



Research Article

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Practice of essential newborn cares in N’Djamena Union Hospital

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Abstract

Introduction: Essential Newborn Cares (ENC) is a strategy aiming to improve the health and the survival of newborn. **Objective:** assess the availability of drugs and medical consumables, and the quality of essential newborn care. **Patients and method:** This was a descriptive and analytical cross-sectional study for 3 months from January 25th to April 25th, 2019 on the practice of essential newborn cares performed in N’Djamena Union hospital. All patients delivered by vagina and their newborns were recruited after getting the consent. **Results:** One hundred and forty-six mothers and their newborns, and fifteen health providers were recruited. The age group of 25-34 years was more represented with 45.20%. The mothers’ mean age was 26.03 ± 5.1. The majority of mother were married (87.7%) were unschooled (71.2%). Vitamin K1, eye antiseptic drops, and wire for umbilical cord’ ligation were available in delivery respectively in 15.8%, 2.7% and 90.4%. Essential newborn cares were implemented: early breastfeeding (1.4%) vitamin K1 (correctly administrated in 30.9%) Skin-to-skin contact (8.2%), eye antiseptic drop (correctly done in 1.4%), newborn examination (correctly performed in 6.8%). The knowledge of essential care in the newborn evolves with seniority of health providers with a better knowledge of the staff on: the interest of drying the newborn, the early breastfeeding, the interest of administrating the vitamin K1, and the advantage of eye drop. **Conclusion:** Essential newborn cares (ENC) are known by the majority of mothers. Few newborns have received correctly these cares.

Keywords: Essential newborn cares, Union hospital, N’Djamena, Chad.

INTRODUCTION

Essential Newborn Cares (ENC) are a strategy aiming to improve the health and the survival of newborn through with a package of intervention performed before the conception, during the pregnancy and immediately after the birth as well during the postnatal period [1]. According to the World Health Organization (WHO), essential newborn care consists of: welcoming the newborn, insuring the thermal protection, immediate drying, section cleaning of umbilical cord, evaluation of Apgar score, putting the newborn in contact with his mother skin, the early breastfeeding, the administration of vitamin K1, eyes care, body measurements, the systematic examination of the newborn, vaccination, surveillance to detect danger signs and advice given to the mother on danger signs [2]. Indeed, the aim is not to make ENC available, but to insure its quality. The quality of care does not only depend on the availability of resources and services, but on the functioning and the effectiveness [3].

Objective

Assess the availability of drugs and medical consumables, and the quality of essential newborn care.

METHODOLOGY

This was a descriptive and analytical cross-sectional study for 3 months from January 25th to April 25th, 2019 on the practice of essential newborn cares performed in N’Djamena Union hospital. All patients delivered by vagina and their newborns were recruited after getting the consent. Then we had registered data linked with the cares received, the characteristic of health providers, the availability of drug and equipment

Data were analyzed using SPSS software. The comparison was done using PEARSON's Chi2 test (significant p-value if <0.05)

RESULTS

Socio-demographic characteristics mothers

One hundred and forty-six mothers and their newborns, and fifteen health providers were recruited.

The age group of 25-34 years was more represented with 45.20%. The mothers’ mean age was 26.03 ± 5.17 with extremes of 18 years and 47 years.

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The majority of mother were married (n=128 i.e.87.7%). One hundred and four mothers (71.2%) were unschooled. Seventy eight point seven per cent of mother were (77.7%, n = 115) housewives. Most mothers

(95.9%, n = 140) didn't know essential newborn care. All mothers unschooled didn't know essential newborn cares (p = 0.0000).

Table 1: Materials and drugs available for immediate newborn care

Materials and drugs available for immediate newborn care	yes n (%)	No n (%)
Two clean towels	120 (82,2)	26 (17,8)
wire for umbilical cord 'ligature	132 (90,4)	14 (9,6)
cap	8 (5,5)	138 (94,5)
slippers	4 (2,7)	142 (97,3)
Eye antiseptic drop	4 (2,7)	142 (97,3)
Vitamin K1	23 (15,8)	123 (84,2)
Baby scale	137 (93,8)	9 (6,2)
Identification bracelet	----	146 (100)
Vacuum or sucker	23 (15,8)	123 (84,2)
Heating table	----	146 (100,0)
Space for newborn	128 (87,7)	18 (12,3)
Sterile glove	1 (0,7)	145 (99,3)
Clean glove	134 (91,8)	12 (8,3)
sterile scissors	87 (59,6)	59 (40,4)
Sterile scalpel or clean blade	59 (40,4)	87 (59,6).

Table 1 shows that: Vitamin K1 was available in 15.8% (n = 23). Eye antiseptic drops was noted in 2.7% (n = 4). Wire for umbilical cord'

ligation was available in 90.4% (n = 132)

Table 2: Care administered at birth

Care administered at birth	done		Worst done		Well done	
	n	%	n	%	n	%
Dry and stimulate the newborn	121	82,9	18	12	6	4,9
Evaluating of Apgar score	36	24,7	104	71	6	4,2
Skin to skin contact	12	8,2	15	10	119	81,5
Early breastfeeding	1	0,7	1	0,7	144	98,7
Correct administration of vitamin K1	45	30,9	88	60	13	8,9
Eye drop administration	2	1,4	0	0	144	98,6
Umbilical cord cares	0	0	0	0	146	100
Identification of newborn with armband	0	0	0	0	146	100
Registration of the newborn	139	95,2	0	0	7	7,6
Examination of the newborn	10	6,8	8	5,5	128	87,7
Give advices to family	20	13,7	6	4,1	120	82,2

Early breastfeeding was noted in 1.4% (n = 2). The vitamin K1 was correctly administrated in 30.9% (n = 45). The Skin-to-skin contact was performed in 8.2% (n = 12). Eye antiseptic drop were correctly done in 1.4% (n = 2). The newborn examination was correctly performed in 6.8% (n = 10 =). All of the newborns had had the umbilical cord dried and no closed (of Chlorhexidin and alcohol not available).

Characteristics of agents involved in the care of mothers and newborns

We interviewed 15 health providers in the delivery room, whose 12 were midwives (80%), the remaining (20%) were birth attending. Five midwives (33.3%) were trained on ENC. The average seniority for health providers in the delivery room was 6.06 ± 4.49 years with extremes of 1 year and 17 years.

Table 3: Staff knowledge of ENC according to seniority

Staff knowledge	seniority			Total	p
	<2 years	<2 years	<2 years		
What is the interest of drying the newborn					
none	0	0	1	1	
Clean the newborn	0	1	0	1	0,391
Protect against hypothermy	2	5	6	13	0,030
Newborn bath					
6 hours after birth	1	3	4	8	0,253
On arrival at home	0	1	0	1	0,391
When needed	0	0	1	1	
No answer	1	1	0	2	0,682
Just after birth	0	1	2	3	0,625
Early breastfeeding					
≤ 1 hour after the birth	2	4	6	12	0,049
> 1hour after birth	0	2	1	3	
What is the interest of administrating the vitamin K 1					
none	0	1	0	1	0,03
Protect against newborn hémorrhage	2	5	7	14	
What is the interest of eye drop					
none	0	1	0	1	0,391
Protect against eye infection	2	5	7	14	
Dose de la Vitamin K1					
Correct	0	1	4	5	0,442
No correct	2	5	3	10	

The knowledge of essential care in the newborn evolves with seniority of health providers with a better knowledge of the staff on: the interest of drying the newborn, The early breastfeeding, the interest of administrating the vitamin K 1, and the advantage of eye drop with $p < 0.05$ for 5 years of seniority.

DISCUSSION

The main characteristics of the mothers in this study were: young, (mean age of 26.03 years), married (87.7%) and mostly housewives (89%). Our results are similar to those reported by Kamissoko [4] and Salimata [5] in Mali. In our country, the mothers' knowledge on the newborn cares is very insufficient. This assertion is confirmed in this study with 95.9% of mother that didn't know the essential newborn cares. Throughout the literature one can note a disparity on mother' knowledge considering the cares administered to newborns [5, 6]. Salimata [5] had reported 62.4% of mothers knowing less than 50% of on newborn' cares. This variation of knowledge about essential newborn cares can be imputed to factors such as early marriage and low level of schooling. Our series confirms this assertion because all mothers that were unschooled had no idea about ENC ($p = 0, 0000$).

The availability of equipment and drugs in healthcare structures is linked to factors such as socio-economic level. We had noted disparities in the availability of equipment and drugs. Our finding corroborate these assertion with a variable proportion for different drugs with respectively vitamin k1 (15.8%), eye drops antiseptics (2.5%), Cap (5.5%), slippers (2.5%), sterile gloves (0.7%). Boiro [7] in Dakar in Senegal in 2014 reported a better result with respectively 32% for vitamin K1, 51% for the eye drops antiseptic eye care, 7% for the cap, 3.5% for slippers and 75% wearing sterile gloves.

The low rate of wearing slippers and caps in our study could be explained by cultural factors which consist of dressing newborns only after baptism.

The administration of basic immediate care for newborns was generally known but very little healthcare provider.

The cares are insufficiently administered, in particular early breastfeeding 1.4%, the correct dose of vitamin K1 was administered in 30.9%, skin-to-skin contact done well in 8.2%, administration of the antiseptic eye drops in 1.4%, the examination of the newborn well done in 6.8% and all umbilical cords are dried in the open air without care after the section. Other authors such as D. Boiro *et al.* [7] noted variable proportions of care: care of umbilical cord (92%), the administration of eye drops (66%), the administration of vitamin K1 (42%), and examination of the newborn (21%), early breastfeeding (20%) and skin-to-skin contact (6%). This variability of the rate of drug administration and gestures are less perceived in certain series. Thus Njom Nlend *et al* [8] in Cameroon noted that umbilical cord clamping was practiced immediately in most of the structures surveyed (95%), care used antiseptics mainly Chlorhexidine and alcohol, drying immediately after birth was the rule in most health facilities, antiseptic eye drops were administered at birth in 97.5% and vitamin K1 was administered by injection.

The low rates of drug administration noted in our study could be explained by the lack of some products in the birth room such as vitamin K1, eye drops, and antiseptic.

Knowledge and practice of providers on essential newborn cares

Midwives were more represented in delivery room (80% staff) and only 1 / 3 were trained on ENC. Our result is near Agbéko [9] findings who reported that 50% of the staff consisted of midwives and 32.2% had been trained on ENC.

The average seniority for health providers in the delivery room was 6.06 years. However, knowledge about essential newborn cares in the delivery room is varied.

The essential newborn cares were generally known by the health providers, except for the correct dosage of vitamin K1 (n = 10/15 or 66.7%).

Thermal protection measures such as drying the newborn were well known by health providers. Health provider' answers were satisfactory in 86.7% and were variable with the seniority ($p = <0.05$ when seniority is ≥ 5 years). WHO retained immediate skin-to-skin contact at least one hour after birth, as a high-impact intervention that supports the establishment of exclusive breastfeeding, providing appropriate warmth and promoting emotional link between mother and newborn – born [10, 11].

In this study, the majority of health provider known the importance of eye drop (14/ 15).Our result is superior to those of Jyoti Sarin [12] in India which noted 38.7% of health provider knowing the role of eye drop. Francisca [13] in Cameroon, noted a better proportion than ours showing that all health provider controlled umbilical cord care, eye's care, injection of vitamin K1 and the warming of the baby.

CONCLUSION

Essential newborn cares (ENC) are known by the majority of mothers. Few newborns have received correctly these cares. Health providers' knowledge on essential newborn cares care is sparse with a slight improvement of knowledge increasing with seniority.

Conflict of interest

The authors declare no conflict of interest.

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