

Umbilical Cord Care Practices In Konduga Local Government Area Of Borno State North - Eastern Nigeria

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Citation

J Ambe, M Bello, S Yahaya, B Omotara. *Umbilical Cord Care Practices In Konduga Local Government Area Of Borno State North - Eastern Nigeria*. The Internet Journal of Tropical Medicine. 2008 Volume 5 Number 2.

Abstract

Good cord care practices reduce the incidence of neonatal morbidity and mortality from neonatal infections and tetanus. While cord care practices vary from place to place, some of can be harmful to the new born. The objective of this study was to identify the practices of cord care in Konduga Local Government Area of Borno State, North-Eastern Nigeria. With the help of medical students during their rural posting, a structured questionnaire was administered to 400 mothers with particular reference to their last delivery. The traditional practices of cord care in this area include application of hot fermentation (31.5%), use of rag and lantern (19.5%), use of Vaseline (9.5%), ash / charcoal (9.3%), groundnut / palm, mangrove oil (8.3%) use of powder (6.5%) and red sand (3.5%). These practices are often harmful, because these substances are often contaminated with bacteria and spores, thus increasing the risk of infection. Very few mothers/care givers use saline water (2.0%), use spirit or disinfectant (8.5%) while in a few the cord is left alone to dry on its own (1.5%), which is a more hygienic way of cord care. Mothers need to know about these harmful practices, what they may cause and the problems associated with the use of these substances. The health care provider should be able to educate the mothers about the harmful practices of cord care. This will go a long way in reducing the morbidity and mortality in the newborns.

INTRODUCTION

The umbilical cord is the baby's lifeline to the mother during pregnancy. However, it is no longer needed once the baby is born. Within few minutes of birth, the cord is clamped and cut.^[12] To reduce the incidence of periumbilical infection (omphalitis), the cord should be cleansed in the delivery room with sterile cotton soaked in warm water at body temperature or by the use of Gentian violet (1% aqueous).^[34] Traditional cord dressings may include the use of cow dung and herbal preparations. These are practices that promote neonatal infections instead of preventing it, thus should be discouraged.^[4] In this part of the world; traditional and cultural practices of cord care must be identified and documented. There is little or no information about these practices in this part of the globe. This study will enable us document and address harmful practices related to cord care there by reducing the associated morbidity and mortality.

MATERIALS AND METHODS

The study was conducted in 5 districts (Konduga, Auno, Dalwa, Malari and Kawuri) of Konduga Local Government Area (LGA), in Borno State, North Eastern Nigeria. The LGA lies between latitude 11° 15 'north and longitude 13° 10' east, covering an area of approximately 7,850 square

kilometers. It falls within the Sahel Savannah zone. Konduga LGA shares boundaries with 7 other LGAs, namely Kaga to the west, Nganzai to the north, Maiduguri Metropolis to the north-east, Mafa to the east, Bama and Gwoza to the south and Damboa to the south-east. The Local Government headquarters is at Konduga town, which is 36 kilometers away from Maiduguri, the Borno state capital. The survey, which was cross-sectional, was conducted over an eight week period, in the year 2005. Systematic random sampling method was employed to select respondents in the study. Each household was considered a sampling unit and the tenth household was selected from every 40 household. The cooperation of the communities was enlisted through discussion with the chairman, traditional rulers, and Primary Health Care Coordinator in the Local Government. The process was facilitated through the University – Community Partnership Programme. Data were collected based on a proforma questionnaire by final year medical students during their rural posting in Community Medicine. Data collection by the medical students was supervised by academic and consultant staff in the Departments of Paediatrics and Community Medicine, University of Maiduguri, including the authors. Four hundred questionnaires were administered to mothers. Information obtained included biodata of the

parents, attendance of antenatal care during last pregnancy and number of Tetanus toxoid given, place of delivery and information's about cord care. Medical problems of the child in the first few days of life; history of stiffness and or death among previous children during the period of cord care, and knowledge of any child who had similar problem in the community were also sought and documented.

RESULTS

Four hundred mothers responded to the questionnaire, of these, 183 (45.8%) were full time house wives, 89 (22.3%) were small scale farmers, 74 (18.5%) were traditional/skilled handworkers and 54 (13.5%) were civil servants/students. Majority of the mothers, 256 (64%) did not have any formal education, 69 (17.3%) had primary education, while 75 (18.7%) had post primary education.

The age and parity of the mothers are shown in Table I, with majority among the age group of >35 (102) years of age, followed by those of age 20 – 24(93). Table II shows the educational background and occupation of the fathers, majority of them had no formal education and are semiskilled.

Figure 1

Table 1: Age of Mothers / Parity

Age in Years	Parity				Total (%)
	Prim	1 – 4	5 – 9	≥10	
<15	0	1	0	0	1(0.25)
15 – 19	18	16	0	0	34(8.5)
20 – 24	18	62	13	0	93(23.25)
25 – 29	7	48	24	2	81(20.25)
30 – 34	5	33	43	8	89(22.25)
>35	2	29	55	16	102(25.5)
Total	50(12.5%)	189(47.25%)	135(33.75%)	26(6.5%)	400(100)

Figure 2

Table 2: Father's occupation and educational background

Father's Education	Father's Occupation					Total
	Professional Managerial (GI ≥12)	Civil servant (GI 8 – 12)	Skilled worker	Semi skilled	unskilled (Farmer)	
No formal Education	0	12	17	149	21	199
Primary	0	11	9	34	6	60
Post Primary	0	27	8	19	3	57
Tertiary	7	63	7	6	1	84
Total	7	113	41	208	31	400

Out of the 400 mothers who responded to the questionnaire, 243 (60.7%) said they attended antenatal clinic (ANC) during their last pregnancy, while 157 (39.3%) did not attend any form of antenatal clinic.

Of those who attended the clinic, 16 (4.0%) attended only once, 32 (8.0%) twice, 42 (10.5%) thrice and 153 (38.3%) attended the ANC four times.

For those that attended the ANC, 129 (32.3%) attended General Hospital, 105 (26.3) attended PHC, while 9 (2.3%) attended a missionary hospital/other clinic.

The reason given for not attending ANC are presented in Table III, majority gave no reason not attending. Table IV shows the number of tetanus toxoid (TT) given to those who attended the ANC and where. What was used to tie the cord is seen in Table V. Table VI shows the various substances used in dressing the cord from hot fermentation to just left alone. Table VII summaries the various problems encountered during the period of cord care.

Figure 3

Table 3: Reasons given by those who did not attend ANC

Reasons	Number (%)
No reason	122(30.5)
She is healthy	16 (4.0)
Financial	7(1.8)
No health facility	8(2.0)
Husband disapproved	4(1.0)
Total	157(39.3)

Figure 4

Table 4: Those who attended the ANC, the type of facility and the doses of TT they received.

ANC site	Doses of TT given (%)					Total (%)
	1	2	3	4	Did not Receive	
General Hospital	16	57	41	14	1	129 (53.1)
PHC	26	35	20	13	11	105 (43.2)
Missionary/ Private	1	2	4	1	1	9 (3.7)
Total	43(17.7)	94(38.7)	65(26.8)	28(11.5)	13(5.3)	243(100)

Figure 5

Table 5: Material used to tie the cord

Material used	Number (%)
Thread	293 (73.3)
String	34 (8.5)
Did not tie	28 (7.0)
Cord clamp	16 (4.0)
Cloth	11 (2.8)
Cow tail / Cowpea	10 (2.5)
Rubber	8 (2.0)
Total	400 (100)

When asked where they delivered, 297 (74.3%) delivered at home, 70 (17.5%) in the General Hospital, 20 (5.0%) in the PHC, while 13 (3.2%) in the clinic.

Ninety five (23.8%) said they have seen or heard of a child in the community with the problem of stiffness.

DISCUSSION

In some populations, especially in developing countries, poverty, poor hygiene and home delivery are likely to contribute to the risk of umbilical cord infection.^[56]

A substantial proportion of neonatal deaths occur from infection of the umbilical cord. Infants with neonatal tetanus often have concomitant cord infection which points to an unclean delivery and poor cord care practices.^[789] Majority of the mothers (74.3%) delivered at home; this trend was also reported in the past from the same area.^[10] In the developing countries, especially in the rural areas, it has been reported that majority of the mothers do give birth at home.^[11] The mothers are been attended to at home by traditional birth attendants or other caregivers, which are most likely associated with unclean delivery practices and cutting of the cord with unsterile instruments; these usually contribute to the contamination of the cord and increased

risk of infection and tetanus.^[789] Only 28 (7.3%) had 4 doses of tetanus toxoid in this study, which may be an indication that mothers in this area do not have full protection for their newborns against neonatal tetanus. This has also been reported by Akani in the South Eastern Region of Nigeria^[7].

Majority of the fathers do not have any formal education, this also may contribute to the poor understanding of the mothers/care giver about the harmful practices with use of these substances in cord care. Also majority of mothers despite the ANC attendance delivered at home which may be a reflection of the educational background of their husbands.

From this study, only 28 (11.5%) received up to 4 doses of TT, while 202(83.1%) received between 1 – 3 doses. Thus the mothers may not have been immunized well enough against tetanus. We still see a lot of case of Neonatal tetanus (NNT) in this area and it is one of the major contributing factors to the high neonatal morbidity and mortality.

In tying the cord, majority used thread and strings, these are materials not sterilized. They may contribute to the infection of the cord. Not tying the cord may also lead to bleeding, which may cause mild to moderate anaemia in the newborns affecting their growth and development, and if it become severe, may lead to death. It is a practice that needs to be discouraged.

From this study, 90.8% of the mothers did not have any problem during the period of cord care; however, 19.2% did have problems, ranging from fever to skin rashes. The large majority of mothers / care givers, who indicated that they did not have any problem, may have said so for the fear of being seen as irresponsible. Thus, there is the need to look into this aspect, perhaps by having a focused group discussion or a different questionnaire to address this aspect.

Various materials have been used for tying the cord, which includes strings, threads and strips of cloth.^[12] In this study the use of thread (73.3%), strings (8.5%) and cord clamp (4%) is reported. A few (7%) left the cord untied, this practice has also been reported by Garner.^[6] The practice of not tying the cord increases the risk of bleeding from the umbilical stump with attendant morbidity and mortality. In many cultures, some substances are applied to the umbilical stump. Some of these include ash, oil, butter, spice paste, herbs and mud. In this study, hot fermentation was used in 126 (31.5%), rag and lantern 78(19.5%), Vaseline 38 (9.5%), ash/charcoal 37 (9.3%), methylated spirit or disinfectant 34 (8.5%), groundnut/palm/mangrove oil 33 (8.3%), others

were, use of powder (6.5%), red sand (3.5%), hot /saline water (2.0%), salt or just left alone (1.5%). Most of these practices are harmful because these substances are often contaminated with bacteria and spores, thus increasing the risk of infections.

There have been various reports on the use of alcohol as a cleansing agent.^[12814] However recent reports revealed that the use of alcohol has more adverse effect than being beneficial, because it causes the cord to dry up quickly. It also prolongs the period of separation of the cord.^[81516] Very few mothers allow it to dry naturally, which is now being advocated.^[1516] Regardless of the current umbilical cord care practices in use, it is important to educate mothers/care givers on the proper topical application and care of the umbilical stump, as well as the risks and benefits of any cleansing agent used and symptoms of adverse toxic effects associated with the cleansing agent.

NNT is still one of the leading causes of morbidity and mortality in this region, 23.8% said they have seen or heard of a child in the community with the problem of stiffness. From personal communication, they still believe that NNT is caused by an evil spirit and they do not want to talk about it.

Teaching should also include education regarding the normal appearance of the umbilical stump especially if a drying agent is not utilized, the local and general signs of infection and the expected length of time for the cord separation to occur; this will either prevent or reduce the morbidity and mortality associated with this preventable condition. The community / Local Government need to be educated about NNT and care of the cord. This will reduce the high rate of neonatal morbidity and mortality (including the high rate of NNT).

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