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Original Research Article

A Study on Effect of breast feeding on morbidity pattern among infants up to 6 months of age

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Abstract
Introduction: *Human breast milk is form of milk for the healthiest human babies. Breastfeeding promotes health, helps to prevent disease, and reduces health care and feeding costs. Madhya Pradesh has high post neonatal death rate and rate of exclusive breastfeeding practice is 21.6%.Prevalance of diarrhea is 13.2%, Acute respiratory infection 4.4% in infants < 6 months of age.*
Methodology: *This cross-sectional study was undertaken among breast feeding mothers who attending at immunization clinic GMH, SGMH associated with medical college of Rewa city from March 2015 to February 2016. Data collection was done for 650 subjects.*
Results: *Most of the infants suffered from fever 49.23%.however no. of mothers complained of diarrhea and ari were similar. Maximum infants had difficulty and diarrhea in feeding due to which taken to hospital 45.5% followed by difficulty in breathing 43.7% and episode of fever 42%. Least had history of convulsion 2.7%.Among the infants who were given pre lacteals (216), 79% had diarrhea, 68% had ari, 74.6% had fever.*
Conclusions: *Prevalence of diarrhea, ARI, Fever was 45%, 44.92%, 49.23% respectively. Most infants have multiple episodes and more than one morbidities. Relation of these morbidities to prelacteal feed and non EBF practice was found statistically significant.*
Keywords: *Exclusive breast feeding, Morbidity pattern, Prelacteal feed.*

Introduction

Human breast milk is form of milk for the healthiest human babies. Breastfeeding promotes health, helps to prevent disease, and reduces health care and feeding costs. Artificial feeding is associated with more deaths from diarrhea in infants in both developing and developed countries. Experts agree that breastfeeding is beneficial, but may disagree about the length of breastfeeding that is most beneficial, and about the risks of using artificial formulas.

Breast milk is the natural first food for babies, it provides all the energy and nutrients that the infant needs for the first months of life it is also important for sensory and cognitive development and also protects the infant against infectious and chronic diseases. Exclusive breastfeeding for 6 months is the optimal way of feeding infants[1]. All

infants, breastfeeding remains the simplest, healthiest and least expensive feeding method that fulfils the infants' needs It has been observed that infants aged 0–5 months who are not breastfed have seven-fold and five-fold increased risks of death from diarrhea and pneumonia. The United Nations Children's Fund (UNICEF) has estimated that exclusive breastfeeding in the first six months of life can reduce under-five mortality rates in developing countries by13%[2].

Most of the mothers can breastfeed for six months or more, without the addition of infant formula or solid food ;there are few exceptions, such as when the mother is taking certain drugs or is infected with human T-lymphotropic virus, HIV, or has active untreated tuberculosis[3]. The WHO recommends exclusive breastfeeding for the first six months of life, after which "infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to two years of age or beyond.[4]

Scientific facts in favour of breastfeeding are overwhelming. Several studies have shown that exclusive breastfeeding for six months is nutritionally adequate and provides protection against many acute and chronic illnesses in children of the developing as well as the developed world. Breast feeding for 6 months as a potential to reduce under 5 mortality by 13% it is the most effective intervention to reduce neonatal and under 5 deaths, if every baby were exclusively breastfed from birth for 6 months, an estimated 1.5 million lives would be saved each year.[5,6]

Optimal infant and child feeding practices are crucial for nutritional status, growth and development. .Exclusive Breast feeding for 6 months is an essential component for growth and development of the infant[7].

Madhya Pradesh has high post neonatal death rate and rate of exclusive breastfeeding practice is 21.6%. Prevalance of diarrhea is 13.2%, Acute respiratory infection 4.4% in infants < 6 months of age.[8] Till date no study has been done to highlight the scenario of effect of on morbidity pattern of infents up to 6 month of age in this region. Therefore this study is undertaken to find out the effects of breast feeding on morbidity pattern of infents.

Materials and Methods

This cross-sectional study was undertaken among breast feeding mothers who attending at immunization clinic GMH, SGMH associated with medical college of Rewa city from March 2015 to February 2016. Data collection was done for 650 subjects. Those who did not give consent were excluded.

Ethical Clearance

The study is commenced after approval from institutional ethical committee. Invasive procedure and active interventions were not done in the study so only informed verbal consent was taken. They were assured that their responses would be kept anonymous and confidentiality maintained.

Data Collection Method

These health-care centers were visited by the interviewer for 2 days in a week for the purpose of data collection.

All the Mothers who's infents were up to 6 month of age visiting at the immunization clinic particular day were contacted and explained about the study purpose. Face-to-face interview of breast feeding mothers and examination of infents up to 6 month of age was done after taking informed verbal consent. A pretested and structured oral questionnaire was used to elicit the required information regarding benefits of exclusive breast feeding and morbidity pattern of infents who is not exclusive breast feed.

Study Variables

Data were collected Regarding Morbidity Prevalence about Diarrhea, ARI and fever among Infants .Data were collected regarding morbidity indicators of infents had feeding difficulty and dirrohea, episode of fever, about convulsion, difficulty in breathing and blood in stool. Data were also collected about Relationship between

Prelacteal feeding, exclusive breast feeding and morbidity pattern such as diarrhea, ARI and fever. Data were analyzed using Graphpad software. Results were presented in percentages and proportion.

Result

Most of the infants suffered from fever 49.23%. however no. of mothers complained of diarrhea and ari were similar.(Table 1) Maximum infants had difficulty and diarrhea in feeding due to which taken to hospital 45.5% followed by difficulty in breathing 43.7% and episode of fever 42%. Least had history of convulsion 2.7%. (Table 2) Among the infants who were given pre lacteals (216), 79% had diarrhea, 68% had ari, 74.6% had fever. The association between these morbidity and prelacteal feeding is highly significant (p is <0.0001). (Table 3) Among 176 exclusively breast feed infants 10.8% had diarrhea, 31.4% had ari, and 39.6% had fever. On the other side infants who were non exclusive breast feed, 18.7% had diarrhea, 45.8% had ari, 48.3% had fever. The association is significant (p< 0.05). (Table 4)

Table 1 Morbidity Prevalence among Infants

SN	Type of Morbidity	No. of Infants	Percentage (%)
1	Diarrhea	293	45.0
2	ARI	292	44.92
3	Fever	320	49.23
	Total	*650	*100

*most infants have multiple morbidities, so total no. cannot be matched.

Table 2 Morbidity Indicators

SN	Indicators	*Number of Mothers	Percentage (%)
1	Had feeding difficulty and diarrhea taken to a hospital	296	45.5
2	Consultation during an episode of fever	273	42.0
3	Convulsion and taken to a hospital	18	2.7
4	Had difficulty in breathing	284	43.7
5	Blood in stool and taken to a hospital	32	4.9
Total		*650	*100

*Many Mothers gave more than 1 response so the total no. cannot be matched.

Table 3 Relationship between Prelacteal feeding and morbidity pattern

Characteristics		Pre-lacteal Feeding				Chi square, P Value
		Yes(216)		No(434)		
		NO.	%	NO.	%	
Diarrhea	Yes	170	79.0	113	26.0	<0.0001
	No	46	21.0	321	74.0	
ARI	Yes	145	68.0	147	34.0	<0.0001
	No	69	32.0	287	66.0	
Fever	Yes	161	74.6	159	36.6	<0.0001
	No	55	25.4	275	63.4	

Table 4 Relationship between Exclusive breast feeding and morbidity pattern

Characteristics		Exclusive Breast Feeding				Chi square, P Value
		Yes(176)		NO(474)		
		No.	%	No.	%	
Diarrhea	Yes	19	10.8	90	18.7	0.018
	No	157	89.2	384	81.3	
ARI	Yes	54	31.4	217	45.8	0.001
	No	120	78.6	257	54.2	
Fever	Yes	69	39.6	229	48.3	0.047
	No	107	60.4	245	51.7	

Discussion

When relationship between prelacteal feeding (216,33.25%) and morbidities in this study was seen, prevalence was 79%, 68%, 74.69% respectively for diarrhea, ari, and fever. The relationship between prevalence of morbidities in prelacteal feeding and non prelacteal feeding was significant (p value < 0.05). When morbidities were compared to EBF and non EBF practice (73%), prevalence of morbidities were 81.3%, 54.2%, 51.7 % in non EBF practicing group.

Many studies have similar findings. B. Sridevi et al (2015)[9] showed that Respiratory Tract Infections are most common observed illness followed by diarrhea .Majority of the mothers (90%) Were given colostrum, 60% were given EBF (Exclusive Breast Feeding), also showed out of 20 (100%) infants who were given pre-lacteal feeds 16 (80%) had Diarrhoea and 14(70%) had Respiratory Tract infections. Also found that those infants (40) who did not receive EBF till 6 months of them 88% had Diarrhoea and 70% had RTIs. Srinivasan Vijayalakshmi et al (2014)[10] showed that 72% infants were exclusively breastfed till six months and 5.9%newborns were given prelacteal feed. The incidence of fever, diarrhea and breathing difficulty were 2.9, 2.9 and 1.8 episodes/ child/ year respectively. On average 93% of mothers continued breastfeeding and gave excess oral fluid during an episode of diarrhoea. Morbidity among children was significantly associated with breastfeeding practices with exclusive breastfed children suffered less in the study area (p<0.05). Nitin joseph et al (2013)[11] showed that Incidence of morbidity among infants was found to be least among those exclusively breast fed (EBF) for 6 months and most when EBF for less than 6 months ($P = 0.045$). It was also more when infants were weaned with a combination of solids and solids ($P = 0.018$). Diarrheal episodes were more in infants who were bottle-fed ($P < 0.001$). Weight gain between 6 th and 12 th month of infancy was found to be significantly affected by various morbidities ($P = 0.001$). Incidence of morbidities was less among preterm babies and more among partially immunized ($P < 0.001$) babies with birth order ≥ 3 ($P = 0.012$), babies of mothers with low socio-economic and educational status. Liesbeth Duijts et al (2010)[12] showed that Exclusive breastfeeding until the age of 4 months and partially thereafter was associated with a significant reduction of respiratory and gastrointestinal morbidity in infants.

Conclusion

In fact this prevalence of exclusive breast feeding is lower than the other states but it should be more than this finding because M.P. is specially highly endemic for malnutrition among of children up to 5 yrs and the exclusive breast feeding is one of the best and most cost effective mode to prevent the infant mortality rate and child mortality rate by preventing malnutrition. The knowledge regarding time of initiation was maximum for initiation n of breast feeding within 1 hr among the mothers (30.25%) and minimum no. of mothers were responding that breast feeding should be initiated within 2 hr (13.75%) as per their knowledge. Max. number of the mothers showed that colostrums should be given to the newly born babies (65.5%) and only 11.5 % mothers denied to give the colostrums to the newly born baby.23% mothers responded that they don't know either colostrums should be given to the baby or not. Prevalence of diarrhea, acute respiratory infection (ARI), Fever was 45%, 44.92%, 49.23% respectively. Most infants have multiple episodes and more than one morbidities. Relation of these morbidities to prelacteal feed and non EBF practice was found statistically significant (p value <0.05).

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