Original Article

FEEDING BELIEFS AND PRACTICES OF MOTHERS/ CAREGIVERS FOR THEIR INFANTS

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ABSTRACT

OBJECTIVE: To evaluate the nutritional practices and beliefs for infants by mothers/care givers in our set up.
DESIGN: A descriptive study.
SETTING: Liaquat University Hospital, Hyderabad – Sindh, from 7th November to 16th December, 2001.
METHODS: One hundred infants admitted in paediatrics ward were selected for the study. Study was based on a questionnaire, developed to collect information by interviewing mothers to ascertain their infant feeding practices and various beliefs/taboos affecting these practices.
RESULTS: One hundred mothers belonging to urban and rural areas were interviewed. At birth, 71% of mothers discarded colostrum. The frequency of breast-feeding was high initially but due to variety of socio-cultural reasons, it declined rapidly with early supplementation of bottle-feeding. Pre-lacteal feeding was a major reason for breast feeding delay. Exclusive breast-feeding was of short duration. Inadequate weaning in terms of quality and quantity was observed common. Cultural beliefs and taboos were affecting the weaning in majority of the cases.
CONCLUSION: Lack of maternal education about feeding the infant is significant in our set up. There is, therefore, a need to educate the mothers about correct feeding practices so that healthy growth of the infants can be maintained.

KEY WORDS: Feeding Practices. Socio-cultural factors. Maternal education. Infant.

INTRODUCTION

Feeding and complementary feeding practices during infancy are the determinants of growth and development. Successful infant feeding needs cooperation between mother and her baby beginning with the initial feeding experience and continuing throughout the child period of dependency. Breast-feeding is important not only for the optimal growth and development but has also protective role in decreasing the incidence and severity of infectious diseases including diarrhoea, respiratory tract infections, necrotizing enterocolitis, otitis media, urinary tract infection and late onset sepsis in preterm.[1-10] In addition, breast-feeding is also associated with reduced rates of sudden infant death syndrome, reduced incidence of diabetes, cancer, obesity, hypercholestrolemia and asthma.[11-16] It provides analgesia during painful procedures and associated with enhanced cognitive development.[17-20] Post-neonatal mortality rate is also reduced by 21% in breast fed infants.[21] Exclusive breast-feeding is defined as infant consumption of human milk with no supplementation of any type except for vitamins or medicine and it is sufficient to meet the demand of growing infant till 6 months of age. After that the caloric requirements are no longer met by breast milk alone, hence, complementary food, rich in iron should be introduced gradually beginning around 6 months of age and continuation of breast-feeding is recommended.[22-23] In our part of the world, lack of knowledge and awareness about feeding infant together with influences of various cultural beliefs and food taboos interfere with the feeding of infants leading to malnutrition with high incidence of infant morbidity and mortality.[24] Prelacteal feeding of tea, honey, water and ghutti is a common, deep-rooted tradition for first 2 to 3 days while colostrum is considered thick stale and discarded. The practice of extensive supplementation beginning in early months of life is also common leading to high illness rate and malnutrition of infants. Complementary feeding is defective due to ignorance, lack of awareness and influences of baseless beliefs created by family's friends or neighbors. These important issues need to be addressed for intervention but before any intervention, it is necessary to get information on infant feeding practices and beliefs of mothers/care

givers. Hence, this study was designed to determine the infant feeding pattern and complementary feeding practices by mothers/care givers and the influences of various beliefs interfering with the feeding of infants, so that a nutrition education programme can be implemented.

SUBJECTS AND METHODS

This study was conducted at Liaquat University Hospital, which is a major public sector hospital located in Hyderabad, Sindh. Feeding practices of infants from birth up to the age of 12 months were recorded for infants admitted in the paediatrics ward for different illnesses. A pre-designed questionnaire was used to record the information regarding age, sex, 1st feed given, feeding practices from birth to age of 12 months by personal interview from the mother/ care giver. For this study, 100 infants were studied during the period of five weeks.

Inclusion criteria:

1. Age: from birth to 12 months.
2. Infants who were normal at birth without any problem, which could affect their sucking mechanism such as cleft lip and palate, brain damage and severe congenital heart disease.

Exclusion criteria:

1. Age > 1year.
2. Born premature.

Socio-economic class of the infant's family was defined as: monthly family income of up to Rupees 6000 was considered as lower social class, monthly income of up to Rupees 15000 was classified as middle class and above Rupees 15000 as upper social class. However, we could not get any case from upper class as in our set up, this class prefers to seek healthcare from the private sector. Data was analyzed through SPSS 10.0 software program.

RESULTS

Beliefs and practices related to the feeding of 100 infants were assessed by interviewing mothers from urban (55%) and rural areas (45%). Out of these, 61% belonged to lower and 39% from middle classes. Age distribution of infants is shown in **Table I**. Regarding feeding practices, breast- feeding was initiated in majority of cases (63%) on 1st day, more than one hour after the delivery. Among these, 21% of mothers started breast-feeding 2 to 3 days after the delivery citing no milk flow. Twelve babies received animal milk and four babies formula milk at birth due to various reasons such as maternal illness, pain at operative site, generalized weakness and perception that mother's milk will come in 2 to 3 days. The practice of pre-lacteal feeding of honey, water, butter, ghutti and tea was observed in 79% of infants and it was the major reason for delay in breast feeding for 2 to 3 days. Colostrum was discarded by 71% of mothers. Most of the mothers preferred mother's milk to feed their baby. Out of 84 cases who received breast-feeding, twenty-five (29.76%) mothers introduced supplementary milk at 2-4 weeks. This figure raised up to 37(44.04%) before 4 months and at 6 months to 51(60.71%) **Table II**. The reason for supplementation was inadequate mother's milk in 28(54.90%) cases, refusal of baby in 18(35.29%), milk is not suitable for baby in 3(5.88%) and in 2(3.92%) subjects, it was maternal illness. Forty-nine (73.13%) infants in the age group of 2-12 months were getting over diluted milk and 6(8.95%) babies concentrated milk. Only 12 (17.91%) infants were receiving normal feed in respect of dilution. Amount and frequency of supplementary feeds were inadequate in 39(76.47%) infants. Only 12(23.52%) infants were receiving adequate supplementation. Breast-feeding was continued during weaning by 16(48.5%) mothers. Out of 100 infants, 77% were in the age of 4 months and above and among these, only 64(83.11%) infants were receiving complementary food. Early complementary food before 4 months was seen in 3 (4.68%) infants while 28(43.75%) infants received complementary food between 4-6 months and 33 (51.56%) after 6 months **(Table III).** Forty-eight (75%) infants received inadequate complementary food while 16(25%) received proper complementary food. Home made complementary food was given to 36(56.25%) infants, while commercial preparation was given to 17 (26.56%) infants and 11(17.18%) infants were getting both. Complementary feeding was influenced by cultural beliefs and taboos in 41(64.06%)cases and these included egg and honey are hot and cause diarrhea while rice, orange, banana were considered cold food and were not given specially during cold weather as they were thought to cause chest congestion or aggravate cold. Doctor or health worker advised complementary feeding in 36(56.25%) infants, neighbor in 4(6.25%), media in 12(18.75%) cases,

and it was mother's own decision in 12(18.75%) infants.

TABLE I:

AGE DISTRIBUTION OF INFANTS

Age	Number of Infants
0-3 months	23
4-6 months	37
>6 months	40
Total	**100**

TABLE II:

INFANT AGE AND FEEDING TYPE (n=100)

Age	EBF*	NBF**	Supple-mented
At birth	84(84%)	16(16%)	-
1month (n=84)	59(70.23%)	-	25(29.76%)
<4 month (n=84)	47(55.95%)	-	37(44%)
6month(n=84)	33(39.28%)	-	51(60.71%)

* Exclusive breast-feeding
** Non breast-feeding

TABLE III:

INTRODUCTION OF COMPLEMENTARY FOOD VERSUS AGE (n=100)

Age	Weaned	Not weaned
< 4 months	3	20
4-6 months	28	11
>6 months	33	5
Total	**64**	**36**

DISCUSSION

The importance of good feeding during infancy cannot be overstated. The well- nourished child not only grows and develops well but has much better resistance to infections. Human milk is the best form of nutrition for infant.[25,26] It promotes growth and development as well as provides short and long term benefits to infant, children, adult and society. It is produced by women everywhere and indeed is the only food equally available to rich and poor alike. The protective benefits of breast-feeding are confirmed in studies performed in developed and developing countries as well as across all socio-economic strata.[27] It protects woman against breast cancer, osteoporosis and helps in birth spacing to enable mother to recover her immune and nutritional status between pregnancies.[28] It provides the loving interaction and is the basis for the establishment of children's personality and learning readiness. Breast-feeding is foundation of food security for all babies of the world and is one of the world's most valuable, renewable natural resource. Early initiation and maintenance of exclusive breast-feeding are important factors for child survival strategies. Attitudes and practices which interfere with successful establishment of lactation remain common.[29] In our part of the world, it is a custom to discard colostrum considering it to be bad for baby and to give pre-lacteal feeding like ghutti, arqe-shireen, honey and the tea. In the present study, 71% mothers discarded colostrum depriving the infant from protective role of colostrum as described by Lewis Jones.[30] Studies have shown that pre-lacteal feed interferes with initiation and maintenance of breast feeding,[31,32] and is a proven cause of lactation failure during first two weeks of the life.[33] The practice of pre-lacteal feeds is observed frequently in many Asian countries.[34-36] In the present study, practice of pre-lacteal feed was observed in 79% of infants, however, the prevalence of breast-feeding at birth was high and 84% infants received mother's milk. A sharp decline and early supplementation was observed towards the end of 1st month of life and only 59(70.23%) infants were receiving breast milk. This decline continued and by 6 months, 33(39.28%) infants were on breast milk. There was a serious problem of false beliefs about breast-feeding, interfering with the optimal pattern of exclusive breast-feeding for the first month of life. These were influenced by families, general public as well as by health personnels. In a recent study at Institute of Child Health, Lahore exclusive breast-feeding at one month age was observed in 9% infants only,[37] indicating that the most rapid decline in breast-feeding occurs in 1st month, which is target period for the support and assistance by the health care professionals.[38-40] Another study regarding infant feeding in Lahore at Children Hospital and Child Institute has shown that exclusive breast-feeding was observed in 28% of infants at 3 months of age and

mixed feeding was dominant.[41] In our study, the most common reason described by mother/care giver for supplementation was inadequate breast milk followed by baby refusal and false belief that milk is not suitable for baby in addition to maternal illness. Majority of infants in this study received substantially low amount of diluted/over diluted animal milk or formula milk with unclean bottle due to financial constraints and lack of knowledge. Although, a drop in infant mortality rates from 139 in 1960 to 84 in 1999 has been reported, but there was no change in breast-feeding rate showing that only 16% of infants are exclusively breast fed at 0- 3 months while 31% are breast fed with complementary food at 6-9 months of age.[42] Correct introduction of solid foods at 4-6 months of age, the type of food and frequency of feeding is crucial for the health and development of infant. Strong traditional influences and environment play an important role in determining the type of complementary foods. Among rural communities in developing countries, home made foods are likely to be composed of locally grown product and in these circumstances, the choice of ingredient is often severely limited and the ability to mix the food into a nutritious combination is hampered by the mother's lack of knowledge. In Pakistan, complementary foods may be either part of the regular family diet or home made preparation and tend to be combination of rice, animal milk, pulses, tea, rusks or some used cerelac/ farex. In a study at Gilgit, Pakistan, common food items were milk, bread, suji, phitti, tea, farex, cerelac and the mean age of complementary feeding was 9 months. Table food was introduced slowly and frequently diet was not made especially for infants.[34] A recent report has showed that only 31% infants of 7-9 months age received solid or semi solid food with breast-feeding during 1995 to 2003.[43] In this study, 28 (43.75%) infants of 4-6 months age group and 33 (51.56%) infants having more than 6 months of age were receiving complementary foods, while 16 (20.77%) infants were not getting complementary feeding due to lack of knowledge about complementary feeding at 4-6 months of age. Even those who received complementary foods, it was inadequate in frequency, quantity and quality due to financial reasons and lack of awareness. The problem of false beliefs in this part of world are very common and interferes with the feeding of infants because in many instances, more nutritious foods are available but not given to the infants in the mistaken belief that they cause illness.

CONCLUSION

In our set up, exclusive breast-feeding is initially high but falls rapidly due to various reasons and supplemented with bottle-feeding. Practice of pre-lacteal feeds and discarding colostrum is also common. Complementary feeding is defective in terms of timing, frequency, quantity and quality due to lack of appropriate guidance. Hence, correct information, encouragement and emotional support by health professionals to the mother to promote use of colostrum, exclusive breast-feeding and improving complementary feeding practices are the way to reduce infant morbidity and mortality in this part of the world.

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