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Prevalent neonatal care practices in rural area of central India: The truth revealed

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Abstract:

Neonatal health is the key to child survival. India is the first country to add neonatal component to Integrated Management of Childhood Illness (IMCI). After so many years of implementing the Integrated Management of Neonatal and Childhood Illness(IMNCI) strategy through Reproductive and Child Health(RCH) II/National Rural Health Mission(NRHM), neonatal care practices should have changed. This study was done withaims and objectives to assess the practices of neonatal care in rural area, to assess the impact of NRHM in the field of neonatal care practices in rural area.The cross sectional study was carried out among 370 mothers who had a child completed neonatal period preceding the study by interview using pretested questionnaire & was analyzed using epi info statistical software.

Result of the study suggested that many harmful and un-indicated neonatal care practices were prevalent in the community. Mothers had traditional care practices pertinent to breastfeeding, bathing, kajal in eyes, massage of anterior fontanels, pre-lacteal feed etc. Bathing the baby immediately at birth was commonly practiced in 60 %. 37.02% mothers initiated breast feeding within half hour of birth. Early initiation of breast feeding was more likely in neonates with mother with higher education and higher income and those belonging to joint families.27.56 % mothers had not given Colostrum to their babies & in majority the reason was family customs or prohibited by elderly. Turmeric or ghee was applied to cord in 75.94 %. After 7 years of implementation of IMNCI strategy through NRHM we got mixed pattern of results in neonatal care practices.Unsafe and harmful traditional practices in neonatal care are more prevalent in the rural areas. Still 13% deliveries are home deliveries emphasizing the need for further education in safe and healthy practices to the mothers and the community.

Keywords: Neonatal care practices,Impact of NRHM,Exclusive breastfeeding, Colostrum.

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Introduction:

New born or neonatal period include the time from birth to 28 day of life. This is the crucial period in laying the foundation of good health. At this time specific biological and psychological needs must be met to ensure the survival and healthy development of the child into a future adult (1).

Neonatal care refers to the care given by the mother to her newborn such as breastfeeding, personal hygiene, and prevention of hypothermia & infection and safety measures(2).Mother has prime responsibility for caring her newborn which comprises the following aspects; they are thermal regulation, breast feeding, hygienic practice including skin care, eye care, cord care etc. and safe environment(3).

Newborn care practices which are harmful are major contributors for high mortality rates, especially in developing countries where 96% of the world's approximate 5 million annual neonatal deaths occur. Each year in India over 1 million newborn die before they complete their first months of life, accounting for 30% of the world's neonatal deaths. India's current neonatal mortality is higher in rural areas at 49/1000 live births v/s 27/1000 in urban area. Neonatal health is the key to child survival(4). Many of the life-threatening conditions could be prevented or treated with low cost technology, improved labor and delivery care attention to the physiological needs of the newborn (5).

India is the first country to add neonatal component to Integrated Management of Childhood Illness (IMCI). After so many years of implementing the Integrated Management of Neonatal and Childhood Illness(IMNCI) strategy through Reproductive and Child Health(RCH) II/National Rural Health Mission(NRHM), neonatal care practices should have changed.The present study aims to study the practices in relation to newborn care like prevention of hypothermia, colostrum feeding, early initiation of breast feeding and pre-lacteal feeding so as to improve neonatal survival and decrease morbidity and mortality in rural area in India and to assess the impact of NRHM in the field of neonatal care practices in rural area.

Material and Methods:

This cross- sectional study was carried out between November 2012 to January 2013 among the mothers residing in rural area of the central India,who had given birth to a live born within the last one year. Sample size calculated on the basis of percent distribution of neonates who were breastfed within 1 hr of birth in Maharashtra according to NFHS 2005-06 which was 52%. Considering 10% allowable error calculated sample size was 369 which were rounded off to 370.Permission of Institutional Ethical Committee was taken before starting the study. It was a cross sectional study using a multistage random sampling.Tertiary care hospital is situated

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in a taluka having total 56 Gram Panchayats. Out of 56 Gram Panchayats, one Gram Panchayat was selected randomly. The selected Gram Panchayat is having two villages. One village was again selected randomly by random sampling method. The population of the area was 5,044 and 6 anganwadis were there in that village with 580 registered PNC mothers. Out of which 4 anganwadis were selected randomly and list of mothers taken and visited to them. All participants were informed regarding the purpose of the study and their consent taken for the study. Mothers were interviewed by the investigator using predesigned pretested questionnaire. Mothers with post partum psychosis, mothers not consenting were excluded. Data was analyzed by using Epi Info Software 3.4.3 version.

Main outcome measures calculated in percentage were thermal care, breast feeding practices and some cultural practices.

Results:

Out of total 370 mothers, 48 (12.97%) deliveries were home deliveries while 322 (87.03%) were hospital deliveries. Majority of mothers (80%) were of age less than 26 years.Most of the mothers (93.5%) have education upto HSSC and only 6.5% mothers were graduate and postgraduate and out of the total 24.32% mothers were employed. Nearly more than half of the mothers (54.05%) belonged to nuclear family and remaining 11.35% mothers belonged to joint family and 34.59% mothers were from three generation family. 32.97% mothers were from class I and II of socioeconomic status(SES) and 67.03% were from class II, IV and V of SES according to Modified Prasad Scale (Table 1).Out of total 34 deliveries conducted by dais, 26(76.47%) were untrained and 8(23.53%) were trained dais. Majority of the total i.e.(79.45%) were normal deliveries, 6 (1.62%) were instrumental deliveries and 70 (18.91%) were cesarean sections.

Table 1: Socio- demographic characteristics of the mothers (N=370)

Characteristics	Number	Percentage
Religion		
Hindu	200	54.05
Muslim	22	5.9
Buddhist	140	37.83
Others	8	2.1
Education of mothers		
Illiterate	0	0
Upto high school	174	47.02
Upto HSC	172	46.48
Degree	20	5.40
Post graduate	4	0.01
Age of mothers		
19-22 yrs	135	36.48
23-26 yrs	162	43.78
27-30 yrs	73	19.72
Occupation of mothers		
Employed	90	24.32
Un- employed	280	75.68
Type of family –		
Nuclear	200	54.05
Joint	42	11.35
Three generation	128	34.59
Socio-economic Status		
I	10	2.7
II	117	31.62
III	214	57.83
IV	29	7.8
V	5	1.3

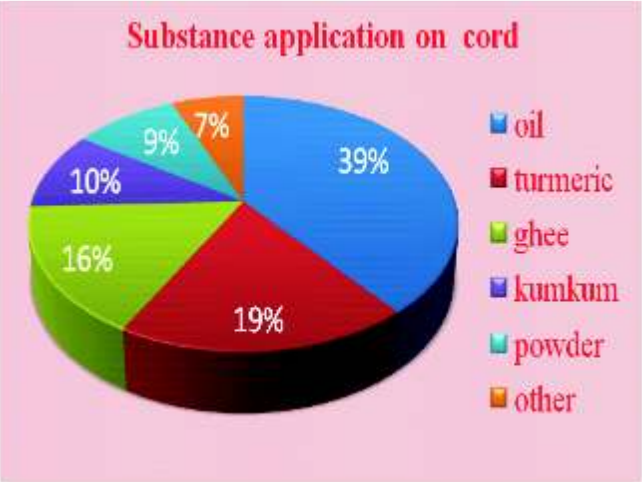
Result of the study (Table 2) revealed that many harmful and unindicted neonatal care practices were prevalent in the community. Still 60% mothers had traditional care practices pertinent to breastfeeding and bathing at birth.

Table 2: Prevalent Neonatal Care Practices

Prevalent Neonatal Care Practices	N = 370	
Parameters	Number	Percent
Bathing at birth	222	60
Skin to skin contact	44	11.89
Colostrum discarded	102	27.56
Breast feeding within half hour	138	37.29
On demand breast feeding	244	65.94
Rooming in	319	86.21
Prelacteal feed	122	32.97
Breast feeding counseling not received	42	11.35
Hand washing after change of soiled nappy	240	64.86
Application of substance on cord	281	75.94
Kajal application in eyes	282	76.21
Putting oil in nose and ears	202	54.59
Procedure to avoid evil eye	326	88.10
Knowledge of danger signs to mother	230	62.16

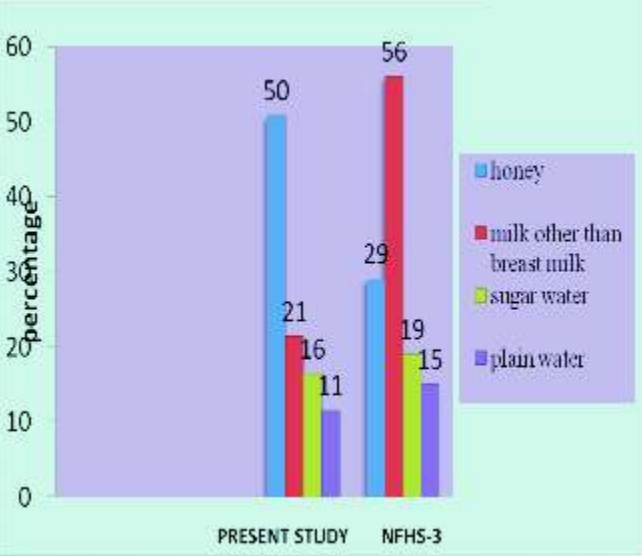
Only 24% mothers were keeping cord dry and clean as indicated.75.94% motherswere applying substance on cord; most commonly applied substance was oil (Fig. 1).

Figure 1:Substance application on cord



76.21% mothers were applying kajal in eyes. Prelacteal feedwas given by 32.97% mothers.Most commonly used prelacteal feed was honey (50%)(Fig. 2).

Figure 2: Types of prelacteal feed used



Bathing the baby immediately at birth was commonly practiced in 60 %. Only 37.02% mothers initiated breast feeding within half hour of birth.

Early initiation of breast feeding was more likely in neonates with mother with higher education ($p < 0.01$) and higher income ($p < 0.05$) and those belonging to joint families (< 0.01)(Table3).

Table 3: Association of various factors with early initiation of breastfeeding (N=370)

Factors	Early BF initiation	Initiation of BF in >1/2 hr	Total	'p' value	Chi square	OR (95% CI)
Joint & 3 gen family	88	112	200			
Nuclear family	50	120	170	0.003831	19.08	1.88
Total	138	232	370			
Edu> HSC	92	104	196			
Edu< HSC	46	128	174	0.000046	16.57	2.46
Total	138	232	174			
Higher income group	58	69	127			
Lower income group	80	163	243	0.01607	5.79	1.71
Total	138	232	370			

27.56 % mothers had not given Colostrum to their babies & in majority the reason was family customs or prohibited by elderly (Fig. 3).

Figure 3: Reasons for discarding colostrum

Discussion:

After 7 years of implementation of IMNCI strategy through NRHM we got mixed pattern of results in neonatal care practices in rural area.The present study showed that 60 % of newborn were given a bath immediately after birth. Same results were observed there in study of Gupta P et al which was 79.7 %(6).Similarly, Singh (7) in a study in rural area of Ghaziabad U.P. also reported that bath was given in 71.2% of newborns.Similarly Kumar et al (8) in a study in Haryana found that 65% were bathed within 24 hours of delivery. These findings show that there was very less awareness in community regarding prevention of hypothermia.

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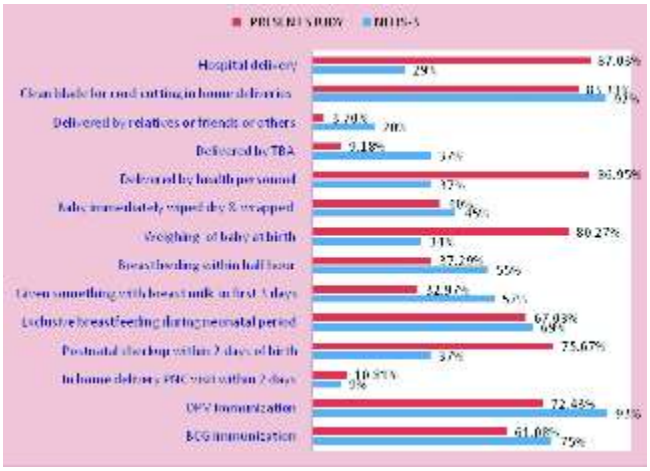
In the present study, it was found that 37.29 % mothers initiated breast feeding within half hour of birth. Similarly Gupta P (6) in her study revealed 36.6% mothers initiating breast feeding within half hour which is in close approximation to the present study. According to DLHS-4 Nagpur (2011-2012)(9) 73.2% mothers initiated breast feeding within 1 hour which is in contrast for our study, while national average of percentage of initiation of breast feeding was 37% within 24 hours of birth. Grover P in his study found breast feeding was initiated within one hour in only 12% of the newborn(10) which was very low as compared to present study. The present study revealed that more than half (72.44%) had given colostrum to their newborn. In contrast to our study, Singh (2002) had shown in his study that about 47.8% had given colostrum to the neonate (7). DLHS-4 Nagpur reported that only 60 % of mothers had given colostrum to their babies which less than in the present study. In contrast to present study, Taja et al (2001) (11) in a district of MP found that 77.3% mothers discarded colostrum and only 22.7% of mothers had given it to their baby. In the present study the reasons found for discarding colostrum were prohibited by elderly (42.15%), family customs (34.31%), ignorance about advantages (15.68%) and baby was admitted in NICU (7.8%).In contrast to our study, Singh et al (2002) showed in his study that about 36.8% mothers gave no milk secretion as the reason for not giving colostrum, 28.9% said that they did not know that it should be given while 18.4% said that giving colostrum was against the tradition of the family and community and another 15.7% said that elderly female prevented them from giving colostrum (7). Present study findings were compared with NFHS-3 (12) data with regards to cord cutting in home deliveries, delivery by untrained persons, delivery by TBA, bathing at birth, weighing the baby at birth, something given along with the breast feeding, breast feeding during neonatal period, neonatal checkup within 2 days of birth, BCG and OPV immunization and it was observed that mixed results were there(Fig. 4).

Figure 4: Comparison of present study variables with NFHS-3



Conclusion:

Unsafe and harmful traditional practices in neonatal care are more prevalent in the rural area though NRHM has positive impact in certain neonatal care practices there is need for further education in safe and healthy practices to the mothers and the community in rural area.

Recommendations:

In majority of cases, correct practices regarding newborn care were poor among mothers and this should be promoted through improved coverage with existing health services.The Government should take necessary steps in terms of increasing awareness of mothers through Information Education and Communication activities about the safety measures for handling neonates.

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