



KNOWLEDGE AND PRACTICES REGARDING NEWBORN CARE AMONG POSTNATAL MOTHERS IN A TERTIARY CARE HOSPITAL OF CENTRAL INDIA

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ABSTRACT

Background: A set of Essential Newborn Care (ENC) practices have been proven to decrease in neonatal morbidity and mortality. Mother's knowledge, attitude and practices related to proper neonatal care is an important predictor of neonatal mortality. **Aim:** The present study was designed to assess the knowledge and attitude of neonatal care practices among postnatal mothers in a tertiary care hospital in Central India.

Methodology: This cross-sectional study was carried out in the Neonatology division of MGM medical college and hospital, Aurangabad from May 2016 to August 2016. A structured questionnaire in the form of multiple choice questions was developed to detect knowledge level of postnatal mothers on newborn care.

Results: A total of 100 postnatal mothers aged between 19 to 29 years, with an average of 22.1 ± 2.33 years were included in the study. Majority of them (91%), knew the importance of providing warmth to the baby. Almost all the mothers didn't support the use of gripe water, oil instillation into mouth or nostrils and application of cow dung on umbilical cord stump. Almost all (96%) women knew the importance of immunization for their babies. Among them 76% mothers were aware of proper technique (Warm clothes + Kangaroo care) of keeping baby warm.

Conclusion: Knowledge and practices regarding newborn care among postnatal mothers in a tertiary care hospital were fairly good.

KEYWORDS : Newborn care, Postnatal mothers, knowledge, practice

INTRODUCTION

The postnatal period, defined as the time immediately after the birth of the baby and up to 6 weeks (42 days) after birth, is critical for newborn and mother. The majority of the neonatal deaths (75%) occurs during the 1st week of life, and between 25% and 45% occurs within first 24 hours of birth.¹ Two-thirds of all neonatal deaths occur due to prematurity, asphyxia, and sepsis while inappropriate feeding and cultural practices during the postnatal period may pose further risks to the life of newborn. All these maternal and neonatal problems could be reduced if women receive appropriate postpartum care.²

The newborn health challenge faced by India is more formidable than that experienced by any other country in the world. It is estimated that out of 3.9 million neonatal deaths that occur worldwide, almost 30% occur in India.³ Global under-five mortality rates have declined over the past four decades, but the neonatal mortality rates still remain high.⁴ Although the neonatal mortality rate (NMR) shows a decreasing trend, compared to 25% reduction in the neonatal deaths in 1980s the decline in 1990s was only 15% and the same trend was observed in 2000s.⁵ Irrespective of urban-rural differences in NMR, neonatal deaths are a bane of the poorest.⁶ Despite a plethora of health institutions, over 50% births amongst the urban poor continue to occur in home settings and under the supervision of untrained birth attendants.⁷ Care practices immediately after delivery play a major role in causing neonatal morbidities and mortalities. Essential newborn care practices were outlined to decrease the neonatal morbidity and mortalities.⁸ These practices include clean cord care, thermal care, and initiating breastfeeding immediately after birth (within 1 hour). The traditional practices like applying cow dung on the umbilical stump, oil instillation into nose etc. also contribute to newborn's risk of morbidity and mortality. With this background, the present study was carried out to assess the

knowledge and practice of postnatal mothers regarding the newborn care at a tertiary care hospital.

METHODOLOGY:

This cross-sectional study was carried out in the Neonatology division of MGM medical college and hospital, Aurangabad. A total of 100 postnatal mothers delivered from May 2016 to August 2016 were included for the study. Postnatal mothers who lost their babies and sick mothers were excluded from the study. Data will be collected using a standard questionnaire that will be read out to the postnatal mothers. Approval from the Institutional Ethical Committee was taken before commencement of the study. Informed consent was obtained from all the mothers interviewed.

Socio-demographic information such as age, level of education, occupation, place of residence, type of family, family income etc will be recorded. A structured questionnaire in the form of multiple choice questions was developed to detect knowledge level of postnatal mothers on newborn care. Questionnaire had total 36 items. Various areas included in tool were a) training and counseling about postnatal care; b) Knowledge about warm care, breast feeding (start, exclusive, duration, positioning, attachment, burping), child bath, vaccination, post-vaccination effects, hygiene, jaundice, danger signs, emergency services; c) Traditional practices like using gripe water, applying kajal, sprinkling talc on the body, applying cow dung on umbilical stump, instilling oil into mouth and nose.

Statistical Analysis:

Data was entered in Microsoft Excel software. Results were shown by descriptive analysis using frequencies and percentages of various variables included in the study.

Ethical Considerations:

The study was conducted according to the Declaration of

Helsinki; the protocol was reviewed and approved by the institutional ethics committee of the institute. A written informed consent was taken from all patients after explaining the purpose of the study and resolving any doubts if any..

RESULTS:

A total of 100 postnatal mothers were included in the study. Maternal age ranged between 19 to 29 years, with an average of 22.1 ± 2.33 years. Among them 12% of the mothers had only completed primary school or less and 22% were graduates. Only 8% of them were employed. Most of the mothers (70%) belonged to joint families. Normal vaginal delivery was recorded in 52% and Caesarean section in 48% of them. Forty one babies were born low birth weight (less than 2.5 kg). (Table 1)

Table 1: Socio-demographic characteristics of study participants (N=100)

| Sample characteristics | Frequency (%) |
|------------------------|---------------|
| Age in years | |
| <20 | 26 (26) |
| 21-30 | 70 (70) |
| 31-40 | 4 (4) |
| Religion | |
| Hindu | 82 (82) |
| Muslim | 18 (18) |
| Education | |
| Illiterate | 8 (8) |
| Primary School | 4 (4) |
| High school | 34 (34) |
| Higher secondary | 32 (32) |
| College | 22 (22) |
| Type of family | |

| | |
|-----------------------------|---------|
| Joint | 70 (70) |
| Nuclear | 30 (30) |
| Area of residence | |
| Urban | 58 |
| Rural | 42 |
| Occupation | |
| Housewife | 92 (92) |
| Working | 8 (8) |
| Parity | |
| Primipara | 54 (54) |
| Multipara | 46 (46) |
| Mode of delivery | |
| Normal Vaginal delivery | 52 (52) |
| LSCS | 48 (48) |
| Gender of baby | |
| Male | 51 (51) |
| Female | 49 (49) |
| Birth weight (grams) | |
| < 2.5 kg | 41 (41) |
| > 2.5 kg | 59 (59) |

Table 2 shows knowledge regarding newborn care among postnatal mothers. Among 100 post natal mothers, 93 were advised regarding post natal care. Majority of them (91%), knew the importance of providing warmth to the baby. Almost all the mothers didn't supported the use of gripe water, oil instillation into mouth or nostrils and application of cow dung on umbilical cord stump. Almost all (96%) women knew the importance of immunization for their babies, but only 47% knew about most common adverse reaction of vaccination-fever. Only 10% mothers knew exact technique of burping the baby.

Table 2: Knowledge regarding newborn care among postnatal mothers (N=100)

| Questions regarding knowledge & practices of newborn care | Yes(%) | No (%) |
|---|---------|-----------|
| Did you receive any advice on post natal care? | 93 (93) | 7 (7) |
| Is there importance of providing baby warmth? | 91 (91) | 9 (9) |
| Is there necessity of bath on day 1 of life? | 33 (33) | 67 (67) |
| Will you prefer giving gripe water to your baby? | 2 (2) | 98 (98) |
| Will you apply kaja to your baby? | 52 (52) | 48 (48) |
| Will oil massage help the baby? | 52 (52) | 48 (48) |
| Will you follow massaging of anterior fontanelle? | 33 (33) | 67 (67) |
| Will you sprinkle talc on your baby? | 56 (56) | 44 (44) |
| Will you instill oil into mouth or nostril of your baby? | 2 (2) | 98 (98) |
| Will you prefer cowdung on umbilical cord stump? | 0 (0) | 100 (100) |
| Is there importance of vaccination? | 96 (96) | 4 (4) |
| Will baby develop fever after vaccination? | 53 (53) | 47 (47) |
| Do you know the danger signs? | 75 (75) | 25 (25) |
| Will you wash your hands every time before touching your baby? | 34 (34) | 66 (66) |
| Do you know the proper positioning of baby and mother for breast feeding? | 75 (75) | 25 (25) |
| Do you know the proper attachment of mother and baby during breast feeding? | 94 (94) | 6 (6) |
| Is it necessary to burp the child after feeding? | 55 (55) | 45 (45) |
| Do you know exact technique of burping after breast feeding? | 10 (10) | 90 (90) |
| Do you know how to contact emergency services? | 76 (76) | 24 (24) |

As shown in table 3, 76% mother were aware of proper technique (Warm clothes + Kangaroo care) of keeping baby warm. About one third of women were in opinion of giving bath to new born on 1st day of life. About 29% did not know the exact importance of vaccination of child, although they knew it was important for the child. Two third of participants consider jaundice abnormal for baby.

Table 3: Various practices regarding new born care among post natal mothers

| Practices regarding new born care | Frequency (%) |
|--|---------------|
| Knowledge about keeping baby warm | |
| Warm clothes + Kangaroo care | 76 (76) |
| Kangaroo care | 4 (4) |
| Warm clothes | 13 (13) |
| don't know | 7 (7) |
| First bath after birth | |

| | |
|---|---------|
| 1 st day | 33 (33) |
| 2 nd day | 25 (25) |
| 3 rd day | 23 (23) |
| After shedding of umbilicus | 19 (19) |
| To be done with umbilical cord stump | |
| Leave it as such | 59 (59) |
| Apply oil | 27 (27) |
| Apply cream | 11 (11) |
| Apply ash | 3 (3) |
| Importance of vaccination | |
| Disease prevention | 47 (47) |
| Improves health | 11(11) |
| Weight gain | 13 (13) |
| Don't know | 29 (29) |
| Knowledge regarding jaundice | |
| Considers it abnormal | 72 (72) |
| Considers it normal | 4 (4) |
| Don't know | 24 (24) |

DISCUSSION

Globally, four millions deaths take place in the first month of life.³ There is trend of fall in under five mortality in the recent years but most of it is due to a decrease in the post-neonatal mortality.³ India accounts for a quarter of neonatal deaths occurring globally.¹⁹ Newborn care practices at and immediately following delivery can contribute to decrease in neonatal morbidity and mortality. A set of Essential Newborn Care (ENC) practices have been proven to reduce these risks.⁸

Maintaining the normal body temperature is extremely important in newborns because of their larger body surface area. A study done in rural India has proven that even when pregnant mothers have access to a trained birth attendant for delivery at home, thermal care is the component of essential newborn care which gets neglected.¹¹ All the mothers in the present study had a fairly good idea in terms of maintaining body temperature with warm clothes with only 4% of them describing the Kangaroo method itself. But more effort can be put into educating these women to prevent hypothermia in newborns. It is a very common practice in India to bathe the newborns immediately after birth. This puts the newborn at risk of hypothermia which gets worse with the lack of adequate drying and warm clothes. In the present study around 67% of mothers said that the first bath should be given after the 1st day of birth. This is in contrast to 48% of the mothers practiced optimal thermal care in a study done in rural Uganda.¹²

Care of umbilical cord is always stressed since it can function as the entry point for infections. Despite the efforts to improve the cord care practices, in many rural areas as well as urban slums where deliveries are conducted by untrained dais, guidelines for umbilical cord care are seldom followed. Since our study was done in a hospital setting and the initial part of cord care is taken care of by the hospital staff, our focus was on their knowledge and attitude of postnatal mothers towards the care of cord stump. The World Health Organization recommends dry cord care where nothing is placed on cord stump unless indicated.¹³ Various studies done in developing countries have reported mothers applying substances like mustard oil, turmeric, cow dung, antiseptic lotion etc. on the cord stump.⁹ In our study 59% of mothers responded that they would leave the cord stump as such. 27% of mothers were applying coconut oil and 11% were applying cream on the umbilical stump. One point to be noted here is that there were 3% of the mothers who said they would apply ash on the cord stump. This shows the lacuna in the education provided to them although they were taken care of in a tertiary care centre.

Although immunizations does not come under the essential newborn care practices, it is crucial that the mothers are imparted the elementary lessons regarding immunization

before they get discharge from hospital. Although all the mothers in the present study were of the opinion that vaccines are essential, majority of them did not know which all diseases can be prevented with vaccines. Various studies have proved that better knowledge about the vaccines would improve the vaccine coverage.¹⁴

Instillation of oil in the nostrils and ears and oil baths of newborns is a well-known practice in this part of the country. This practice leads to Lipoid pneumonia due to aspiration of the oil into the lungs.¹⁵ The practice often includes "oil cleansing" of the throat, eyes, nose, and ears by the mother or grandmother or by a skilled woman whose services are specially sought for the purpose. A recent study has reported that 29% of patients with persistent pneumonia have a history of GERD or oil instillation in the nostrils.¹⁶ In our study, only 2% of the mothers were of opinion that oil instillation in the nostrils is good for the baby which shows good knowledge among postnatal women.

Another traditional practice notable is the use of gripe water. It is believed that the alcohol in gripe water provides the soothing effect.¹⁷ In our study we found that only 2% of the mothers would give gripe water to their babies. This is in contrast to 13% of mothers who were using gripe water in a developed country like England.¹⁸

Only 34% mothers practiced hand washing every time before touching the child. Hand hygiene is very important factor to prevent transmission of various diseases.¹⁸ An effective sucking technique is considered important to establish breastfeeding, to ensure milk transfer, and to prevent breastfeeding problems.²⁰ Knowledge regarding proper attachment and positioning while breast feeding was fairly good among study participants.

CONCLUSION

Knowledge regarding importance of providing warmth to the baby, vaccination of child, proper positioning breast feeding and proper attachment to breast was fairly good. Almost all the mothers didn't supported the use of gripe water, oil instillation into mouth or nostrils and application of cow dung on umbilical cord stump. Knowledge regarding hand washing before touching the child and technique of burping need to be updated among them.

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