

Original Article

CORD CARE PRACTICES AMONG MOTHERS IN A TERTIARY CARE CENTER

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Objective: To assess the frequency of different cord care practices among mother presenting in a tertiary care center

Methods: This study was conducted on women who are presenting in Gynecology department of Services Hospital Lahore. Women were inquired about the use of method whatever the type for cord care after the delivery of neonates thus information was recorded in a well defined questionnaire.

Results: Out of 4000 women, 1757 used desi ghee (43.925%). 1139 used spirit (28.47%), 423 used alcohol swabs (10.57%), 262 used surma and other things like polyfax, lotions and herbals (6.55%), 219 used gentian violet (5.45%), 200 used pyodine solution (5%).

Conclusion: The most common way to care the cord was application of desi ghee that was easily available in urban and rural area.

Keywords: Cord care, desi ghee, spirit and new born

Introduction

The World Health Organization recommends improving newborn care practices at birth in order to reduce morbidity and mortality. These have been described as essential newborn care (ENC) practices.^{1,3} One of these essential practices is clean cord care which is very important in preventing early neonatal infections.² The basis of cord care, as we know it today, has evolved through many years of traditional and cultural customs. Despite this, cord infections are still prevalent in developing countries because of the high rates of unhygienic cord care practices. Treatments range from the application of ashes and fresh colostrum in Kenya, to coconut oils and flowers by the American Samoans.⁴ The World Health Organization (WHO) recommendations for developing countries, promote dry cord care under routine circumstances but acknowledge that antiseptics may be helpful when harmful, unhygienic, traditional practices place newborns at increased risk for omphalitis.⁵ It is widely known that hygienic conditions for home births are a challenge. There are also data demonstrating that hygienic conditions in hospitals are equally challenging, including hospital nursery outbreaks of highly resistant gram negative bacteria.⁷ In many high neonatal mortality settings, mothers and newborns are discharged within hours of birth to return home where unhygienic conditions and practices represent a significant risk for life-threatening infection that is preventable through the use of chlorhexidine. While bacterial exposure at birth is an important factor in the development of sepsis, exposures in the hours

and days that follow are also likely to be important. Chlorhexidine has a significant residual antiseptic effect which inhibits bacterial growth for 24 to 48 hours after application. Whether the birth occurs at home or in a facility, chlorhexidine application at the time of birth provides continued protection during the critical first two days when risk is greatest for acquiring sepsis due to bacterial exposure through the cord-stump. In January 2014 WHO recommended use of Chlorhexidine in settings with neonatal mortality rate of more than 30/1000 live births. This recommendation is based on clinical trial data collected to date which has been from settings where mortality rate was more than 30/1000 live births. The Chlorhexidine Working Group (CWG) has developed the following guidance to assist countries that are interested in the introduction and scale up of 7.1% chlorhexidine digluconate (delivering 4% chlorhexidine) for umbilical cord care.⁸ The CHLORHEXIDINE WORKING GROUP is an international collaboration of organizations committed to advancing the use of 7.1% chlorhexidine digluconate for umbilical cord care through advocacy, research and technical assistance. Cord care practices may directly contribute to infections in the newborn which account for a large proportion of the four million annual global neonatal deaths.⁹ Cord infections are more prevalent in developing countries because of the high rates of unhygienic cord care practices.^{4,6} Some of these practices which have been reported especially in the rural areas, include the use of traditional cord dressings like cow dung, herbal preparations, ash,

mud, coconut oil etc which are usually contaminated and serve as sources of infection. In order to prevent cord infection it is important to gain insight to the prevailing cord care practices, which forms the basis of this study.

Methods

This study is cross sectional by design and was carried out in Gynecology and Obstetrics department of Services Hospital Lahore in duration of one year. Services Hospital is tertiary care hospital of 1100 beds capacity and a well established Gynecology and Obstetrics Department with associated Neonatal Unit and immunization center. Simple structured questionnaire was used to obtain information concerning the age of mother, education level of mothers, from where they got advice for cord care, treatments applied to the umbilical cord stump to newborns and number of previous babies and area of residence. Data collected were entered and analyzed using SPSS version 20. Results were expressed as percentages and frequency. Chi-square test was used as test of significance. Statistically significant p value of less than or equal to 0.05 was considered.

Results

Total of four thousand mothers were interviewed. Demographics data like age, education and area of residence has been summarized in **Table 1**.

Table-1: Demographics of the women

		Frequency (%)
Age	16 - 20	1246 (31.15%)
	21 - 25	1104 (27.6 %)
	26 - 30	727 (18.1%)
	31 - 35	517 (12.9%)
	36 - 40	406 (10.15%)
Educational status	Illiterate	1454 (36.35%)
	Primary	1131 (28.27%)
	Middle	660 (16.5%)
	Matric and above	755 (18.87%)
Residence	Rural	2166 (54.15%)
	Urban	1834 (45.85%)

One thousand seven hundred and fifty seven (43.925%) used desi ghee. One thousand one

hundred and thirty nine mothers (28.47%), used spirit , Four hundred and twenty three (10.57%) used alcohol swabs , two hundred and sixty two mothers (6.55%) used surma, two hundred and nineteen mothers (5.45%) used gentian violet , 200 mothers (5%) used pyodine solution .

It was reported that about one thousand five hundred and twenty three (38.07%) mothers used desi ghee for cord care in previous babies, one thousand and seventy seven mothers(26.92%) used spirit, four hundred and sixty six (11.65%) alcohol swabs nine hundred and thirty four (23.35%) used surma in previous babies.

One thousand eight and ninety nine (47.47%) mothers who were counseled from staff and doctor on duty, while one thousand five hundred and sixty three (39.075%) mothers were counseled by grandmothers and aunts while five hundred and thirty eight (13.45%) mothers did not have any consultation regarding the umbilical cord care.

After counseling by a doctor two thousand and ninety eight (52.45%) mothers started using spirit and one thousand and seventeen (25.42%) started using alcohol swabs advised by doctors, eight hundred and eighty five (22.12%) persisted with previous practices, p value 0.001.

It was also noted that there was significant impact of age on core care practices amongst mothers included in the study p value 0.001. Mothers of age 21-25 years were using desi ghee and after that mothers of 16-30 years of age were using spirit. The difference was found to be significant (p value 0.001).

Uneducated mothers and mothers of primary education level were using desi ghee for cord care while mothers who had education level of metric or above were using spirit. **Table 2**.

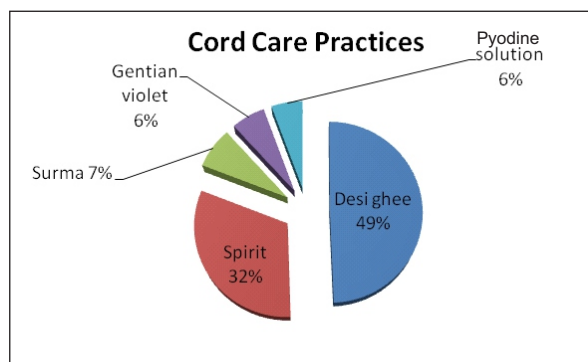


Fig-1: Distribution of common practices for Cord care

Table-2: Characteristics of patients regarding umbilical cord care.

Characteristics		Desi Ghee	Spirit	Alcohol	Surma	Gentian Violet	Iodine	Total
	N	1757	1139	423	262	219	200	4000
Age	16-20	552	467	105	61	36	26	1246*
	21-25	603	212	129	29	46	45	1104*
	26-30	241	254	85	53	86	48	727*
	31-35	202	138	64	59	23	31	517*
	36-40	159	68	40	60	29	50	406*
Education	Illiterate	737	398	110	110	58	41	1454*
	Matric & above	156	410	86	37	29	29	755*
Level	Middle	242	123	118	68	55	54	660*
	Primary	622	208	109	47	69	76	1131*
Residence	Urban	1064	540	215	103	140	107	2166*
	Rural	696	599	208	159	79	Nil	1834*
Practice history in previous baby (ice)		1523	1077	466	934	Nil	Nil	4000

* = $P < 0.001$, chi-square test

Discussion

This study highlighted important aspects affecting cord care among mothers. Maternal education, age, residence and counseling have marked effect on cord care practices. Younger age group and lower education status mothers were prone to harmful misconceptions about cord care. Lack of proper education about cord care predisposes mothers to transit to “modernistic” newborn practices which are wrongly perceived to be safe like alcohol swabs, spirit. There is a low rate of doctors involvement in health education of mothers on new born care practices. Grandmothers play an important role in new born care and should be a target group for health education to improve new born care practices

in our environment . After counseling, mothers changed their practices. The need is to educate mothers and medical staff regarding standard cord care. There has been a wide range of inconsistent practices related to umbilical cord care that have included a variety of cleansing agents and techniques.

Conclusion

The current standard of umbilical cord care may be based on historic practices and traditions rather than scientific investigation and justification.

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Guidelines

We used to use serum creatinine cut-points to determine when we should prescribe metformin in patients with any degree of renal insufficiency. Now the FDA has done away with that guideline and really expanded the number of patients that we can safely keep on metformin. These are the rules:

1. Test the eGFR in any patient before you start metformin. If it's $> 45 \text{ mL/minute}/1.73 \text{ m}^2$, you are fine. That patient is fully eligible to be on metformin.
2. For the most part, the FDA does not recommend starting metformin in patients with an eGFR between 30 and $45 \text{ mL/minute}/1.73 \text{ m}^2$. But they still consider metformin safe if your patient is on metformin already and seems to be deriving some benefit. So, patients down to an eGFR of $30 \text{ mL/minute}/1.73 \text{ m}^2$ can remain on their metformin.
3. Patients with an eGFR $< 30 \text{ mL/minute}/1.73 \text{ m}^2$ should not be on metformin.
4. The notion that we don't have to stop metformin in every patient undergoing a radiographic dye study makes me incredibly happy. I've spent countless hours dealing with this in my patients. The specific guidelines are as follows:
5. If the eGFR is $> 60 \text{ mL/minute}/1.73 \text{ m}^2$, don't worry about it. They can continue taking their metformin throughout, unless it's an intra-arterial dye study. In that case, you are going to need to hold the metformin and make sure that the renal function stays stable.

If the eGFR is $< 60 \text{ mL/minute}/1.73 \text{ m}^2$ meaning between 30 and 60 then, as we did before, you stop the metformin before the patient undergoes the dye study and recheck in 48 hours to make sure that the eGFR is still in a safe range.