

## Original Research Article

# A study of newborn on prelacteal feeds

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## ABSTRACT

**Background:** Infants are often prescribed prelacteal feeds after birth. We studied 50 such cases. Most prescriptions were written on day one. Maternal problems were the commonest reasons cited. However maternal and neonatal diseases severe enough to affect lactation are rarely encountered. On counselling breastfeeding was initiated. The seeds of lactation failure are sown on day one of life. The best chance of preventing it is on day one.

**Methods:** 50 newborn babies born between August 2015 and July 2016 in Ashwini Rural Medical College and Hospital, Kumbhari, Solapur, Maharashtra, India and who were prescribed prelacteal feeds were included in the study. Approval from ethical committee was taken.

**Results:** Most mothers did not have any medical or pregnancy related diseases. Antenatal counselling was not done in 18 (36 %) mothers. In 48 (96%) cases prelacteal feeds were initiated on day one. Maternal problems 19 (38%) were the commonest reasons cited for prelacteal feeds. In majority of cases 45 (90 %) there was no neonatal reason for prelacteal feeds. 22 (44 %) mothers initiated breastfeeding on recovery from their medical problems. In 17 (34%) cases, counselling was done and was effective.

**Conclusions:** Prelacteal feeds are commonly prescribed in postnatal wards. Maternal problems were the commonest reasons cited though most of the mothers did not have medical or pregnancy related disease. Proper counselling was effective in convincing mothers. Maternal and neonatal diseases severe enough to affect lactation are rarely encountered. Antenatal counselling is an effective way to initiate breastfeeding on day one.

**Keywords:** Lactogenesis, Lactation failure, Prelacteal feeds

## INTRODUCTION

In the postnatal ward often infants are often prescribed formula feeds. We studied 50 such cases. We analysed the history, neonatal examination and circumstances in background of which prescriptions were written. Maternal problems were the commonest reasons cited for starting prelacteal feeds though most of them did not have any medical or pregnancy related disease. Most of the prescriptions were written on day 1.<sup>1</sup> However on counselling such mothers and her attendants, scientifically and sympathetically, it was possible to

persuade mothers to initiate breastfeeding on day one. Maternal and neonatal diseases severe enough to affect lactation are rarely encountered.

Lactation failure is a common problem faced by paediatrician. Often it is recognised when the infant is seen in outpatient department for complaints such as diarrhoea, constipation or colic. Sometimes it comes to light on routine history taking and is not seen as a problem by the family. We feel that seeds of lactation failure are sown on day one of life. The best chance of preventing it is on day one.

## METHODS

Over a period from August 2015 to July 2016, 50 newborn babies in postnatal ward of Ashwini Sahakari Rugnalaya and Research Centre, who were prescribed prelacteal feeds, were included in the study. Approval from ethical committee was taken. These patients were born at term or near term, were not sick and required routine care after birth. Antenatal, intrapartum, postpartum and early neonatal history were recorded. Neonatal examination was done. Mothers and her attendants were given instructions regarding breastfeeding.

## RESULTS

**Table 1: Significant findings in maternal history.**

Maternal Reasons	No. of cases	Percentage
Heart disease	2	4
Delivery outside	1	2
FTND	16	32
LSCS	22	44
PIH	8	16
Diabetic	1	2
Incorrect positioning	1	2
HIV	1	2
NICU staff by profession	2	4%

Table 1 depicts the significant findings found in maternal history. Heart disease was found in 2 cases (4 %). These mothers were kept in ICU for observation.

**Table 2: Antenatal counselling.**

Antenatal counseling	No. of cases	Percentage
Yes	32	64
No	18	36
<b>Total</b>	<b>50</b>	<b>100</b>

1 (2 %) baby delivered elsewhere and proper breastfeeding instructions were not given. 22 (44 %) mothers had lower segment caesarean section (LSCS), 8 (16 %) had pregnancy induced hypertension, 1 (2 %) had gestational diabetes, 1 (2 %) was HIV positive and 1 (2 %) mother was breastfeeding in incorrect position.

From the above table it can be seen that maximum number of mothers did not have any medical or pregnancy related diseases or local breast problems. Improper position was found in only 1 case. 2 mothers (4%) were NICU staff by profession.

Table 2 reveals that antenatal counselling was done in majority of cases, 32 (64 %) cases. Gunasekaran et al in their study reported antenatal counselling of 21%.<sup>3</sup>

**Table 3: Distribution according to day of initiation of prelacteal feed.**

Day of initiation	No. of cases	Percentage
Day - 1	48	96
Day - 2	2	4
<b>Total</b>	<b>50</b>	<b>100</b>

Table 3 shows that prelacteal feeds were started in 48 (96 %) infants on day 1 and in 2 (4 %) infants on day 2 of life. This table shows that prelacteal feeds were started on day 1 in majority of cases.

**Table 4: Reason for prelacteal feed.**

Reason for prelacteal feed	No. of cases	Percentage
Poor suck	9	18
Blood from Breast	1	2
Less milk secretion	3	6
LSCS	7	14
Maternal problems	19	38
None	2	4
Relative pressure	3	6
Twins and LSCS	2	4
Retracted nipple	1	2
<b>Total</b>	<b>50</b>	<b>100.0</b>

Table 4 depicts reasons cited for initiating prelacteal feeds. Poor suck was cited as reason to start prelacteal feeds in 9 (18 %) cases, blood from breast 1 (2 %) case, less milk secretion 3 (6 %) cases, LSCS 7 (14 %) cases, maternal problems 19 (38%) cases, relative pressure 3 (6%) cases, twins with LSCS 2 (4 %) cases and retracted nipple in 1 (2 %) case. It can be seen that maternal problems and LSCS were the reasons cited in majority of infants who were given prelacteal feeds.

**Table 5: Significant neonatal findings.**

Baby problem	No. of cases	Percentage
Cleft lip	1	2
IDM	1	2
LBW	2	4
None	45	90
Vomiting	1	2
<b>Total</b>	<b>50</b>	<b>100.0</b>

Table 5 reveals significant findings of neonatal examination. Cleft lip was found in 1 (2 %) case, features of infant of diabetic mother 1 (2 %) case, low birth weight 2 (4 %) cases and vomiting in 1 (2%) case. 45 (90 %), babies had no significant findings.

Table 6 shows the management measures taken. In 17 (34 %) cases counselling worked in re-establishing breastfeeding. In 2 (4%) cases it did not work. In 22 (44 %) cases breastfeeding was established after maternal

recovery. This is comparable to study by Mathur GP et al.<sup>1</sup> Positioning properly and nipple extraction helped in 7 (14%), and 1 (2 %) case respectively. In the HIV positive mother breastfeeding was not advised.

**Table 6: Management measures taken.**

Management	No. of cases	Percentage
Successful counselling	17	34
Unsuccessful counselling	2	4
BF on maternal recovery	22	44
Positioning	7	14
Nipple extraction	1	2
Breastfeeding not advised	1	2
<b>Total</b>	<b>50</b>	<b>100.0</b>

## DISCUSSION

Breast development and milk production occurs during pregnancy under the effect of estrogen, progesterone, human placental lactogen and prolactin. The high levels of circulating progesterone inhibit the secretory process of the mammary gland. Once the placenta is expelled after birth, progesterone levels decline rapidly, and increasing prolactin levels trigger the beginning of lactogenesis II, which is the onset of copious milk secretion. Oxytocin is essential for milk removal from the mammary gland. In response to infant suckling, afferent impulses from sensory stimulation of nerve terminals in the areola travel to the central nervous system triggering the release of oxytocin from the posterior pituitary.

Oxytocin is carried through the bloodstream to the mammary gland where it interacts with specific receptors on the myoepithelial cells located on milk-secreting cells (alveoli) and ducts, initiating contraction of the cells, which results in expulsion of milk from the gland. In addition to these anatomical and physiologic processes, breastfeeding is a process that also involves psychological and emotional state of the mother. Any disturbance in this state reduces breast milk secretion. Hence physiologically there will almost certainly be some milk immediately after birth. Milk supply continues to increase as long as the baby or hand expression or pump empties the breasts. But if milk removal doesn't happen, milk production will start to shut down. Very rarely inadequate glandular tissue has been reported as cause of primary lactation failure. This scientific knowledge is well documented.<sup>4</sup> It forms the basis of our counselling the mothers and relatives.

In our study most mothers did not have any medical or pregnancy related diseases. Of these 16 (32%) were normal deliveries. Yet their babies were on prelacteal feeds. In only one case improper positioning was found the reason for prelacteal feeds. One mother (2%) tested positive for HIV and was advised not to breastfeed. Antenatal counselling was not done in 18 (36 %) mothers

and stands out as a correctable cause for initiating prelacteal feeds.<sup>5</sup> In 48 (96%) cases prelacteal feeds were initiated on day one, highlighting the need to concentrate on the reasons and correcting them, since reasons of primary lactation failure or serious maternal problems like Sheehan's syndrome, eclampsia were not seen in our study.<sup>6</sup> The importance of breastfeeding during the first hour of life cannot be overemphasized.<sup>7</sup>

Maternal problems 19 (38%) were the commonest reasons cited for prelacteal feeds though most of them did not have any medical or pregnancy related disease. Poor suck was cited as a reason in 9 (18%) cases though significant reason for this was found in only three cases. One baby had cleft lip, one mother had retracted nipple and there was position issue in one case. In majority of cases 45 (90 %) there was no neonatal reason for prelacteal feeds.<sup>1</sup>

22 (44 %) mothers initiated breastfeeding on recovery from their medical problems. Position was corrected in 7 (14 %) cases. Nipple extraction was done in the lone case in our study followed by which breastfeeding was established. In the rest 17 (34%) cases, counselling was done explaining the anatomy and physiology of breast development and lactogenesis to all mothers and their attendants. In these cases mothers started breastfeeding and stopped prelacteal feeds. In 2 cases counselling failed. It is noteworthy that both mothers were NICU staff by profession.

## CONCLUSION

Starting prelacteal feeds is quite common in postnatal wards. Maternal problems were the commonest reasons cited for prelacteal feeds though most of them did not have any medical or pregnancy related disease. Proper counselling was effective in convincing such mothers and their attendants. Maternal and neonatal diseases severe enough to affect lactation are rarely encountered. Antenatal counselling is an effective way to initiate breastfeeding on day one and should be religiously followed. Majority of prelacteal feeds were prescribed on day one. Introspect is needed before writing a prescription of formula feeds.

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