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Exclusive Breastfeeding and Growth of infants attending Olabisi Onabanjo University teaching Hospital

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ABSTRACT: A longitudinal study of 150 infants selected by stratified random sampling of 700 breastfed infants attending the child survival clinic of Ogun State university Teaching Hospital sagamu over two years was carried out. The study was carried out to see the proportion of mothers' breastfeeding exclusively for six months and how breast milk alone supports the infant's growth. The percentage of mother's breastfeeding exclusively by 1, 2, 3, 4, 5 months postpartum respectively was 100%,100%, 90%, 74%, and 20% respectively. A high percentage of the infants had normal weight for age (92.3% - 96.9%), normal height for age (80-93.5%) and normal weight for height. (72.9% - 90.3%) The percentage of children who had low height for age was high (6.5% -20%) in all the age groups, when compared with weight for age (0.7%) and height for age (0.9% -4.5%) More advocacy and awareness program is needed to sustain exclusive breastfeeding for six months postpartum and to reassure mothers that exclusive breast-milk for the first six months of infants life is enough for infant's growth.

Key words: Breastfeeding, Growth of Infants, Exclusive breastfeeding.

Introduction

Breastfeeding as a natural source can start a child on good nutrition for a life time[1]. Studies however have shown that inappropriate breast-feeding practices are prevalent despite the fact that the importance of breastfeeding are well documented.[2] Practices such as early introduction of complementary diet and sudden and abrupt cessation of breast feeding on the premise that breast milk is not sufficient for the baby preclude the infant from obtaining the full benefits of breast-feeding. Moreover, employment of women in the formal sector has contributed to the reduction of mother's breastfeeding.

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The younger and literate mothers particularly are in the majority. In 1990 only 2% of infants were breastfed exclusively during the first month of life while 57.o% give water along side with breast milk and 38% give supplements shortly after the first month in Nigeria.[3] A multi centered study by WHO on the duration of lactational amenorrhoea in relation to breast-feeding practices found that the main reason to discontinue breast feeding or give supplements alongside with breast-feeding as early as one month of age was attributed to breast- milk insufficiency[4] .In 1990 Unicef launched the Baby Friendly Hospital Initiative (BFHI) to promote, protect and support breast-feeding, this has led to an increase in the number of women who breast feed exclusively. However the advocacy is not being vigorously pursued and there is need to evaluate whether exclusive breast feeding is being sustained 17 years since the Baby Friendly hospital Initiative was launched.

In order to protect and support breastfeeding there is need to know how adequate breast milk alone support the nutrition of infants in the six months of life so as to change the attitude of mothers to the adequacy of breast milk for infants nutrition. The need for this study is further underscored by the fact that there is no agreement about the adequacy of breast milk to support infant growth especially in the developing countries. For some authors, breast feeding provides all the required nutrients in the first 2 or 3 month of life but fails later on to support adequate growth in the majority of cases.[5, 6,] Others argue that breast feeding is enough to support infants growth in the first six months of infants life.[8]

Subjects, Materials and Methods

The study was conducted in Olabisi Onabanjo University Teaching Hospital Sagamu. It is a longitudinal study involving infants of ages 0-6 months attending the child survival clinic. The stratified random sampling was used to select the sample population from the children who attend the clinic. Each clinic day was considered as a stratum. The infants were randomly selected from exclusively breastfed infants among the attendees and followed up until 6 months of age. The total number of infants who attended the clinic during the study period was 700. 150 out of the 700 infants were recruited for participation in the study. The anthropometric measurements weight, height and ages were obtained every month.

The nutritional status was computed from athropometric data by using EPI- NUT module of Epi info (version 6) (WHO/CDC 1995). The following nutritional indices were calculated.

HAZ – Height for Age Z score
WAZ – Weight for Age Z score
WHZ – Weight for Height Z score

Results

Table 1: Proportion of mother's breastfeeding exclusively by months postpartum.

Age (Months)	Number of mothers	Percentage
1	150	100
2	150	100
3	135	90
4	111	74
5	30	20

The proportion of mother's breastfeeding exclusively by 5 months postpartum had reduced to 20%.

Table 2: Anthropometric measurement of exclusively Breastfed Infants by Age

Nutrition Index	Age (Months)				
	1	2	3	4	5
	N=150	N =150	N =135	N= 111	N=30
Weight(Kgs) ± SD	3.2 ± 0.7	4.5 ± 0.7	5.5 ± 0.9	6.2 ± 0.9	6.6 ± 0.8
Height (cm) ± SD	50.0 ± 2.6	53.4 ± 2.3	56.9 ± 2.7	59.7 ± 2.8	61.6 ± 2.8
HAZ ± SD	-1.0 ± 0.8	-1.0 ± 0.9	-0.8 ± 0.9	-0.6 ± 0.9	-1.0 ± 0.9
WHZ ± SD	1.2 ± 1.0	1.2 ± 1.1	1.1 ± 1.0	0.9 ± 1.0	0.8 ± 0.9
WAZ ± SD	0.4 ± 1.2	0.1 ± 0.9	0.3 ± 0.9	0.2 ± 0.9	0.0 ± 0.8

Altogether all the infants had normal anthropometric measurements.

Table 3: Percentage of infant with normal weight for height, high weight for height (Robust) and low weight for height (underweight)

Age (Months)	Normal	Robust	Wasting	Total
1	96.7%	3.3%	0.0%	100%
2	92.3%	3.2%	4.5%	100%
3	97.0%	3.0%	0%	100%
4	96.4%	2.7%	0.9%	100%
5	96.9%	3.1%	0%	100%

Comparative weight for height shows the degree of wasting. The cut off point for normal values are -2SD and +2SD. The mean weight for age Z score of the infants through out the follow up period was normal for most of the infants.4.5% of the infants tended towards the underweight in the 2 month of life but this was not seen subsequently.

Table 4: Percentage of infant with normal Height for age, high height for age (Tall) and low Height for Age (short)

Age (Months)	Normal	Tall	Short	Total
1	89.1%	-	10.9	100%
2	83.3%	-	16.7%	100%
3	86.7%	-	13.3%	100%
4	93.5%	-	6.5%	100%
5	80.0%	-	20%	100%

Comparative Height for Age shows the degree of stunting. The cut off point for normal values are -2SD and +2SD. The mean Height for age Z score of the infants through out the follow up period was normal for most of the infants. However, the percentages of children that are short are relatively high when compared to other forms of nutrition indicators as seen in Tables 3 and 5

Table 5: Percentage of infant with normal Weight for age, high Weight for age (Robust) and low Weight for Age (wasted).

Age (Months)	Normal	Robust	Wasted	Total
1	85.5%	13.2%	1.3%	100%
2	77.9%	21.4%	0.7%	100%
3	81.2%	18.8%	0.0%	100%
4	83.8%	16.2%	0.0%	100%
5	90%	9.7%	0.0%	100%

Comparative Weight for Age shows the degree of underweight. The cut off point for normal values are -2SD and +2SD. The mean Weight for age Z score of the infants through out the follow up period was normal for most of the infants. Some of the infants were overweight.

Discussion

A study conducted by the B-zone (South West Nigeria) of the baby friendly Hospital Initiative in 1999 showed that the proportion of infant who were exclusively breast fed fell from 86.6% in the first month of life to 61.6% in the sixth month of life. A steeper decline was recorded in this study in which the proportion of infants who were exclusively breast-fed fell from 100% at admission to 20% in the fifth month of life.[7] The steeper decline may be as a result of less awareness and less promotion of exclusive breastfeeding as was being done in the 1990s when the Baby friendly hospital initiative was launched in 1991. Hence the need to put in place a structure that will continually foster the promotion and protection of exclusive breast feeding for six months of infant's live. Some of the suggestions being made to promote this are to give adequate information about appropriate breast feeding to mothers, fathers and caregivers. Mothers should have access to skilled support to help them initiate and sustain appropriate feeding practices, and to prevent difficulties and overcome them when they occur[9]. Community –based networks offering mother-to-mother support, and trained breastfeeding counselors working within, or closely with, the health care system, could also play important role in this regard. Furthermore, Mothers should be allowed to continue breastfeeding and caring for their children after they return to paid employment. This can be achieved by implementing maternity protection legislation and related measures consistent with ILO maternity Protection Convection, 2000 No. 183 and maternity Protection Recommendation, 200 No. 191. maternity leave, day-care facilities and paid breastfeeding breaks should be available for women employed outside the home.

In this selection of healthy mother infant pair, maternal milk was enough to ensure adequate infant growth during the first six months of life. A high percentage of the exclusively breastfed infants had normal weight for age, normal height for age and normal weight for height. This finding is in agreement with the findings of Abiona TC et al 2002, in Ile-Ife[1] who found that exclusive breast-feeding supported adequate growth during the first six months of life for most of the children studied and that our national recommendation that infants be introduced to complementary feeding at six months is appropriate. Milk directly from the mother's breast cannot be diluted or spoilt. It is easy to digest and contains none of the harmful or difficult to digest components found in substitutes. Others have argued that the substitutes contain enough iron, protein and other nutrients needed by the infant. Yes the substitutes contain all these nutrients, but the infants cannot digest a lot of these nutrients. Besides Breast milk offer other benefits like reduced risk of postpartum hemorrhage, lowered risk of ovarian and breast cancer to the mother. Psychological benefits through the emotional bond that develops between the mother and breast fed infant to mention a few further reiterate the need to promote, protect and support exclusive breastfeeding in the first six months of infant's life.

References

1. Onayade AA, Abiona TC, Abayomi IO, Makanjuola RO. (2004) East Afr med J. The first six months Growth and illness of exclusively and non–exclusively breastfed infants In Nigeria. life in Ile-Ife, Osun Satete, Nigeria.
2. Task Force on the Assessment of the Scientific Evidence Relating to Infant-Feeding practices and Infant Health. Report of The Task Force on The Assessment of the scientific Evidence Relating to Infant-Feeding. Practices and Infant health Peaediatrics 1984; 74 (Supp 2, part2): 579-758
3. NDHS, (1990) federal Office of Statistics: Nigerian demographic and Health Survey 1990. Colombia MDIRD/Macro International Inc, 1992: 107-111
4. WHO (1992) Report of the interim analysis of the multicentre study of the duration of lactational amenorrhea in relation to breast-feeding practices. Vol 1 page 10-50.
5. Waterlow JC,Thompson AM (1979) Observation on the adequacy of breast feeding Lancet: 2:28
6. Waterlow JC, Ashworth A, Griffiths M. (1980) Faltering in infant growth in less-developed countries. Lancet 2: 1176-7
7. Reports by the B-Zone (South West Nigeria) of the baby Friendly hospital Initiative June (199)
8. Abiona TC, Onayade AA, Ijadunola KT, Abayomi IO, Makanjuola RO. (2002) Nutr Health.Growth pattern of exclusively breast-fed infants during the first six months of life in Ile-Ife, Osun Satete, Nigeria.
9. Global Strategy for infant and young child feeding, WHO/UNICEF Geneva, 2003