BREASTFEEDING AND GROWTH IN RURAL KENYAN TODDLERS

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Abstract: Research has not provided unequivocal support for the recommendation to continue breastfeeding until children reach at least age 24 months. In many circumstances, breastfeeding duration is chosen or conditioned by factors other than scientific evidence and recommendations. Even in communities where breastfeeding into the second year is the norm, a significant number of toddlers are weaned before the recommended age. The research reported here was conducted in a rural community of western Kenya. We prospectively followed a cohort of 264 children for 6 months (mean age at baseline, 14.1 ± 2.4 months) to examine the effect of variable breastfeeding duration on length and weight gain. We found that breastfeeding was positively associated with growth in a manner that we inferred to be causal, the effect being stronger on linear growth than on weight gain. This was despite the fact that in a cohort where 95% were breastfeeding at baseline, the prevalence of stunting (height-for-age below −2 standard deviations of the WHO-NCHS reference) was already 48%. The present paper examines the socioeconomic characteristics, sanitation, morbidity, and complementary feeding practices that define the context of this apparently contradictory relationship. The population was poor, no household had running water, and malaria is endemic in the study area. Complementary feeding was initiated for 93% of the cohort before age 3 months. The weaning diet was bulky (77% energy from carbohydrate), and high in phytate content ([phytate]:[zinc] molar ratio, 28). Diet quality, judged by diversity and animal source food intake, was low. Several micronutrient intakes were below current recommendations, including riboflavin (63%), niacin equivalents (64%), calcium (72%), iron (74%) and zinc (33%). Based on a locally defined socioeconomic status scale, children in higher SES households were breastfed for a shorter duration than were children from poorer households. Sanitation and water consumption modified the effect of breastfeeding duration on growth: the effect was stronger in the absence of a pit latrine and at low water consumption. Our results support the
recommendation to sustain breastfeeding in the second year, particularly in economically depressed environments with inadequate sanitation and water supplies

1. INTRODUCTION

Traditional norms rather than scientific recommendations are responsible for the universal initiation of breastfeeding at birth in Marachi Central Location, Busia District in western Kenya. As is the case in the rest of sub-Saharan Africa, over 90% of children continue breastfeeding beyond infancy. For a variety of reasons, however, only half of those who survive to their second birthday are likely to be breastfed for the recommended minimum 24 months. Because of the controversy surrounding the cross-sectional association between prolonged breastfeeding and child nutrition, we used a prospective cohort design to more rigorously examine the relationship between continued breastfeeding and growth in the second year. If continued breastfeeding negatively influenced growth, then 90% of this young population would be at risk of growth failure through continued breastfeeding. If, on the other hand, it were good for growth throughout the second year, this would need to be established to support the recommendation on prolonged breastfeeding. But whatever the influence might be, other factors that jointly or interactively with breastfeeding affect growth would need to be established for more comprehensive understanding and management of child nutrition in the second year.

2. METHODS

Children born between 1 May 1994 and 31 January 1995 were identified in a door-to-door survey throughout the location. Twins, children who had a congenital malformation, or whose mother intended to leave the study location within the next six months, was mentally unstable or deceased were excluded. Out of 296 children enrolled into the study in November 1995 (baseline), 264 were followed up successfully till May 1996 (final assessment).

Anthropometry was measured at baseline and final assessment to estimate growth in weight and length. Morbidity data were collected by recall in weekly cycles. Food intake data were collected using 24-hour dietary recall interviews administered every three weeks during the study. Demographic and other descriptive information about the household, mother and child was collected in face-to-face interviews at baseline and final