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## RESEARCH ARTICLE

### PRELACTEAL FEED: PRACTICES AND BELIEFS

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Prelacteal feeding practices, Primary care givers, Beliefs of primary care givers.

#### **ABSTRACT**

**Background and objectives:** Breastfeeding is the most natural way of meeting the infant's nutritional demands due to which exclusively breastfeed for a period of at least 6 is encouraged. But still there is a common practice in some cultures to give pre-lacteal feeds.

**Objective:** To study the practices of pre-lacteal feeding and its associated beliefs among the primary care givers.

**Methods:** An exploratory study was conducted on 100 primary care givers visiting Pediatric OPD which were selected by convenience sampling technique.

**Results:** Total 48% received pre lacteal feed from which 50% received with in 1 hour of birth. Honey as pre lacteal feed was given by 75%, 52.1% of children received pre lacteal feed from their grandmother. About 50% gave prelacteal feed to develop qualities of prelacteal feed giver. Among the primary care givers with health related belief(s); 55.55% gave it to keep the mouth and throat of the baby moist. Those who had received counseling regarding exclusive breastfeeding, they did not give pre-lacteal feeds.

**Conclusion and Global health implications:** Counseling regarding exclusive breastfeeding during antenatal visits can decrease the chances of prelacteal feed.

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# INTRODUCTION

The nutritional status of infants mainly depends on feeding practices. It is seen that child rearing practices vary among people from different cultures and geographic areas. Breastfeeding is a complete nourishment for body and soul of babies. (Singh, 2010) Breastfeeding has been suggested as a modifiable influencing factor which can help in reduction of occurrence of respiratory and gastrointestinal tract infections. (Duijts et al., 2001) Breast milk contains a number of antiinfective substances, protective antibodies and lactobacilli which protect the baby against the development of diarrhea, respiratory illnesses and other infections. Breast fed babies are less likely to suffer from dental caries, diabetes mellitus, obesity, high blood pressure, heart attack and certain cancers during adult life. (Singh, 2010) National Family Health Survey (NFHS-3) 2005-2006, conducted in India revealed that breast feeding within 1 hour of normal vaginal delivery was initiated only by less than one -fourth (24.5%) of mothers in the country. Exclusive breast feeding for the first 6 months of life was given by less than half (46.4%) of the mothers in the country.

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(Agarwal and Dadhich, 2009) Unfortunately most of the mothers discard colostrum for various myths and give prelacteal to their neonates. (Subbulakshmi and Udipi, 1990; Singh et al., 1997) A prelacteal feed is any food except mother's milk provided to a newborn before initiating breastfeeding. (Khanal et al., 2013) UNICEF/WHO discourage the use of prelacteal feed as it can adversely affect breastfeeding. Even most health care workers routinely and unnecessarily give prelacteal feed. (Akuse and Obinva, 2002) Pre lacteal includes honey, jaggery (brown jaggery from sugar cane), ghee (clarified butter) and ghutti (herbal paste). (Goyle et al., 2004) These prelacteal may be prepared with herbs such as cumin, cardamom, nutmeg, asafetida, caraway, cinnamon and aniseed. (Laroia and Sharma, 2006) Some studies found that practice of giving prelacteal is universal in rural as well as urban areas. (Kannam et al., 2004) The person administering the prelacteal holds an elevated position within the family or community. (Huffman et al., 1980) Some believe prelacteal are a necessary substitute for colostrum. (Gatrad and Sheikh, 2001; Fikree et al., 2005) Prelacteal feed are given under the belief that they act as laxative, cleaning agent or rehydrating agent (Ingram et al., 2003) or as a means of clearing the meconium. Other studies have also reported "insufficient milk supply" as a reason for providing prelacteal. (Shariff and Farzana, 1990;

Prasad, 1994) A study conducted by Ahmed *et al.* on prelacteal feeding revealed that it was given to 77% of babies and honey was given to 72% of them. The common methods of prelacteal feeding were by finger (14%) and spoon (40%). The reasons for giving are-social custom (55%), insufficient breast milk (14%), to keep the mouth and throat moist (9%), rapid growth (7%) and to clear bowel (5%).

Prelacteal liquids are harmful to a newborn mainly due to two reasons. Firstly, being of poor quality, it increases the risk of introducing early infection to a newborn and secondly, it reduces the practice of exclusive breastfeeding. Many mothers, with the belief that colostrum is harmful to child; put the baby to their breast even after one to two days of birth. But by that time, they continue to give water sweetened with honey or crystalline sugar (mishry), or plain water to newborn, which are of poor quality and do not contain the required nutrients. Furthermore, the prelacteal liquid is given with a finger or spoon often while the child is asleep or crying and there is also a danger of aspirating the fluid into the air passage and lungs. Thus, this feeding process can be dangerous to the child and may even results in death. (Ahmed et al., 1996) Despite of the awareness created by various governmental and nongovernmental agencies regarding exclusive breast feeding people still practice prelacteal feeding. In the Indian society, the prelacteal feeding is mostly given by that person; whose characters parents want to be in their child. Now-a- days, hospital policies restrict the prelacteal feeding but the people still give prelacteal feed by hiding it from the medical personnel because they have fixed belief about its affects. Prelacteal feed is the major problem in the community. Moreover there is a need to give knowledge about benefits of exclusive breastfeeding and ill effects of prelacteal feed to the community people.

## MATERIALS AND METHODS

An exploratory design was used to study the practices & beliefs of prelacteal feed among primary care givers of children. It was conducted in Pediatric OPD at DMC & Hospital, Ludhiana, Punjab. The target population for conducting research study consisted of all the primary care givers of children (0-2 years) visiting Pediatric OPD of DMC& Hospital, Ludhiana, Punjab. Convenience sampling technique was used to collect data.

The tool for data collection was a structured interview schedule & it had following sections:-

### Part A:

- 1) Socio-demographic data which include: age, gender, habitat, annual income of family, educational status of mother and father, occupation of mother and father.
- 2) Birth history which include: place of delivery, type of delivery, birth weight, admission in nursery.

**Part B:** Questionnaire to assess practices related to prelacteal feed.

Part C: Questionnaire to assess beliefs related to prelacteal feed.

A written permission was taken from Principal, College of Nursing and Head of the department of Pediatrics, DMC & Hospital, Ludhiana. An informal verbal consent from subjects was taken.

## **RESULTS**

From 100 selected children 40% of children were in age group of birth- 6 months followed by 19% of children in 7 months -12 months, one fourth (25%) in 13-18 months, 16% in 19 months-24 months. More than half (62%) of children were males and 38% were females. More than half (60%) of children were single child of their parents. Slightly more than half (52%) belonged to Hindu religion. Majority of children (71%) were living in urban areas and 29% were living in rural areas. As per educational status, 47% of mothers and 42% of fathers were graduate. Majority of mothers (80%) were house wives. Most of fathers (99%) were working. Majority i.e.74% was from joint family. Majority of primary care givers (70%) received counseling regarding exclusive breast feeding (Figure 1). Most of deliveries (91%) were institutionalized. Slightly more than half (52%) of children were delivered by LSCS where as 47% were delivered by normal vaginal delivery, 65% of children weighed between 2500 - 3500 grams at the time of birth. Out of 100 children (Table 1) slightly less than half (48%) received pre lacteal feed from which 50% received pre lacteal feed with in 1 hour of birth, followed by 39.6% who received it between 1-4 hours of birth and 10.4% received prelacteal feed after 4 hours of birth. Majority of children (75%) received honey as pre lacteal feed, 12.5% received jaggery water, 6.2% received sugar water, and 2.1% received plain water and same number received cow milk as well as tea. Most of children (83.3%) received pre lacteal feed with finger and only 16.7% received with spoon. More than half (52.1%) of children received pre lacteal feed from their grandmother, 22.9% received pre lacteal feed from some other persons (aunt, uncle & sister), 8.3% children received pre lacteal feed from father another 8.3% received from grandfather, 6.2% & 2.1% received from nurses and doctor respectively (Figure 2). Most of the primary care givers (95.8%) were pre-occupied with some belief(s) in their mind while only 4.2% did not have any belief regarding pre lacteal feed (Figure 3). Majority of prelacteal feed givers (80.4%) had cultural belief(s) in their mind whereas only 6.5% had some health related belief(s) and 13% had both cultural and health related belief(s) in their mind (Figure 4).

Primary care givers who were preoccupied with cultural belief(s), 51.16% of them gave prelacteal feed to develop qualities of prelacteal feed giver and 51.16% gave it as a tradition, 6.90% and 2.32% gave it on elder advice and to soothe the baby until true milk arrives respectively and 2.32% gave it so that the baby speaks sweetly in future (Table 2). Primary care givers with health related belief(s); half of them (55.5%) gave it so as to keep the mouth and throat of the baby moist, less than one-fourth (22.2%) gave it with a belief that it is easy to digest for the baby and 11.1% gave it with belief of clearing the bowel of the newborn, promote immunity and energy giving (Table 3). Those who had received counseling regarding exclusive breastfeeding, they did not gave prelacteal feeds.

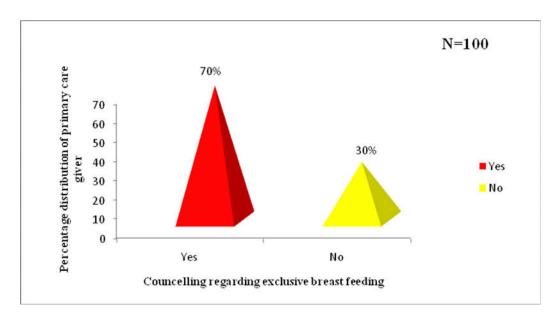


Fig. 1. Percentage distribution of primary care givers regarding counseling of exclusive breast feeding

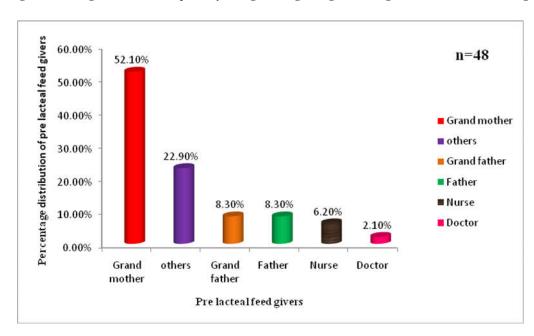


Fig. 2. Percentage distribution of primary care givers who gave pre lacteal feed to child

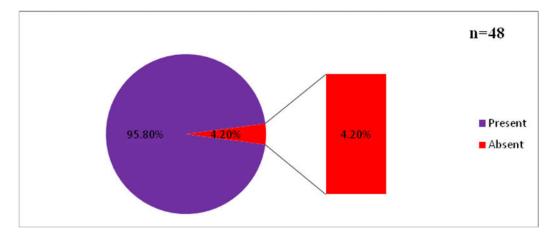


Fig.3. Percentage distribution of primary care givers as per presence of belief(s) related to pre lacteal feed

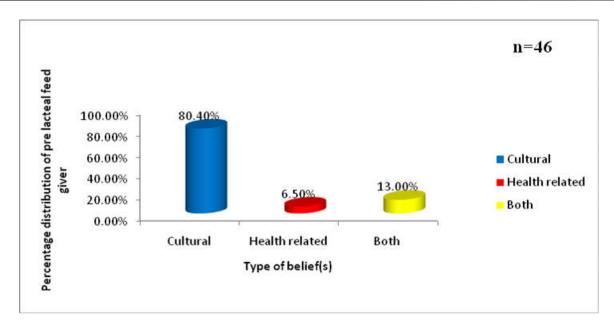


Fig.4. Percentage distribution of pre lacteal feed givers as per the type of belief(s) related to prelacteal feed

Table 1. Frequency and percentage distribution of children as per practices of pre lacteal feed

		N=100
Pre lacteal feed practices	f	%
Pre lacteal feed given		
Yes	48	48.0
No	52	52.0
When child received pre lacteal feed after delivery (n=48)		
<1 hours		
1-4 hours	24	50.0
>4 hours	19	39.6
Substance given as pre lacteal feed(n=48)	05	10.4
Plain water		
Honey	01	02.1
Sugar water	36	75.0
Jaggery water	03	06.2
Cow milk	06	12.5
Tea	01	02.1
How pre lacteal feed was given(n=48)	01	02.1
With spoon	08	16.7
With finger	40	83.3

Table 2. Frequency and percentage distribution of primary care givers as per cultural belief(s)

		n=43
Cultural belief	f*	%
To develop qualities of pre lacteal feed giver	22	51.16
As a tradition	22	51.16
Elder advice	03	06.90
Soothes the baby until true milk arrives	01	02.32
Baby speaks sweetly	01	02.32

<sup>\*</sup>Some of the primary care givers had more than one cultural belief (s) (multiple response)

Table 3. Frequency and percentage distribution of primary care givers as per health related belief(s)

		n=9
Health beliefs	f*	%
It clears bowel of new born	01	11.1
It promotes immunity in new born	01	11.1
It is energy giving	01	11.1
It is easy to digest	02	22.2
It keeps mouth and throat moist	05	55.5

<sup>\*</sup>Some of the primary care givers had more than one health belief(s). (multiple response)

Table 4. Association of practices of prelacteal feed with selected socio-demographic characteristics

					N=100
Socio-demographic characteristics	N		feed given	Chi-square	p-value
		Yes	No	χ	p-varue
Gender					NG
Male	62	30	32	0.01	$0.92^{NS}$
Female	38	18	20		
No. of Sibling					
0	60	25	35	1.81	$0.18^{NS}$
≥1	40	23	17		
Religion					
Hindu	52	25	27		
Sikh	44	22	22	0.92	$0.63^{NS}$
Others	04	01	03		
Habitat					
Urban	71	32	39	0.84	$0.36^{NS}$
Rural	29	16	13		
Occupation of mother	_,				
Working	20	06	14	3.24	$0.07^{\mathrm{NS}}$
Non-working	80	42	38	3.2.	0.07
Type of family	00		30		
Nuclear	26	12	14	0.05	$0.83^{NS}$
Joint	74	36	38	0.03	0.05
Counseling about EBF	7-	30	30		
Yes	70	29	41	4.04	$0.04^{*}$
No	30	19	11	7.07	0.04
Place of delivery	50	19	11		
Home	09	07	02	2.32	$0.12^{NS}$
Institutional	91	41	50	2.32	0.12
	91	41	30		
Admitted in nursery	42	16	26	2.04	$0.09^{\rm NS}$
Yes	42	16	26	2.84	0.09***
No	58	32	26		

NS=Non-significant; \*Significant (p<0.05) EBF- Exclusive breastfeeding.

(Table 4) Other socio-demographic characteristics like gender, number of sibling, religion, habitat, and occupation of mother, type of family, place of delivery and admission of child in nursery were not significantly associated with practices of prelacteal feed.

# **DISCUSSION**

Out of 100 children; slightly less than half (48%) received pre lacteal feed from which 50% received pre lacteal feed with in 1 hour of birth, followed by 39.6% who received it between 1-4 hours of birth and 10.4% received prelacteal feed after 4 hours of birth. These results are contradictory with the study by A Patel et al. (2011) at a tertiary care hospital, Nagpur where only 16.9% of the sample of 500 hospital delivered babies received prelacteal feeds which is quite less than the present study. Thus, the institutionalized deliveries have a large affect on the timely initiation of breastfeeding and prelacteal feeding. Similarly, a study conducted by Anuradha Goyle et al. (2004) on a sample of 328 pavements and roadside squatter settlement families in Jaipur city depicts that 96.6% mothers gave prelacteal feeds to their infants, which is quite higher than the present study. Majority of children (75%) received honey as pre lacteal feed, 12.5% received jaggery water, 6.2% received sugar water, and 2.1% received plain water and same number received cow milk as well as tea. These results are in concordance with the study of Sumera Ali et al. (2011) conducted on 200 mother-infant pairs in an urban and semiurban community, Pakistan in which honey was the most common prelacteal feed followed by Ghutti. Similarly, a study conducted by Igbal et al. (2011) on a sample of 1000 lactating

mothers at a tertiary care hospital, Lahore depicts that honey is the most common prelacteal feed followed by formula milk, Ghutti and sugar water. On the contrary, in a study by *Anuradha Goyle et al.* (2004) on a sample of 328 pavements and roadside squatter settlement families in Jaipur city, the common prelacteal feeds were plain water, jaggery with ghee/oil, sugar water, Ghutti water, jaggery water, omum (ajwain) water, non-human milk, honey, tea and omum (ajwain) with ghee/oil in roadside squatter families. Hence, it is clear that the choice of prelacteal feed can differ according to different cultures.

In the present study, most of children (83.3%) received pre lacteal feed with finger and only 16.7% received with spoon. More than half (52.1%) of children received pre lacteal feed from their grandmother, 8.3% received pre lacteal feed from father as well as 8.3% from grandfather, 6.2% and 2.1% received from nurse and doctor respectively and 22.9% received pre lacteal feed from some other person (aunt, uncle and sister). These results are similar to the studies carried out by Ahmed et al. (1996) on a sample of 420 mothers in early post-partum period at Chittagong district, Bangladesh in which the common methods of prelacteal feeding were by finger and spoon and by Sabah Tarannum et al. (1998) on 473 children aged less than 2 years in a rural community of Bangladesh in which grandmothers (47%) initiated the feeding followed by traditional birth attendant. 51.16% of primary care givers gave prelacteal feed to develop qualities of prelacteal feed giver and 51.16% gave it as a tradition whereas 6.97% and 2.32% gave it on elder advice and to soothe the baby until true milk arrives respectively and 2.32% gave it so that the baby speaks sweetly in future. Among the ones with some health related belief(s); a slightly more than half (55.55%) gave it so as to keep the mouth and throat of the baby moist, less than one fourth (22.22%) gave it with a belief that it is easy to digest for the baby and 11.11% gave it with belief of clearing the bowel of the newborn, promote immunity and energy giving each. The study by *Iqbal et al.* (2011) on a sample of 1000 lactating mothers at a tertiary care hospital, Lahore reveals that elder's influence (31.8%). The study conducted by *Ahmed et al.* (1996) on a sample of 420 mothers in early post-partum period stated that 55% gave it due to a social custom, 14% due to insufficient breast milk, 9% to keep the mouth and throat moist, 7% for rapid growth of the infant and 5% to clear the bowel.

Those who received counseling regarding exclusive breast feeding did not give prelacteal feed to their child. These results are in accordance with the study by carried out by *Rajendra K Gupta et al.* (2011) on a sample of 582 mothers at a tertiary care hospital Jhalawar, Rajasthan. Findings showed that mother's education and breastfeeding education at the time of antenatal checkups is significantly associated with initiation of breastfeeding and prevention of prelacteal feeding.

# Conclusion and global health implication

It is concluded from the study that practice of prelacteal feed is still common in some of the developing countries. Antenatal counseling regarding exclusive breastfeeding up to 6 months can decrease the prevalence of prelacteal feeding which can further decrease the morbidity and mortality among newborns.

#### **Conflict of interest:-** Not applicable

Funding:- Not applicable

#### Key message:

- Practices of prelacteal feed is still common in some of the cultures.
- Honey is the preferred prelacteal feed.
- Primary care givers have beliefs like passing of desired characters from one generation to another with the help of prelacteal feed.
- Antenatal counseling regarding exclusive breastfeeding can help to decrease the prelacteal feeding and to promote breastfeeding.

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