

Study of Causes of Lactation Failure and the Effect of Intervention

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Abstract

Exclusive breastfeeding is recommended for all infants upto 6 months of age. However, all mothers are not able to exclusively breastfeed their babies upto 6 months and discontinue/are forced to discontinue breastfeeding partially or fully and introduce top milk or complimentary feeding before 6 months. This leads to various infections and malnutrition in infants due to early introduction of unhygienic and inadequate feeds. *Objective:* To study the causes of failure of lactation in mothers giving supplementary feeds to babies below 6 months and to study the effect of intervention. *Design:* Prospective study. *Method:* 100 underweight-for-age babies on supplementary feeding before 6 months of age and attending the Child Health Promotion Clinic (CHPC) of Kalawati Saran Children's Hospital, Delhi were enrolled after obtaining an informed consent over a period of 3 months. The mothers were interviewed for feeding practices, their own diet, rest/stress, knowledge regarding feeding and diet, reasons for failure of breastfeeding and the treatment taken, if any. *Case-specific advice* was given to the mothers regarding proper attachment, positioning, exclusive breastfeeding upto 6 months and extra diet, and rest. They were asked to comply with the advice and followed up every week for 4 weeks. Metoclopramide (10 mg TDS) was advised only when non-pharmacological methods were not effective. They were asked to report back in case of any adverse effect(s). *Observations:* The response was measured in terms of decrease in supplementary feeding and /or re-establishment of exclusive breastfeeding. *Subjects:* A total of 100-62 male and 38 female babies were enrolled in the study. 38 babies were 0-2 months, 40 were 2-4 months and 22 were 4-6 months of age. Out of the 100 mothers, 62 mothers were 20-24 year old, 27 were 25-29 year, 9 were 30-35 year and 2 were > 35 year old. 59% were first time mothers. *Feeding pattern:* On being interviewed, it was found that 79 babies were on top milk. 40 were bottle fed and 39 were on katori/spoon feeds. *Maternal education:* 15% mothers were illiterate, 66% had completed school (12th grade) and only 15% had college education. Only 58% had knowledge regarding the advantages of breastmilk. *Maternal diet:* 32% mothers did not have adequate knowledge regarding requirement of extra-diet/nutrition during lactation. 74% were consuming less food than they were consuming during pregnancy ie only 26% were consuming more food than during pregnancy. *Family support:* Only 80% mothers had family support available to them during lactation period. 67% mothers started top feeding the baby at onset of slighted problem. Out of these, 45% started bottle feeding. Only 27% sought the advice of a medical personnel/doctor. Best results (100%) in establishment of exclusive breastfeeding after counselling were obtained in problems in attachment/positioning/nipple, baby's illness, not getting enough diet, mother too busy in housework and family pressure to stop breastfeeds. Superstitious mothers who believed that their milk was poisonous, also benefitted from counselling and were able to re-establish lactation. Positive results of counseling were observed in solving the problems of lactation, caused due to misconceptions and re-establishment of exclusive breastfeeding was seen in a large number of mothers. *Conclusions:* Counseling was especially helpful in solving the problems of lactation, caused due to misconceptions and baby/breast disorders. More stress is required on adolescent education, and antenatal and postnatal counseling regarding adequate maternal diet and family counseling in national programmes in our country.

Keywords: Breastfeeding; Counseling; Lactation.

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Introduction

Breastfeeding is one of the important aspects of a woman's life. Adequate support, advice and encouragement can make it a more beautiful phase of her life and also help immensely in reducing neonatal morbidity and mortality [1,2]. Multiple factors influence breastfeeding and vary in various geographical regions [3,4].

Objective

To study the causes of failure of lactation in mothers giving supplementary feeds to babies below 6 months and to study the effect of intervention.

Design

Prospective study.

Method

100 underweight-for-age babies on supplementary feeding before 6 months of age and attending the Child Health Promotion Clinic (CHPC) of Kalawati Saran Children's Hospital, Delhi were enrolled after obtaining an informed consent over a period of 3 months.

The mothers were interviewed for feeding practices, their own diet, rest/stress, knowledge regarding feeding and diet, reasons for failure of breastfeeding and the treatment taken, if any Case-specific advice was given to the mothers regarding proper attachment, positioning, exclusive breastfeeding upto 6 months and extra diet, and rest. They were asked to comply with the advice and followed up every week for 4 weeks. Metoclopramide (10 mg TDS) was advised only when non-pharmacological methods were not effective. They were asked to report back in case of any adverse effect(s).

Observations

The response was measured in terms of decrease in supplementary feeding and /or re-establishment of exclusive breastfeeding.

Subjects

A total of 100- 62 male and 38 female babies were enrolled in the study (Table 1).

38 babies were 0-2 months, 40 were 2-4 months

and 22 were 4-6 months of age (Table 2).

Out of the 100 mothers, 62 mothers were 20-24 year old, 27 were 25-29 year, 9 were 30-35 year and 2 were > 35 year old (Table 3). 59% were first time mothers (Table 4).

Feeding Pattern

On being interviewed, it was found that 79 babies were on top milk (table 5). 40 were bottle fed and 39 were on katori/spoon feeds (Table 6).

Maternal Education

15% mothers were illiterate, 66 % had completed school (12th grade) and only 15% had college education (Table 7). Only 58% had knowledge regarding the advantages of breastmilk (Table 8).

Maternal Diet

32% mothers did not have adequate knowledge regarding requirement of extra-diet/nutrition during lactation (Table 9). 74% were consuming less food than they were consuming during pregnancy ie only 26% were consuming more food than during pregnancy (Table 10).

Family Support

Only 80% mothers had family support available to them during lactation period (Table 11). 67% mothers started top feeding the baby at onset of slighted problem. Out of these, 45% started bottle feeding. Only 27% sought the advice of a medical personnel/ doctor (Table 12).

Best results (100%) in establishment of exclusive breastfeeding after counselling were obtained in problems in attachment/ positioning /nipple, baby's illness, not getting enough diet, mother too busy in housework and family pressure to stop breastfeeds. Superstitious mothers who believed that their milk was poisonous, also benefitted from counselling and were able to re-establish lactation (Table 14).

Antenatal and lactation/IYCF (Infant and Young Child Feeding) clinics should focus on the benefits of breastfeeding, anatomy and physiology of the breast, techniques of breastfeeding, care of the breast(s) and common problems likely to be encountered during lactation and their remedies. These antenatal and lactation/IYCF (Infant and Young Child Feeding) clinics can help resolve maternal apprehensions regarding breastfeeding of the baby and promote breastfeeding as a method to reduce the risk of cancer [5]. This will decrease the likelihood of discontinuation of lactation.

Table 1: Sex distribution of babies enrolled in the study

Sex	No. of babies (%)
Male	62 (62)
Female	38 (38)
Total	100

Table 2: Age distribution of babies enrolled in the study.

Age (months)	No. of babies
0-2	38 (38)
2-4	40 (40)
4-6	22 (22)
Total	100

Table 3: Age distribution of mothers whose babies were enrolled in the study.

Age of the mother (yr)	No of mothers (%)
20-24	62 (62)
25-29	27 (27)
30-35	9 (9)
>35	2 (2)

Table 4: Gravida status of mothers whose babies were enrolled in the study.

Gravida status of mother	No of mothers (%)
Primigravida	59 (59)
Multigravida	41 (41)

Table 5: Type of milk given to babies

Type of milk	No of babies (%)
Breast milk	21 (21)
Top milk	79 (79)

Table 6: Feeding techniques of babies enrolled in the study

Feeding technique	No of babies (%)
Bottle feeding	40 (40)
Katori spoon feeds	39 (39)

Table 7: Education of mothers whose babies were enrolled in the study

Maternal education	No of mothers (%)
Illiterate	15 (15)
Completed class 10	4 (4)
Completed school(12 th)	66 (66)
College education	15 (15)

Table 8: Knowledge of mother regarding advantages of breast milk

Knowledge reg. advantages of breastmilk	No of mothers (%)
Having knowledge of benefits	58 (58)
No knowledge regarding benefits	42 (42)

Table 9: Knowledge regarding diet & nutrition during lactation

Knowledge regarding extra diet & nutrition during lactation	No of mothers (%)
Having knowledge	68 (68)
Not having knowledge	32 (32)

Table 10: Mothers consumption of food during lactation

Mothers food consumption per day	No of mothers (%)
Consuming less food than in pregnancy	74 (74)
Consuming more food than during pregnancy	26 (26)

Table 11: Availability of family support

Family support	No of mothers (%)
Available	80 (80)
Not available	20 (20)

Table 12: Help sought by the mother

First person contacted	No. of mothers (%)
Medical intervention / doctor advice	27 (27)
Religious person	2 (2)
Used prior knowledge	4 (4)
Started top feed	67 (67)
Started bottle feeding	45 (45)

Table 13: Factors hindering Exclusive Breastfeeding

S. No.	Factors hindering Exclusive Breastfeeding	No of mothers (%)
1.	Mother's perception of inadequate milk output	13(13)
2.	Problem in attachment/positioning /nipple	5(5)
3.	Breast milk alone not enough for baby	14(14)
4.	Bottle feeding is better	7(7)
5.	Water is required by baby	13(13)
6.	Not getting enough diet	12(12)
7.	Baby's illness	7(7)
8.	Ignorance about exclusive Breastfeeding	8(8)
9.	Working mother	5(5)
10.	Mother busy in housework	4(4)
11.	wants to stop BF	4(4)
12.	Family pressure to stop Breastfeeding	4(4)
13.	Superstition - poisonous milk	2(2)
14.	Primary lactation failure	2(2)

Table 14: Interventions done to correct factors hindering Exclusive Breastfeeding

S. no.	Factors hindering Exclusive Breastfeeding	No of mothers (%)	Intervention undertaken	Outcome
1	Mother's perception of inadequate milk output	13(13)	↑freq. of Breastfeeding ↑mother's diet	10↑breastmilk out of13
2	Problem in attachment/positioning /nipple	5(5)	correction +counselling	all 5 began exclusive bf
3	Breast milk alone not enough for baby	14(14)	c+ ↑bf	11 ex.bf+ 3pbf
4	Bottle feeding is better	7(7)	c+ stop bottle feeding	All stopped bottle, pbf+KS feeds
5	Water is required by baby	13(13)	c+ stop water	9 stopped water
6	Not getting enough diet	12(12)	↑mother diet +c	all ↑diet + ex.bf
7	Baby's illness	7(7)	treated illness+ c	all ex.bf
8	Ignorance about exclusive Breastfeeding	8(8)	c + ↑ bf duration & freq.	All ex. bf
9	Working mother	5(5)	EBM +c	all 5 EBM
10	Mother busy in housework	4(4)	c+ ↑ bf duration & freq.	all ex.bf
11	wants to stop BF	4(4)	c+ ↑ bf duration & freq.	2↑bf+ 2 ex bf
12	Family pressure to stop Breastfeeding	4(4)	C	All 4 ex bf
13	Superstition - poisonous milk	2(2)	C	all ex bf
14	Primary lactation failure	2(2)	c+ ↑ bf duration & freq.	No benefit

c = family counselling,

bf =breastfeeding,

ex.bf=exclusive breastfeeding,

pbf=partial breastfeeding,

KS=Katori spoon feeds

PS: This research was undertaken as a part of short term student project from ICMR.

Discussion

Factors hindering exclusive breastfeeding were identified. We found that bottle feeding impairs successful establishment of exclusive breastfeeding. Breast milk alone not enough for baby (14%), mother's perception of inadequate milk output (13%), water is required by baby (13%) and not getting enough diet

(12%) were major reasons for not being able to breastfeed. A positive influence of counseling and intervention for correction of these factors was observed.

Family and work place support is very essential for continuation of exclusive breastfeeding upto 6 months of life [6,7]. We found that 20% of mothers did not have any family support for household work

required for continuation of exclusive breastfeeding for 6 months of life.

It is well known that advice given to the mothers regarding proper attachment, positioning and increasing the frequency of breastfeeding help in maintaining lactation for continuing exclusive breastfeeding upto 6 months [8]. Similar counselling was done in the form of case-specific advice to the mothers regarding proper attachment, positioning and increasing the frequency of breastfeeding to help in maintaining lactation for continuing exclusive breastfeeding upto 6 months. These mothers were followed up every week upto 4 weeks. Knowledge regarding extra diet and rest was also provided and it was seen that all (100%) mothers benefitted from the counselling and were able to begin exclusive breastfeeding.

The fact that 67% mothers started top feeding the baby at onset of slighted problem (out of these, 45% babies started receiving bottle feeding) provides an insight into the lack of positive reinforcement regarding continuation of breastfeeding and that only 27% mothers sought the advice of a medical personnel/doctor (Table 12) indicates the dismal state of lactation failure/care seeking behavior of breastfeeding mothers in our society.

62% mothers were 20-24 year old, 27% were 25-29 years old, 59% were primigravida mothers and 42% had no knowledge regarding advantages of breast milk and 32% did not have any knowledge regarding extra diet, (calories) and nutrition required during pregnancy, indicating a huge deficit in adolescent education & premarital & antenatal counseling in our country.

62% babies enrolled were male, despite the fact that enrollment was done in a non-biased manner. This could indicate a strong health seeking behavior of parents for the male child. Maximum number of babies (40%) were in 2-4 month age group and babies of 4-6 month group constituted only 22% of all babies. 79% of these were found to be on top feeding indicating a high rate of discontinuation of breastfeeding.

Positive results of counseling were observed in

solving the problems of lactation, caused due to misconceptions and re-establishment of exclusive breastfeeding was seen in a large number of mothers.

Conclusions

Counseling was especially helpful in solving the problems of lactation, caused due to misconceptions and baby/breast disorders. More stress is required on adolescent education, and antenatal and postnatal counseling regarding adequate maternal diet and family counseling in national programmes in our country.

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