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Home-Based Management of High Risk Neonatal in Baghdad City: A Quantitative Research

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Abstract
Low birth weight baby is highly prevalent in Iraq which effected by the sanctions, Gulf wars and widespread violence. According to WHO, World Health Statistics 2012 and the Kaiser Family Foundation found that Low Birth weight Babies (Percent of Births) 2005-2010 for Iraq was 16% with rank 13. This study conducted to identify the home based management of LBW baby in Iraq.A descriptive study was applied to identify home-based management of LBW, the present study was carried out between June 2011 and January 2012, the study was done on (50) mothers of premature baby who chosen accidentally from pediatric teaching hospitals (Ibn AL Baladi hospital, AL Mansour hospital). Data were collected through interviewing with the mothers and application of the questionnaire which is prepared for the purpose of the study. Descriptive analysis methods were used to analyze data gathered.The results of the study revealed that (44%) from mothers who observe child's respiration continuously and (34%) of the sample who observe child's color. Other results of the present study is (24%) of the mother don't know the importance of love and security on child's growth and development.The study recommended that construction of an educational program for mothers concerning premature baby, discharge planning tool for mothers and further studies on large sample, including all premature units in Iraqi cities.
Keywords: Home,Managment,neonate.

1. Introduction

Low birth weight baby is highly prevalent in Iraq that reflects the effect of sanctions, Gulf wars and widespread violence (Sahar,Zaid,Eman,Izzat ,2010).
WHO, World Health Statistics 2012, the Kaiser Family Foundation Low Birth weight Babies (Percent of Births) 2005-2010 and world life expectancy for Iraq is 15% with rank 13 from rank of 26 of the highest, LBW rate 17.2 per 100.000(Web1;Web2).
Globally, more than 20 million infants are born with low birth weight. The number of low birth weight babies is concentrated in two regions of the developing world: Asia and Africa. Seventy-two percent of low birth weight infants in developing countries(UNICEF,2004).While LBW mortality in Iraq doubled in the last 6 years reaching 33.6% in 2009(Obaid 2011).
Preterm birth is the most common direct cause of newborn mortality. Which is the reasons for low-birth-weight (LBW), are also important indirect causes of neonatal deaths(WHO,2011).
The rate of preterm birth has increased by 20% since 1990. The majority of this rise is attributable to births between 34 0/7 and 36 6/7 weeks Preterm premature rupture of the membranes (PROM), defined as rupture of membranes before 37 weeks of gestation, is responsible for one third of all preterm births and affects approximately 120 000 pregnancies in the United States each year (Mateus et al. 2010).
Isaacson (2006) thought that the birth of a premature infant causes emotional upheaval for parents. They often wonder what they can do to help their infant during the critical newborn period. It is the responsibility of those who care for premature infants and their families to provide parents with the support they need.
The etiology of preterm births as stated by Spielma & Taubman (2009) is still not well understood. Preterm birth has been associated with various characteristics of the mother's age, medical condition and complications, history of previous preterm births, maternal habits (for example, smoking and alcohol consumption), educational level and social and environmental factors such as stress.
American Family Physician (2007) presented that the premature babies have growth problems. They need extra calories and nutrients (for example, iron and calcium) to grow to a normal size for their age. Special charts made for smaller, premature babies may be used to track the baby's growth.
Before the infant's discharge from hospital, it is helpful for the parents to room in with him. This gives them a chance to care for their infant independent of the nursing staff while still having the staff close by if needed (Lauwers & Shinkie 2000).
Rooming-in also allows the mother to breastfeed the infant on cue and helps them develop a pattern of breastfeeding before going home (Mateus et al. 2012).
According to the result of Cleaveland (2010) that Compared with term infants, however, late preterm infants are at higher risk for excessive weight loss, feeding intolerance, hyperbilirubinemia, hypoglycemia, hypothermia,

respiratory distress, apnea of prematurity, and a weak suck, because of the increased risks these infants face, they also have higher morbidity and mortality than term infants. As well as WHO (2009) focusing on the importance of caring of LBW infants, including their feeding, temperature maintenance, hygienic cord and skin care, and early detection and treatment of infections and complications including respiratory distress syndrome can substantially reduce mortality of LBW baby .

Objectives:

The study aims to identify the home-based management of high risk neonatal in Baghdad city.

2. Methods

2.1 Design, A Descriptive design was conducted at premature units of two pediatric teaching hospitals in Baghdad city (Al Mansour Hospital and Ibn Al Baladi Hospital) between June 2011 and January 2012.

2.2 Sample: The sample of study was taken accidentally from (50) mothers who had premature child in different socioeconomic and educational level. All mothers had premature baby and come to hospital for follow up after two months, all participating mothers signed informed consent.

2.3 Measures: Researchers were start interviewing the mothers regarding home-based management of LBW Baby by use the W H O criteria of caring that include babies feeding, temperature maintenance, hygienic cord and skin care, and early detection and treatment of infections.

2.4 Procedures, Researchers established agreements to start data collection to measure opinions of mother toward feeding, temperature maintenance, hygienic cord and skin care, and early detection and treatment of infections, after reviewing literatures and studies, the researchers develop a questionnaire for the purpose of the study, it consist from two parts, part one contain the demographic data and part two concerned with the most important topics that are related to home care which applied by mothers or who giving baby care at home, the reliability of a questionnaire was found at (0.85). Data were collected through structured interview and application of the questionnaire with mothers. Data analyzed by using descriptive statistical methods.

2.5 Data analysis, collected data analyzed utilizing the SPSS version 16 Descriptive statistics such as percentages and frequencies used to describe the home-based management of LBW Baby as mother and the sample characteristics.

3. Results

The demographic characterics of the participants are illustrated in table (1). Data were gathered from (50) mothers with premature baby visit Ibn-AlBaladi hospital. The mean age of mothers was 19.7(SD. 4.001).The majority of gestational age of the baby delivered at (24-26wk) with mean 30.3 (SD. 2.7). The highest number of the sample practiced mixed type of feeding process which considered as 50% from the whole number of the sample.

The mean score and st. deviation are presented in each domain of home management concerning high risk neonate as shown in table (2). The majority of the sample 76% who managing her baby by carefull handling while the lowest number 22% Who asking about her baby's immunizations and seeking for advice.

4. Discussion

Most of mothers ages (18-21) which estimated (46%) from the entire sample. Majority of them (44%) have babies at (24-26 wks.) gestational age and (30%) have babies of (27-29wks) most of those babies (64%) are male and (32%) of the premature baby are (1st -2nd) order in the family.

Large number of mothers (50%) feed their babies mixed type of feeding, (44%) of the sample have primary level of education while only (22%) of them have more than institutional level of education. (76%) of the mothers has no other premature child in the family.

Regarding to the home-based management of high risk neonatal, as shown in table (2)

Reduce neonatal and infant mortality rates by improving the care of LBW infants. This clearly shown that appropriate care of LBW infants, including their feeding, temperature maintenance, hygienic cord and skin care, and early detection and treatment of problems such as infections can reduce mortality as presented by WHO (2011).

The samples were answered as" feeding mother's own milk" with little attention on feeding there neonatal that reflect poor knowledge about feeding babies only (34%) while (38%) of the mothers was observed the body weight of her baby. While Gibson et al. (2006) & Mc Carter (2009) insist on assessing the baby weight daily which provides period to support that infant to meet his/her needs and give adequate nutrition. Measurements of weight are accurate if performed using modern electronic scales, but only providing the baby is weighed naked and without any equipment attached.

Feeding challenges in the late preterm infant have been shown to be related to immature sucking and swallowing reflexes, which lead to improper handle on for the breastfeeding infant as well as inadequate intake in the bottle-

feeding infant. Sucking, swallowing, and breathing must match smoothly and effectively, with highly accurate timing and coordination, for safe and efficient oral feeding (Cleaveland 2010 ; Nicolaoua 2009).

As "Protect baby from changing of temperature" There were (34%) of mothers know the effect of keeping of high risk neonatal warmth which is presented by Kumar et al. (2009) that the risk factors for neonatal hypothermia differ markedly within low resource settings. A combination of physiological, behavioral and environmental factors universally put all newborns, irrespective of birth weight, at risk of hypothermia. The knowledge deficit along the continuum from health providers to primary care givers has sustained the silent epidemic of hypothermia.

Mother showed that (28%) of them use Kangaroo mother care approach that is initiative for caring as mentioned by some researchers, Kangaroo mother care (KMC), originally defined as skin-to-skin contact between a mother and her newborn, frequent and exclusive or nearly exclusive breastfeeding, and early discharge from hospital, and has been proposed as an alternative to conventional neonatal care for low birth weight (LBW) infants as stated by (Ammaria et al. 2009; Agustin 2011).

Mothers showed that (44%) of them observed respiration continuously, only (52%) of them change the child's position and head on side their neonatal after hospital discharged. Nurses need to apply more attentions to increase mother's information and skills regarding respiratory support for neonatal.

Home-based management of LBW and the preterm neonates is feasible and effective. It remarkably improved survival by preventing comorbidities, by supportive care, and by treating infections (Whalley & wong 2008 ; Medalynn & Robinson 2010).

The findings of the present study are (58%) of the sample who always were clean the LBW baby skin with dryness , and (54%) of the mother who always clean diaper area gently but only (6%) of them who never use lotion , creams or powder , and this could produce toxic effect on the skin of premature baby.

Other important items related to the study which is found during reviewing literature which is presented by Agerwall et al. (2007) is the importance of cleaning the skin of premature baby with dryness in addition to clean diapers area gently and never use creams, lotion or powder .

Premature newborns were listless and cold, had a weak cry, suckled poorly, and were prone to morbidity. Extra care provided to these newborns at home included: warmth, breastfeeding, infection prevention with high importance as stated by Cleaveland (2010).

Kumar et al. (2009) proposed that nurses in the developed and developing world need to be engaged with the mother and family to provide support and counseling to weigh the risks and benefits of all the alternatives.

The present study shows (26%) of the mothers didn't know the importance of Chang position and head on side , and (60%) of the sample were sometimes put her baby on his back and had side during sleeping hours while (18%) of them don't know the importance of this item. So, Ammaria (2009) thought that infants sleeping in the prone position exhibited lower metabolic rates than those sleeping in the supine position. Despite this reduction in heat production, central and peripheral surface temperatures were higher in the prone position and the gradients between the central and peripheral sites were narrower.

5. Conclusion

Home-based management of high risk neonatal was low standers when comparing with hospital neonatal care regarding W H O criteria of caring that include babies feeding, temperature maintenance, hygienic cord and skin care, and early detection and treatment of infections.

Recommendations

The study recommended:

1-Educational programmers for mothers concerning criteria of caring that include babies feeding, temperature maintenance, hygienic cord and skin care, and early detection and treatment of infections.

2-Constructing of a discharge-planning tool for mother which help her in carrying of high risk neonatal

3- Further studies on a large sample that including all Neonatal intensive care unit (NICU)

References

Agarwal S., Srivastava K., Sethi V., Mathur1 M., Sanger K., Kaushik S., and Haldar P. Positive Deviance in Household Caring of Low-birth-weight Newborns in Slums of. 1Urban Health Resource Centre, F-9/4 Poorvi Marg, New Delhi 57, India an2Department of Foods and Nutrition, Lady Irwin College, 1 Sikandra Road, New Delhi 01, India.2007.

Agustin C-A., José M, Jose. Kangaroo mother care to reduce morbidity and mortality in low birth weight infants. 2011 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd..

Ammaria A. et al. Effects of body position on thermal, cardiorespiratory and metabolic activity in low birth weight infants. Early Hum Dev. 2009 August; 85(8): 497–501

American Family Physician: Caring for premature. October 2007 web site www.aafp.org/afp.
Cleaveland k.: Feeding Challenges in the late preterm infant. Neonatal Network 2010; 29(1): 37-41.
Gibson A,Carney S, Wales JK. Growth and the premature baby. Horm Res. 2006; 65 Suppl 3:75-81. Epub 2006 Apr 10.
Isaacson J., Steps to Successfully Breast Feed The Premature Infant , The Journal of Neonatal Nursing ,Vol. 25,No. 2, 2006.
Kumar V., Shearer JC, Kumar A. and Darmstadt GL. Neonatal hypothermia in low resource settings: a review. Journal of Perinatology (2009), 1–12
Lauwers and Shinkie ,:Infant-Feeding information for Health Professionals ,Lancet Archives, Sep 2000 07:25:10 -0400.
Madalynn Neu and JoAnn Robinson. Maternal Holding of Preterm Infants During the Early Weeks After Birth and Dyad Interaction at Six Months. JOGNN, 39, 401-414; 2010. DOI: 10.1111/j.1552-6909.2010.01152.
Mc Carter D. The influence of culture and health on the breastfeeding relationships. The Association of Women's Health, Obstetric and Neonatal Nurses, 2009 http//jognn.awhonn.org.
Marina Nicolaoua, Rebecca Rosewella, Neil Marlowb, and Cris Glazebrook. Mothers' experiences of interacting with their premature infants. Journal of Reproductive and Infant Psychology. Vol. 27, No. 2, May 2009, 182–194.
Mateus J., Fox K., Jain S., Jain S., Latta R., Cohen J. Preterm premature rupture of membrane : Clinical outcomes of late preterm infants. Clinical pediatrics 2010; 49(1): 60-65.
Obaid KA ; Al Azzawi , Outcome of low birth weight infants in Diyala province of Iraq, J Trop Pediatr, 2011 Aug; Vol. 57 (4), pp. 280-2.
Sahar J Al-Hiali, Zaid R Al-Ani, Eman Al-Kaseer, Izzat R Al –Ani, Low Birth Weight in Western Iraq, the Iraqi postgraduate medical journal, vol.9, NO.3, 2010.
Spielman V. , and Taubman O. : Parental self- efficacy and stress – related growth in the transition to parenthood : A comparison between parents of pre- and full term babies. Health and Social work 2009; 34(3): 201-202.
UNICEF, Low birth weight country, regional and global estimates, This document was prepared by: Tessa Wardlaw, Senior Programme Officer, Statistics and Monitoring, Division of Policy and Planning, , New York; 2004.
Whaley LF. and Wong DL. (2008) Nursing Care of Infant and Children 4th Ed, St. Louis: Mosby Co.
World Health Organization 2011. Guidelines on optimal feeding of low birth-weight infants in low- and middle-income countries. WHO Library Cataloguing-in-Publication Data. ISBN 978 92 4 154836 6.
W H O, Care of the preterm and/or low-birth-weight newborn, http://www.who.int/maternal_child_adolescent/topics/newborn/care_of_preterm/en/
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http://www.globalhealthfacts.org/data/topic/map.aspx?ind=47.
http://www.worldlifeexpectancy.com/cause-of-death/low-birth-weight/by-country/

Table (l) the sample of the study consisted of (50) mothers who have high risk neonatal

Items	Frequency	Percentage	Mean St. Dev. SE.Mean
1.Mothers age 17-14 21-18 25-22 29-26 *-30	 14 23 8 3 2	 %28 %46 %16 %6 %4	 Mean=19.7 St. Dev=4.001 SE.Mean=0.566
Total	50	%100	
2.Gestational age at birth 26-24wks 29-27wks 32-30wks 35-33wks <- 36	 22 15 5 5 3	 %44 %30 %10 %10 %6	 Mean=30.3 St. Dev. =2.7 SE.Mean =0.3
	50	%100	
3.Child Gender Male female	 32 18	 %64 %36	
Total	50	%100	
4.Child's order in the family 1st -2nd 3rd – 4th 5th - 6th	 16 23 9	 %32 %46 %22	 Mean=3.3 St..Dev =1.6 SE.Mean =0.1
Total	50	%100	
5.Type of feeding Breast feeding Artificial feeding Mixed feeding	 19 6 25	 %38 %12 %50	 Mean=2.1 St. Dev=l SE.Mean =0.1
Total	50	%100	

Table (2) Home-based management of high risk neonatal:

Items	Always		Some times		Don't know		
	Freq	%	Freq	%	Freq	%	
feeding mother's own milk	19	%38	24	%48	7	%14	Mean=2.24 St.Dev-0.68 SE.Mean =0.14
observing the body weight of baby	19	%38	24	%48	7	%14	Mean=2.24 St.Dev-0.68 SE.Mean =0.14
Protect baby from changing of temperature.	17	%34	18	%36	15	%30	Mean=2.02 St.Dev=0.8 SE.Mean=0.14
Use Kangaroo mother care approach	14	%28	19	%38	17	%34	Mean=1.94 St..Dev=0.793 SE.Mean =0.14
Observe respiration continuously	22	%44	17	%34	11	%22	Mean =2.7 St..Dev=0.8 SE.Mean =0.14
Chang the child's position and head on side.	26	%52	11	%22	13	%26	Mean=2.26 St..Dev=0.85 SE.Mean =0.141
Close observation to skin color (blue, pale(	14	%28	19	%38	17	%34	Mean=1.94 St..Dev=0.793 SE.Mean =0.14
Isolate my baby from infected pressers.	17	%34	18	%36	15	%30	Mean=2.02 St.Dev=0.8 SE.Mean=0.14
Asking about his /her immunizations	11	%22	30	%60	9	%18	Mean=2.04 St.Dev=0.6 SE.Mean =0.14
Clean diaper area gently	27	%54	16	%32	7	%14	Mean=2.4 St.Dev-0.72 SE.Mean =0.141
Careful handling baby.	38	%76	12	%24	0	0	Mean =2.76 St..Dev=0.4 SE.Mean =0.14
Spending most time in caring of my baby.	27	%54	22	%44	1	%2	Mean =2.5 St..Dev=0.54 SE.Mean =0.14