

STUDY OF FACTORS AFFECTING BREAST-FEEDING INITIATION IN THE GOLDEN HOUR IN A TERTIARY CARE CENTRE

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ABSTRACT

BACKGROUND

The aim is to study the factors affecting early initiation of breast-feeding and its prevalence in a tertiary care centre and to study the prevalence of prelacteal feeds.

MATERIALS AND METHODS

In this hospital based cross sectional study, 500 mother-child pairs delivered at Government Maternity Hospital, Petlaburz Hyderabad were included. Data collected by interviewing the mothers using a semi-structured questionnaire. Background questions covered demographic, social, economic status and variables related to antenatal care and postnatal care. Results of the selected variables were categorised into two groups which involved first group where mother initiated breast-feeding within first hour (Golden hour) and second group where mothers initiated breast-feeding after one hour after birth.

RESULTS

The prevalence of breast feeding initiation within one hour was 5.6%. There was statistically significant difference in breast-feeding initiation rates between groups comprising Hindus and Muslims, working women and housewives, multiparous and primiparous women, women who received feeding advice and women who have not received feeding advice. Literacy, place of residence, inter-delivery interval, mode of delivery, gestational age, sex of the child, birth weight of the child and duration of breast-feeding in the previous pregnancy had no statistically significant influence on initiation of breast-feeding within one hour. Exclusive breast-feeding had a positive influence on breast-feeding initiation rates whereas use of prelacteal feeds had negatively affected the breast-feeding initiation rates.

CONCLUSION

Breast-feeding initiation rates were found to be very low. Practice of use of prelacteal feed was prevalent. Feeding advice increased initiation rates. Exclusive breast-feeding in the previous pregnancy had a positive effect. Antenatal counselling of pregnant women, encouraging breast-feeding in the delivery room, strengthening the anganwadi centres and breast-feeding promotional activities throughout the year will go a long way in achieving increased breast-feeding initiation rates in the golden hour.

KEYWORDS

Breast-feeding Initiation Rates, Golden Hour, Prelacteal Feeds.

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BACKGROUND

The benefits of breast-feeding for the health and well-being of the mother and babies are well documented. WHO recommends early initiation of breast-feeding (i.e. within one hour of birth). First one hour after birth of a neonate is considered as the golden hour with regard to the initiation of the breast-feeding. Early initiation of breast-feeding refers to the initiation of breast-feeding in this golden hour. A recent trial has shown that early initiation of breast-feeding in the golden hour could reduce neonatal mortality by 22%.⁽¹⁾ The advantages of breast-feeding include nutritional, immunological and psychological benefits to both infant and mother as well as economic and environmental benefits.

Mothers with early infant contact and breast-feeding showed more attachment behaviour than mothers without early contact and infants who were not breastfed.^(2,3) The unique composition of human milk such as fatty acid composition plays an important role in neuropsychological development.⁽⁴⁾ Preterm infants who were fed breast milk had faster brainstem maturation compared with infants who were fed human milk substitute.⁽⁵⁾ Low birth-weight infants who were fed mother's milk scored better on developmental tests at 18 months and intelligence tests at age 7 or 8 years than infants who received human milk substitutes.⁽⁶⁾ Similarly, significant increases in cognitive development scores were identified in school-aged children.^(7,8,9) In studies performed in both developing and developed countries, infants fed human milk substitutes have fivefold more gastrointestinal illnesses, threefold more respiratory illnesses and prone to twofold increase in episodes of otitis media.^(10,11,12,13) Globally, over one million newborn infants could be saved each year by initiating breast-feeding in the first hour of life i.e. in the golden hour. In developing countries alone, early initiation of breast-feeding in the golden hour can save as many as 1.45 million lives each year by reducing deaths mainly due to diarrhoeal diseases and lower respiratory tract infections in children.⁽¹⁴⁾

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National Family Health Survey-3 data shows that exclusive breast-feeding rate in 0-6 months is 46%. The coverage evaluation survey 2009 shows improvement in early initiation of breast-feeding from 25% in 2005-06 to 33.5% in 2009. Breast-feeding in spite of being a common practice in India is associated with myths and superstitions such as colostrum being bad for baby, breast milk is inadequate for the first three days after birth, etc. Although breast-feeding is nearly universal in Telangana and Andhra Pradesh, only 63% of children under six months are exclusively breast-fed. In addition, only 58% are put to breast within the first day of life and only 25% are started on breast-feeding in the first hour of life. This means many infants are deprived of highly nutritious colostrum and the antibodies it contains. However, mothers in Telangana and Andhra Pradesh breast-feed their babies for an average duration of 23 months which is one month shorter than the minimum of 24 months recommended by WHO for most children. The impact of early initiation of breast-feeding on infant mortality and its economic advantages are well known. Yet attention paid by health care professionals and policy makers has not been commensurate with the importance of this simple preventive strategy. Its importance is highlighted only during annual campaigns such as World Breast-feeding Week.

Aims and Objectives

To evaluate the various factors affecting the early initiation of breast-feeding in a tertiary care centre, to determine the prevalence of early initiation of breast feeds and the use of prelacteal feeds.

MATERIALS AND METHODS

In this hospital based cross sectional study, 500 mother-child pairs delivered at Government Maternity Hospital, Petlaburz, Hyderabad were included. The study was carried out from March 2013 to June 2013. Those babies who were admitted to the special care nursery were excluded from the study. Data collected by interviewing the mothers using a semi-structured questionnaire. The study was carried out after approval of the Ethics Committee of the College.

Background questions covered demographic factors, social and economic status. The results were categorised into two groups which included first group where mothers have initiated breast-feeding within first hour and second group where mothers initiated breast-feeding after one hour after birth. The selected socio-demographic (predictor) variables were maternal age, religion, marital status, residence, parity, inter-delivery interval, mode of delivery, high risk pregnancy, gestational age, sex of the child, birth weight, type of family (Nuclear or joint family), socioeconomic status, maternal education, paternal education, maternal and paternal occupation (Labourers or others) and the use of prelacteal feeds.

Variables related to antenatal care (ANC) and postnatal care (PNC) included antenatal visits and their number, whether received advice regarding breast-feeding during antenatal period, initiated breast-feeding in the first hour after birth or not, duration of breast-feeding in the previous pregnancy in the multiparous women, age of the immediate preceding child and knowledge regarding importance of colostrum. Psychosocial factors included decisions and preferences of family members regarding feeding of the baby.

Single proportion, percentage, chi square test used to summarise the data and open EPI software was used to analyse the data. Timely initiation of breast-feeding was defined as initiation of breast-feeding within first hour of birth either by putting the baby to breast or the baby is given any of the mothers' breast milk. Cultural practices of offering baby honey, butter, water, etc before initiation of breast feeds was defined as prelacteal feeds.

RESULTS

The prevalence of breast-feeding initiation within one hour was 5.6%. Initiation of breast-feeding in 18-24 years group (5.5%) and above 24 years group (5.7%) was similar. Breast-feeding initiation within one hour was more in Hindus (7.9%) as compared to Muslim community (3%) with a significant p value. Working mothers (17.6%) had better initiation rates in the golden hour when compared to housewives group (4.7%) which was statistically significant. Breast-feeding initiation rates in the illiterate group (6.7%) was more than literate group (5.2%) which was not statistically significant. In rural residents, initiation rates were 8.4% as compared to urban residents (4.3%) with no significant p value. Breast-feeding initiation rates in the multiparous women (7.5%) were more than primis (2.2%) with a significant p value. Feeding advice received group (9.2%) had better initiation rates compared to the group which has not received feeding advice (3.2%) which was statistically significant. Inter-delivery interval had no statistically significant effect on the feeding initiation rates. Breast-feeding initiation rates were more in the caesarean delivery group (6.9%) as compared to the vaginal/episiotomy group (4.8%) with no significant p value. In the term babies (5.6%) and preterm (5%), initiation rates were similar. Breast-feeding initiation rates were more in the male babies group (6.4%) as compared to the female babies group (4.8%) with no significant p value. There was no statistical significant difference between appropriate for gestational age babies (6.2%) and low birth weight babies (2.5%). Breast-feeding initiation rates within one hour were more in the mothers who have breast fed their babies in the previous pregnancy (16%) as compared with those mothers with delayed initiation in the previous pregnancy (5%). This was statistically significant. In 8.5% of the mothers who have practised exclusive breast-feeding in the previous pregnancy breast-feeding was initiated as compared to 0% in those mothers who had no exclusive breast-feeding in the previous pregnancy. This was statistically significant. Breast-feeding initiation was more in those mothers with more than one year of breast-feeding in the previous pregnancy (7.5%) as compared to the mothers who breast-fed less than one year in the previous pregnancy (0%), which was not statistically significant. Breast-feeding initiation rates within one hour were more in those babies who did not receive prelacteal feeds (7.4%) compared to those babies who received prelacteal feeds (0%). This was found to be statistically significant. In the majority, the reason for not initiating breast-feeding was lack of knowledge (39%) followed by lack of opportunity to feed the baby within one hour (22%), maternal pain (14%), no milk (8%), sleeping baby (8%), maternal exhaustion (4%), maternal illness (4%) and religious customs (1%). Of the total 194 subjects who received breast-feeding advice, one third received from anganwadi workers, another one third from doctors and the remaining from audio-visual media, family members and neighbours.

DISCUSSION

Timely initiation of breast-feeding was very low (5.6%) in our study in the tertiary centre studied as compared with the national average of 24.5% (According to NFHSIII, 2005-06). Age groups did not show any significance which is similar to previous studies. Breast-feeding initiation within one hour was more in Hindus compared to Muslim community. Number of rural area mothers who initiated breast-feeding were more in number compared to urban mothers. This is due to the fact that more number of Hindus in our study were from rural area who were counselled by anganwadi workers and most of the urban residents were Muslims who practised aza (Chanting into the baby's ears). Urban area anganwadi centres need to be strengthened. No studies showing religion as a predictor of early initiation of breast-feeding. Number of multiparous mothers who initiated breast-feeding early were more in numbers compared to primiparous mothers. This is probably due to the fact that multiparous women had more knowledge, experience and less anxiety. Those mothers who received advice regarding breast-feeding had more initiation rates which was statistically significant. Previous studies by Viera et al,⁽¹⁵⁾ Patel,⁽¹⁶⁾ Tesfaye Setegn et al and Dashti et al⁽¹⁷⁾ showed similar results.

Gestational age at delivery between the two groups of term and preterm did not show any statistically significant difference. This is similar to the study done by Tesfaye Setegn et al. But studies done by A. Patel et al and Viera et al showed that there was positive association of term gestation with early initiation of breast-feeding, this may be due to higher number of preterm babies in our study. Birth weight did not show any statistically significant association in our study which was similar to studies done by Viera et al, Tesfaye Setegn et al, Dashti et al and A Patel et al. Mode of delivery did not show any statistically significant difference between the caesarean/forceps and vaginal/episiotomy groups in our study which is similar to the study done by Tesfaye Setegn et al. But studies done by Viera et al, Dashti et al and A Patel et al, showed that vaginal delivery was positively associated with timely initiation of breast-feeding. This may be due to the fact that most caesarean deliveries are counselled regarding breast-feeding. Timely initiation in previous pregnancy was positively associated with timely initiation in the present pregnancy also (p=0.01).

In those mothers who have not practised exclusive breast-feeding, none of them were found to have initiated breast-feeding within one hour. Almost every fourth child received prelacteal feeds (24.4%) which is similar to the study done by Mamtarani.⁽¹⁸⁾ In the majority, the reason for not initiating breast-feeding is lack of knowledge (39%) followed by lack of opportunity to feed the baby within one hour (22%), maternal pain (14%), no milk (8%), sleeping baby (8%), maternal exhaustion (4%), maternal illness (4%) and religious customs (1%). Out of the total 194 subjects who received breast-feeding advice, one third of subjects received from anganwadi workers, another one third from doctor and remaining received information from audio-visual media, neighbours and family members. Out of the total 194 mothers who received counselling regarding breast-feeding, only 9% initiated feeding within one hour (Table 1). Major reason for not initiating breast-feeding was lack of opportunity (35%) in the vagina delivery group. This might be due to delay in transporting of mothers from labour room to the postnatal

ward and waiting in the labour room for episiotomy suturing. The other reasons were maternal pain (23%), maternal exhaustion (9%), baby not crying (8%), no milk (7%), maternal illness (6%) and forgetting about initiation of feeding (5%) (Table 2).

Major reason for not initiation of feeding in the caesarean delivery group was maternal pain (23%) which was similar to the study done by Pandit et al.⁽¹⁹⁾ A study done by JK Kumari et al⁽²⁰⁾ showed that out of those mothers who received counselling regarding breast-feeding only 12.5% of them received proper counselling. This may be a contributing factor.

CONCLUSIONS

Breast-feeding initiation rates are very low in the tertiary care centre studied. Prelacteal feeding was prevalent. Counselling regarding breast-feeding increased initiation rates in the golden hour. Practising exclusive breast-feeding resulted in increased initiation of breast-feeding rates in the golden hour. Caesarean delivery is not a limiting factor provided proper counselling and support given. Decreasing prelacteal feeding practice can increase timely initiation of breast-feeding. Increase in timely initiation rates and avoidance of prelacteal feeds can be achieved by proper and complete counselling of pregnant women by lactation counsellors. There is a need to encourage mothers to breast-feed in the delivery room itself to increase breast-feeding initiation rates in the golden hour. Breast-feeding promotional activities should be conducted throughout the year. Strengthening of anganwadi centres needs to be done for better delivery of services and accessibility for expectant mothers.

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