

The Role of the Proper Breastfeeding Training in Promoting Lactation

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Abstract

Objective: Insufficient lactation is the most common complaint of nursing mothers in a first few months after delivery; this is known to be partly due to the mothers' deficient knowledge of proper breastfeeding. The goal of this study was to find out whether training of nursing mothers for proper lactation can enhance their lactation.

Methods: During one year from May 20, 2007 to June 20, 2008 we consecutively enrolled 63 nursing mothers who had been referred to the clinic of Tabriz children's hospital for counselling and prescription of infant formula because of insufficient lactation during 30 to 60 days after parturition. At first all infants were weighed under similar controlled condition. Their weight was then compared with recorded data in their nursery discharge sheet and growth surveillance card. Term infants with weight gain of less than 500 g/month were consecutively enrolled in the study. All mothers passed a short training course on nutritional and immunological benefits of mother milk for growth of their baby as well as latch and positioning techniques of breast feeding. After 15 days we weighed the infants again and compared the two recorded weights to assess the sufficiency of breastfeeding and effect of training. Statistical analysis was done with independent sample test and paired t- test using SPSS software.

Findings: In 63 breastfed infants with an age of 30 to 60 days, before training course of mothers, minimum, maximum and mean weight gain was 8.3, 16 and 12.5 (± 3.8) g/day respectively; 15 days after training of mothers these figures were 7.6, 34.6 and 21.1 (± 13.5) g/day respectively. Results showed that weight gain in 54 (85.7%) infants was satisfactory which was statistically meaningful ($P < 0.001$).

Conclusion: This study showed that counseling nursing mothers for proper lactation is the main clinical pathway toward a successful and sustained breastfeeding and must be considered in obstetrics and medical centers.

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Introduction

Breastfeeding has been recognized as a child survival strategy, while breastfeeding programs have been increasingly implemented in many communities. Breast milk in healthy mothers under normal conditions will be secreted in sufficient quantity, proper quality and over a sufficiently long period of time, to supply the entire milk-needs of infant^[1]. The composition of the milk varies from day to day and even from one feeding to the next, as well as from the beginning to the end of each nursing, for example at the beginning of the nursing the fat in the milk varies from 2 to 3 per cent, at the end of the nursing it varies from 6 to 10 percent^[2]. These variations of the mother milk composition are physiological and cannot be produced synthetically.

Unsuccessful breastfeeding after discharging a mother and her newborn infant from hospital, which is recently performed earlier than ever, may be caused by many factors including maternal ignorance about importance of breastfeeding, shortage of mother's information concerning proper practice of breastfeeding, deficient interventions for evaluation and removal of causative factors when breastfeeding fails, easy availability of infant formula, and early discharge of newborn infant from nursery^[3,4].

Passing judgment on the mother's practice of breastfeeding and determining if it is efficient or deficient, could be assessed only by infant's growth. When an exclusively breast fed infant is growing normally, it can be concluded that his or her mother's lactation is efficient^[2]. But inappropriately low weight gain (less than 500 grams per month or 16.6 g/day) during the first several months necessitates a thorough investigation to find its reasons, including insufficient breastfeeding^[4].

One of the most important causes of the breastfeeding failure refers to deficient experience or knowledge of mothers about proper breastfeeding^[3]. Despite perfect technique of breastfeeding, infant's weight gain may not be as suitable as expected; insufficient milk production by mother's breasts may be a reason for this failure, therefore many studies addressed galactogogues, medications that

promote lactation^[5-9]. But Hansen's study showed that metoclopramide did not improve breast milk volume or duration of breastfeeding in women delivering preterm neonates^[10]. Sakha compared the effects of metoclopramide and training on the breast milk in nursing mothers, results showed although the mean weight gain of infants in the metoclopramide-treated group was slightly higher than in the training group, this difference was not statistically meaningful. These results show the preferable role of training and enhancement of mother's self-confidence and motivation^[4].

Considering this diversity in results of various studies, the effect of metoclopramide in enhancement of breastfeeding remains to be proved. Therefore we designed this study to find out whether training of nursing mothers for proper breastfeeding without galactogogues medication can enhance and promote their lactation.

Subjects and Methods

During one year from May 20, 2007 to June 20, 2008 we consecutively enrolled 75 nursing mothers who had been referred to clinic for counselling about prescription of infant formula in response to insufficient lactation during 30 to 60 days after parturition. Only those mothers were included in this study who had a full term newborn infant with a weight gain of less than 16.6 gr/day (500 g/month). Exclusion criteria were as follow: mothers with preterm or low-birth-weight infants; working mothers; mothers with infants who had cardiac, pulmonary, musculoskeletal, metabolic, genetic and neurological disorders or anomalies; mothers who had tried bottle-feeding before counseling; mothers with multiple gestations; mothers with anatomical abnormalities of breast; mothers who had been admitted to hospital more than three days after delivery; mothers whose newborn infant had been admitted to hospital more than three days after birth.

Mothers' weight, height, body mass index (BMI) and economic state were not considered

in this study.

At first all infants were weighed (Seca balance) under the same controlled condition. Their weight was then compared with recorded data in their nursery discharge sheet and growth surveillance card. Infants with a weight gain of less than 500 g/month (under 16.6 g/day) were consecutively enrolled in the study.

All mothers passed a short training course of information about the nutritional and immunological benefits of mother milk for growth of their babies and about latch and positioning techniques of breast feeding. The course taught the correct position of mother and infant, and instructed mothers to act as follows:

1. The nipple should be centered in baby's wide-open mouth. Try to get as much of breast areola (the pigmented area of the breast) as possible in baby's mouth without forcing it, of course.
2. Check that baby's nose and chin touch the breast, baby's lower lip is not folded in, so that infant does not suck it; lip should be flanged (turned out).
3. You should feel a pulling or tugging sensation after the initial latch on discomfort. You should then sit back, relax and enjoy the closeness of breastfeeding your baby. If the latch is still painful after one minute, take baby off by breaking the suction with your finger. To break the suction, place your finger between baby's mouth and your breast. Pulling the baby off without first breaking suction may cause your nipple to become sore.
4. Try to reattach the baby to your breast, in a correct position, you will be comfortable and the baby will be able to get a lot of milk. You will know that the baby is properly attached when you see jaw and temple movement with baby's rhythmical suck. You will hear your baby swallowing (gulping at time).
5. Facilitate unrestricted breastfeeding 8-12 times per 24 hours.

6. Avoid using bottles and allow infant to nurse hind milk of breast in every breastfeeding.

After 15 days we weighed the infants with the same balance again and compared the two recorded weights of each infant to assess the sufficiency of breastfeeding and effect of training. SPSS software for statistical analysis was used to perform paired t-test. The research review board and ethics committee of Tabriz University of Medical Sciences approved the study.

Findings

From 75 mothers 12 preferred formula feeding for their infants and for this reason they were excluded from study. Thirty-three infants were female and 30 male, there was no statistically meaningful difference between them ($P=0.5$).

The mean weight gain in 63 breastfed infants aged 30 to 60 days regarding their weight gain before training of mothers was 12.5 (± 3.8) g/day. The weight gain of these infants is shown in table 1. Fifteen days after training of mothers the mean weight gain was 21.1 (± 13.5) g/day. The weight gain of these infants is shown in table 2.

Results showed that weight gain in 54 infants (85.7 %) was satisfactory and the difference was statistically meaningful ($P<0.001$), (95% CI: 7.61-10.87).

Discussion

Our study revealed that training of mothers for proper lactation is the main clinical pathway toward a successful and sustained breastfeeding. In this study with a short course training 54

Table 1: Daily weight gain of 30 to 60 day-old infants before training

Weight gain(g/day)	No	Percent	Mean (SD)	Range
Under10	5	7.9	8.8 (0.5)	8.3 - 9.4
10 to 16.6	58	92.1	13.1 (2.9)	10.2 - 16.0

Table 2: Daily weight gain of infants 15 days after training of mothers

Weight gain(g/day)	No	Percent	Mean (SD)	Range
<16.6	9	14.4	11.5 (3.8)	7.6 - 15.3
> 16.6	19	30.1	18.3 (1.7)	16.6 - 20.0
	22	34.9	23.6 (20.9)	20.6 - 26.6
	13	20.6	30.9 (3.6)	27.3 - 34.6

mothers continued to breastfeed their babies. Unsuccessful weight gain was seen only in 9 (14/28 %) of infants, surely this can be reduced by proper breastfeeding training from birth day.

Su study in Singapore showed that antenatal breastfeeding education and post natal lactation support, both significantly improve rates of exclusive breast feeding up to six months after delivery. Post natal support was marginally more effective than antenatal education [11]. Davies study in Nigeria revealed that education program and intervention for breastfeeding was a powerful and only significant predictor of the increase in breastfeeding behaviors, and that an early initiation of breastfeeding is a strong predictor of exclusive breastfeeding to fourth month of age^[12]. A study by Akram and colleagues showed that health education program with flip-charts, videos and photographs in the antenatal period as well as after birth can promote exclusive breastfeeding practices. In their study 94 % of the intervention group mothers continued exclusive breastfeeding till fourth month of age against 7 % in the control group^[13].

All studies revealed that health workers can play a key role in supporting and promoting breastfeeding. Their presence at the time of delivery and subsequent contact with the mother and infant provide them with unique opportunities to help the mother and baby to establish and maintain lactation^[14]. In the past 2 decades, there has been a rapid increase in our understanding not only of scientific basis of lactation and sucking, but also of prevention and effective management of breastfeeding problems, including use of basic counseling skill. Many studies have shown that if health workers' attitude and practice are supportive, it is more likely that mothers will breastfeed successfully

and longer. Unfortunately breastfeeding has been neglected in the training of most health workers, leaving a serious gap in both their knowledge and skill. Therefore training is urgently needed at all levels for up-to-date and effective management of breast feeding^[14].

Sakha study showed that 22 % of bottle-feed cases are the result of physicians' recommendation often without a thorough investigation in order to prove its necessity^[15]. Although the important advantages of breast milk has been emphasized in medical education since many years ago and Iranian national health services have undertaken much effort to support breastfeeding in this country and therefore physicians are expected to transfer this insight to mothers, however, that study cleared that we can not expect a mother to be effectively supported for breastfeeding by a physician who does not believe in it.

Ingram study in UK showed that using an electronic teaching (CD) resource in a practice-bases training session is feasible for updating the knowledge of primary care team and the participants found it to be acceptable. It can help to improve breastfeeding expertise, may improve the consistency of advice about the management of breastfeeding problems, and thus help to improve breastfeeding continuation rates in the community^[16].

In our study 12 of 75 mothers preferred bottle feeding for their infants, and did not cooperate. One of the most important biological tasks of mothers is to breastfeed their own baby; the health services of any country should not be to blame if a mother does not want to accomplish this valuable biological task^[17]. We believe more of these mothers can be persuaded to use breastfeeding by practicing appropriate cultural educations in the community^[15].

Conclusion

Training of mothers for perfect practice of breastfeeding and explaining the values of breast-milk for their children's health, will improve their self-confidence and motivation.

These are the strongest and most effective factors which increase and sustain breastfeeding. Counseling nursing mothers for proper lactation before delivery and continued training of them thereafter, are the main clinical pathways toward a successful and sustained breastfeeding.

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