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Original Research Article

Effect of lactation counselling on breast feeding: randomized control trial

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ABSTRACT

Background: Breastfeeding for a newborn is a standard of care. Breast feeding rates are documented low in our country. Objective of present study was to find out the effect of lactation counselling on breast feeding rates.
Methods: It was an open lable randomized control trial and conducted at Department of Pediatrics and Obstetrics of a tertiary care hospital of Northern India. Eligible subjects were 3rd trimester mothers admitted for delivery. Student t test and chi square test were used.
Results: Breast feeding counseling (intervention) group resulted in early imitation, higher breast-feeding rates at discharge and follow up.
Conclusions: Breast feeding counselling improves initiation, breast feeding rates at discharge and beyond. This study also emphasizes that lactation counselling is useful. Every opportunity of counselling should be availed by health care workers to promote breast feeding.

Keywords: Breast feeding, Breast feeding rates, Lactation counselling

INTRODUCTION

Exclusive breastfeeding is single most intervention to reduce the infant mortality rates (13%). It saves life and ensures quality survival for adulthood. Optimal Infant and Young Child Feeding includes early initiation and exclusive breastfeeding till 6 months of age followed by introduction of complimentary feeding in form of homemade semi solid foods. Breastfeeding should be continued for at least two years of age along complimentary feeding.[1] The World Health Organization recommends that breast feeding should start within an hour of birth and should be exclusively breast fed, on demand, for the first six months.[2] Around 26 million babies born in India every year, only about 45% are breast fed within the first hour of life and that 65% of children are exclusively breast fed for the first six months.[3] Half of the newborns are not breast fed during the initial hour of life after birth. As per National family health survey (NHFS III) 14% at 1st hour and 33% breastfeeding rates at 6 months of postnatal age in Rajasthan.[4] There are various reasons for low breastfeeding rates in Rajasthan. Maternal mental makeup, awareness and low education are important factors behind it. Mothers needs help and support for successful breastfeeding. Counseling has been shown to be effective intervention to increase rates of early initiation of breastfeeding, reduce rates of prelacteal feeding and increase rates of exclusive breastfeeding.[5] At our centre we did not have dedicated breast-feeding counselors. Recently we started human milk banking at

our centre and introduced lactation counselor first time in a phasic manner. There are limited published studies to find out the effect of breast feeding counselor on breast feeding from northern India, we planned a randomized control trial with objective to look for the effect of lactation counselor on breast feeding rates.

Primary outcome was to find out the effect of lactation counseling on initiation of breast feeding at birth. Secondary outcomes were to find out the effect of lactation counseling on breast feeding rates at discharge and follow up and to find out the effect of lactation counseling on use of colostrums and pre-lacteal feeding at birth.

METHODS

Present study was conducted at Department of Pediatrics and Obstetrics of a tertiary care hospital of northern India. It was a prospective observational study. Mothers admitted for delivery during their 3rd trimester. Study was conducted during April 2015 to August 2015.

Inclusion criteria

We included all expectant 3rd trimester mothers at their admission for delivery.

Exclusion criteria

- Mother who refused for consent
- Mothers whom breastfeeding contraindicated

Hospital has human milk bank with full infrastructure related to it.

Eligible certified lactation counsellors were selected. They have conducted at least 2 sessions of 15 min for enrolled mothers. Group counselling was done, whenever possible.

Counselling session of mothers were started after admission (before birth). Counselling place was counselling room at human milk bank and/or post-natal wards. Lactation counsellor conducted the counselling sessions. Discharge of the mother and baby was made as the institutional protocols and when the mother is confident for breastfeeding.

Recruitment, enrollment and randomization

At our centre dedicated lactation counsellors were not employed earlier. Lactation counsellors were employed first time during the study in a phasic manner. Initially mothers of few postnatal wards were covered by lactation counsellors. While counselling for breastfeeding was not offered to mothers of few other wards. Study groups were A mothers with lactation counselling (intervention) group and B Mothers without lactation counselling (control group). The randomization was done using computer generated random numbers.

Data collection

Prevailing practices of breastfeeding was recorded at the time of discharge of the mother-baby duo from the hospital by interview from the mother. Data was collected by the investigator at the time of discharge of mother-baby duo by the means of interview about the mode of delivery, nature of first feed given to the baby, time between birth and first feed and nature of feed given to the baby at the time of discharge from the hospital. Consent**:** Informed written consent was taken from the expectant mother and/or husband.

Sample size was calculated at 80% study power, 95% confidence level, alpha error of 0.05, assuming 12 % early initiation of breast feeding in the population (control group, without counselling) as per the reference article.[6] For the improvement of at least 16% in the early initiation of breast feeding practices among the study group (counselling done) the required sample size was 1230 subjects in both the groups each.

Statistical analysis

Quantitative data was expressed as mean and standard deviation. Student-t test has been used to ascertain the significance of differences between mean values of two continuous variables. Qualitative data was expressed in form of percentage and proportion. Chi-square tests were performed to analyze differences in proportions of categorical variables between two groups.

RESULTS

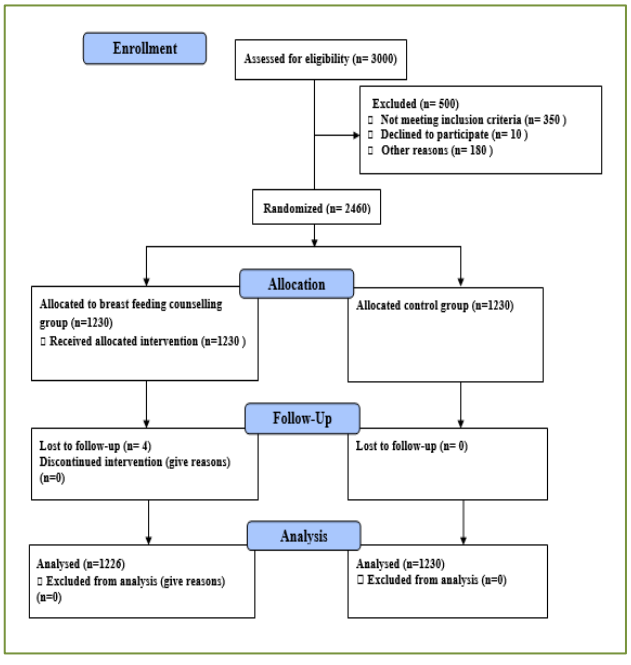

Figure 1: Flow diagram.

Figure 1 is showing the flow diagram of the study including initial assessment, enrollement, randomisation, follow up and outcome analysis.

Base line characteristics of mother like maternal age, parity, socio-economic status, educational status, working status and type of delivery were comparable in two study groups (Table 1).

Table 1: Baseline characteristics.

Parameter	Intervention group	Control group	P value
Mean Maternal age (years)	28.31	29.0	>0.05
Mean Parity	2.31	2.22	>0.05
Literate %	55	54.4	>0.05
Working mothers %	29	30	>0.05
Mode of delivery (vaginal %)	56	56.7	>0.05

The breast-feeding initiation, rates at discharge and follow up were significantly higher in intervention group. Prelacteal feeds were significantly low in intervention group (Table 2).

Table 2: Comparison of two groups on breast feeding parameters.

Parameter	Intervention group (n=1226)	Control group (n=1230)	P value
time (minutes) of initiation of breast feeding (SD)	55 (5.0)	92 (8.9)	0.0001
Breast feeding rates at discharge (%)	1152 (94%)	893 (79%)	0.0001
Use of colostrums at birth (%)	1189 (97%)	677 (55%)	0.0001
Pre-lacteal feeding at birth (%)	307 (25%)	394 (32%)	0.0018
Exclusive breast-feeding rates at 45 days of age (%)	958 (85.5%) (n=1120)	672 (64%) (n=1050)	0.0001

n= number of participants, SD= Standard deviation

DISCUSSION

In this study, the effect of lactation counseling was studied on breast feeding initiation, its rates at discharge and follow up. Mother of intervention group were counseled and helped to initiate breast feeding while in control group received only routine care. There was significantly early initiation of breast feeding in intervention group than control group. Similar results on timing of initiation of breast feeding were seen by others.[7,8] We followed up the study participants till 45 days after delivery. The 45 days-time point was chosen, as the mother has to visit for routine DPT vaccination for the baby. On follow-up (at 45 days), breast feeding rates were significantly high in intervention group than control group. This higher breast-feeding rates in intervention group is due to maternal motivation through counselling. We observed a drop out of study participants at 45 days follow up. The dropout rates were higher in control group.

Earlier studies focused more on exclusive breast feeding than initiation of breastfeeding. Our study results were somewhat similar to studies conducted at Ghana and rural Egypt.[9] Studies have reported that effective counselling is required prior to delivery for early initiation of breast feeding. Regular counselling at different time intervals resulted in sustained breast feeding in later life.[10,11] Studies reported that early initiation of breast feeding had powerful influence over the duration of EBF up to 6 months.[12,13]

A study of selected Mexican hospitals showed that counselling combined with babies staying with their mothers, significantly increased full breastfeeding among primiparous mothers.[14] We observed the same results that early initiation and breast-feeding rates were higher in multiparous mothers, showing that previous experience is useful. However, few multiparous mothers, due to their previous bad experience, are difficult candidates for counseling for early initiation of breast feeding. Similar results were obtained in study done by Agre et al and Holmes et al.[15-17] However, Ekström et al concluded that parity had no significant influence.[18]

Haroon et al. concluded that both individual and group counseling markedly increases exclusive breast-feeding rates.[19] A meta-analysis of 53 studies, has demonstrated that prenatal and postnatal counseling increased EBF rates manifold.[20]

We observed comparable literacy rates in both groups. A previous study concluded that a higher maternal educational level was observed to favor EBF significantly ($p < 0.05$) when compared to illiterate mothers.[21] This is supported by findings of study by Ogbonna et al.[22] and Kumar et al.[23] The higher literacy rate of mothers may be attributed to their better understanding of advantages of early initiation of breast feeding and EBF for healthy survival and growth and development of their infant.

The present study focused the significance of lactation counseling on early initiation of breast feeding. This study also emphasizes that lactation counseling is useful. Every opportunity of counseling should be availed by health care workers to promote breast feeding. Institutionalization of appropriate training programs is essential to ensure successful breast feeding. Efforts to enhance breast feeding are useful for achieving sustainable development goals of reducing child mortality and morbidity. The strength of present study is that it was a randomized control trial with large sample size. The limitation of the study was relatively short follow up.

CONCLUSION

This study concludes that lactation counseling before delivery and at periodic intervals results in early initiation and sustained breast feeding.

Further trials are needed with longer follow up to see the sustainability of the benefit.

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