, Sharma S and Agarwal KN. Dietary intake and growth pattern of children 9-36 month of age in an urban slum in Delhi. *Indian Pediatrics* 2005; 92:351-56.
 17. JF Ludvigsson, Breast feeding initiation, pattern, and determinants visiting in hospitals in Lin Paz, Bolivia, *BMC Pediatrics* 2003; 115: 1-15.
 18. Rayhan I, Sekander HKM. Factors Causing Malnutrition among under five Children in Bangladesh. *Pakistan J Nutrition* 2006; 5: 558-62.
 19. Griffith LJ, Smeeth L, Sherbure HS, Cole TJ, Dezateux C. Effects of infant feeding practice on weight gain from birth to 3 years, *Arch Dis Child* 2009 ; 94:571-82.