WABA Research Task Force (RTF)

e-newsletter

January 2011 issue

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From the Editors

This issue

We are pleased to share with you the second issue of the WABA Research Task Force (RTF) E-newsletter. This issue focuses mainly on aspects of clinical and counselling practices related to breastfeeding. Hypernatremia in breastfed infants is a hot topic for discussion as well as issues related to Kangaroo Mother Care (KMC) for pre-term and low birthweight infants.

The three arms of breastfeeding outlined in the Innocenti Declarations (1990 and 2005) are protection, promotion and support. All these need to be in place for breastfeeding to be successful. How mothers perceive the support from health workers and counselors may differ depending on the training and approach they have. We present two articles on this topic. At the end of the newsletter you will find an article from Pakistan reporting on the protection dimension, namely adherence to the International Code of Marketing of Breastmilk Substitutes.

About the newsletter

There is an abundance of research and much of this can be accessed through journals and databases such as Medline. This newsletter aims to present some of this emerging research in a comprehensive and easy-to-read format.

For each issue, we will choose a few current topics where we ask key researchers/programme experts to summarise the latest research and explain how these findings can be applied in the real world.

You will also find abstracts and commentaries on a few research studies and the links to the full text articles for further reading. We hope that this newsletter will enhance your work, whether programme, clinical or advocacy, as well as stimulate discussion about research findings, methodologies and ethics.

Your comments on the current topics and articles are most welcome! If you have any suggestions for future topics, please let us know. The newsletter will be issued three times a year.

Enjoy reading!

Amal Omer-Salim & Khalid Iqbal

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Breastfeeding associated hypernatremia – a review

By Khalid Iqbal MD,IBCLC, Neonatologist and Lactation Consultant NICU, Dubai Hospital, DUBAI.

We review here 3 studies conducted on different aspects of neonatal hypernatremia associated with breastfeeding exploring certain facts about the topic.

All the three studies revealed the possibility of developing hypernatremia among breastfed babies. But important point to highlight here is that improper latch-on leading to inadequate transfer of breastmilk during early neonatal days, can lead to dehydration and consequently hypernatremia. The risk factors identified so far are primiparous mothers, cesarean deliveries, phototherapy and less active babies.

The first study done in Children's Hospital of Pittsburgh is a retrospective study, there were some variables that were not assessed and moreover because of the incomplete nature of the feeding histories recorded in the medical records, the possible reasons for lactation failure could not be assessed, such as inadequate latch, poor breastfeeding technique, low milk supply, inadequate feeding frequency, or maternal illness. The failure of physicians to record adequate feeding and elimination histories suggests the need for better physician training in breastfeeding management.

The second study done by Sirisha Kusuma et al revealed hypernatremia even in partially breastfed babies and found the phototherapy as a risk factor.

The third study on prevention of dehydration revealed a very practical lesson to weigh the neonates daily during first few days of life in order to diagnose the condition early and act accordingly.

Breastfeeding-associated hypernatremia should be completely preventable but unfortunately the physicians receive no training to deal with breastfeeding problems and assessment. The main objective is to prevent dehydration, which must begin with adequate breastfeeding assistance just after delivery, in postnatal wards that should continue after discharge.

Application for Practice

Breastfeeding is the most complete and perfect form of nurture and nourishment for infants, and all efforts should be made to promote successful breastfeeding. Breastfeeding-associated hypernatremia is a completely preventable complication .

All high risk mothers (primiparous, cesareans, sick babies, near term babies etc) should receive additional help to establish successful breastfeeding.

The breastfed infants should be evaluated by an experienced health care professional at no more than 3 to 5 days of age. Infants should be evaluated with a weight check, physical assessment of hydration and jaundice, and evaluation of breastfeeding and frequency of urine output. Primiparous women, mothers with cesarean sections and mothers of babies under phototherapy need additional support, education, and follow-up monitoring to ensure successful breastfeeding. The judicious use of expressed breast milk could prevent most cases of breastfeeding-

associated hypernatremia. Both physicians and parents need better education and clearer guidelines on preventing, recognizing, and treating breastfeeding-associated dehydration.

BREASTFEEDING-ASSOCIATED HYPERNATREMIA: ARE WE MISSING THE DIAGNOSIS?

Moritz M L et al
Pediatrics 2005;116;e343-e347

This retrospective study was conducted at Children's Hospital of Pittsburgh over a 5-year period, to identify otherwise healthy term and near-term breastfed neonates who were admitted with serum sodium concentrations of >150 mEq/L. The incidence of breastfeeding-associated hypernatremic dehydration among 3718 consecutive term and near-term hospitalized neonates was 1.9%, occurring for 70 infants. These infants were born primarily to primiparous women (87%) who were discharged within 48 hours after birth (90%). The most common presenting symptom was jaundice (81%). Sixty-three percent of infants underwent sepsis evaluations with lumbar puncture. No infants had bacteremia or meningitis. Infants had hypernatremia of moderate severity (median: 153 mEq/L; range: 150–177 mEq/L), with a mean weight loss of 13.7%. Nonmetabolic complications occurred for 17% of infants, with the most common being apnea and/or bradycardia. The conclusions are that hypernatremic dehydration requiring hospitalization is common among breastfed neonates and that increased efforts are required to establish successful breastfeeding. Affected infants were born primarily through vaginal delivery to primiparous mothers. Breastfeeding-associated hypernatremia can be difficult to recognize clinically. However, weight loss and inadequate stooling are sensitive indicators of dehydration among breastfed infants and should be included in the history of all infants presenting for evaluation of jaundice, fever, weight loss, and lethargy.

URL: http://www.pediatrics.org/cgi/content/full/116/3/e343

HYDRATION STATUS OF EXCLUSIVELY AND PARTIALLY BREASTFED NEAR-TERM NEWBORNS IN THE FIRST WEEK OF LIFE

S Kusuma et al
J Hum Lact 2009 25: 280

This is an in-hospital prospective, observational cohort study conducted to assess the effects of type of feeding (exclusively breastfed [EBF] vs partially breastfed [PBF]) on the hydration status of near-term newborns in the first week of life. A total of 205 babies of 35 to 37 weeks of completed gestation were enrolled (82 in the EBF group and 123 in the PBF group). The overall incidence of significant weight loss (≥10%) was 18% with

no significant difference between EBF and PBF groups. The incidence of hypernatremia (serum Na ≥150 meq/L) was 2.4% in the EBF group and 5.7% in the PBF group (P 0.32). The factors associated with significant weight loss in the total cohort were having a mother with previous negative breastfeeding experience, exposure to phototherapy and cesarean delivery. In conclusion, significant weight loss was frequent (18%) in near-term newborns. Exclusively breastfed newborns of near-term gestation maintain similar hydration status as that of PBF newborns in the first week of life and even in summer months. Babies born to mothers with previous negative breastfeeding experience, those exposed to phototherapy, and those born by caesarian delivery are at a much greater risk of developing dehydration. A careful and close monitoring of feeding, weight, and urine frequency in these babies should be done to prevent the development of severe dehydration and hypernatremia. A follow-up weight record on day 5 or 6 of life should be done in babies who have been discharged early.

URL: http://jhl.sagepub.com/content/25/3/280.long

PREVENTION OF HYPERNATRAEMIC DEHYDRATION IN BREASTFED NEWBORN INFANTS BY DAILY WEIGHING

G Konetzny et al
Eur J Pediatr (2009) 168:815–818

In this prospective cohort study from October 2003 to June 2005 in the postnatal ward of the University Hospital Zurich, Switzerland, all term newborns with birth weight ≥2,500 g were weighed daily until discharge. When the weight loss was ≥10%of birth weight, serum sodium was measured from a heel prick. The study revealed, one out of 66 healthy exclusively breastfed term neonates developed hypernatraemic dehydration. Daily weight monitoring and supplemental fluids in the presence of weight loss ≥10% of birth weight allows early detection and intervention, thereby preventing the severe sequellae of hypernatraemic dehydration. Sixty-seven (2.4%) infants had a loss of weight ≥10% of their birth weight. In 24 infants, this was associated with a moderate and in 18 infants with a severe hypernatraemia (0.6% of the total population).

The natural course of weight loss, or the time at which the 10% threshold was reached or exceeded in exclusively breastfed infants, occurred at days 3 and 4. The 10% threshold, however, remains the simplest and fastest possibility for detecting infants at risk, particularly in the setting of out-patient care following a short hospitalisation period. Birth by caesarean section was identified as a risk factor for dehydration. Daily weighing during the first 4–5 days of life is a simple and cost-effective method for recording an imminent or existing dehydration in exclusively breastfed newborn infants. It allows the possibility of timely rehydration and the early recognition of breastfeeding problems, especially following delivery by caesarean section.

URL: http://www.springerlink.com/content/h5376k1h32200793/fulltext.pdf

Towards universal Kangaroo Mother Care – current trends and challenges

By Kerstin H Nyqvist, RN PhD
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Various studies currently published have revealed certain facts about Kangaroo Mother Care (KMC) practices. Mainly two types of KMC can be practised with different issues and outcomes: Continuous and intermittent KMC.

Continuous KMC

The original (continuous) KMC model means that the preterm and/or low birth weight infant is placed in direct skin-to-skin contact on the mother, vertically on her chest between her breasts, below her clothes, as soon as possible, 24 hours per day – except for brief interruptions for the infant's necessary care.[1,2] The mother maintains the infant's body temperature and provides nutrition by exclusive breast milk feeding/breastfeeding (ideally). KMC continues at home after early discharge, with father/substitute sharing the skin-to-skin care with the mother, with adequate follow-up of the infant and support to the family. This model of care has been implemented in low income settings. Although studies have shown it to be very useful in significantly decreasing infant morbidity and mortality, continuous KMC is not practised as much as it should be. Examples of countries that have adopted the model to a significant extent are Colombia, Brazil and South Africa, where national guidelines and programmes for training are being implemented.

Intermittent KMC

In affluent settings with high tech neonatal care, mother-infant skin-to-skin contact often occurs intermittently for periods of one or a few hours, mainly for supporting attachment-bonding, pain relief during painful procedures, and mothers' psychological wellbeing. Common reasons for this level of implementation are restrictions for mothers' (parents') presence in the NICU, lack of space for parents and of armchairs/parent beds and parent rooms, short maternity leave, mothers' problems with transportation and responsibility for siblings at home etc.

Implementation issues

The implementation of continuous KMC in high tech NICUs started recently, and requires reconstruction of the NICU to allow parents' unrestricted presence – with parent beds in the NICU, parent rooms or single infant care rooms, and a changed division of roles between professionals and parents.[3,4] A belief in the superiority of the incubator in maintaining the infant's temperature and stability, and that long periods of KMC is too exhausting for parents are common obstacles to implementation. This was contradicted by a recent Swedish study which demonstrated mothers' acceptance of this model in an affluent setting.[5]

Evidence from low income as well as high tech settings confirms that KMC enhances infant physiologic stability, psychomotor development, parent-infant attachment and bonding, and family functioning, increased breastfeeding rates and duration, and reduced morbidity (1-4). Considering this, it is surprising that implementation of KMC is met to some extent by staff resistance in low income countries, with doubts about effects, concerns about infant safety and increased work load for staff.[6] The increasing rates

1. Ruiz, J.G., Charpak. N., et al. Evidence-based clinical practice guidelines for an optimal use of the kangaroo mother method in preterm and/or low birth weight infants at birth. Bogotà, Colombia. Fundación Canguro and Department of Clinical Epidemiology and Biostatistics, School of Medicine, Pontificia Universidad Javeriana. (URL: http://kangaroo.javeriana.edu.co/sitio_ingles/de_nuevo_eng.html)
2. World Health Organization. Kangaroo mother care. A practical guide. Geneva. WHO, Department of Reproductive health and Research, 2001; URL: http://whqlibdoc.who.int/publications/2003/9241590351.pdf
3. Nyqvist, K.H., et al., Towards universal Kangaroo Mother Care: recommendations and report from the First European conference and Seventh International Workshop on Kangaroo Mother Care. Acta Paed, 2010;99(6):820-6
4. Nyqvist, k.H., et al., State of the art and recommendations. Kangaroo Mother care. Application in a high tech environment. Acta Paed, 2010;99(6):812-9.
5. Thernstrom Blomqvist, Y, Nyqvist, K.H, Swedish mothers' experience of continuous Kangaroo Mother Care. J Clin Nurs 2010 Nov 30. doi: 10.1111/j.1365-2702.2010.03369.x. [Epub ahead of print]
6. Charpak, N., Ruiz-Pelaez, J.G., Resistance to implementing Kangaroo Mother Care in developing countries, and proposed solutions. Acta Paed, 2006;95:529-34

of multi-resistant bacteria in hospitals provide a new argument for the delivery of neonatal care through KMC. The care is provided by parents and requires less physical contact between infants and health staff. This model of care also promotes breast milk/breast feeding and thus gives better immunological protection, among other benefits.

Infant safety may be an issue regarding implementation of KMC in the community when there is limited access to health and medical care, as access to infant care in a facility with trained health care staff may be more optimal. However, this is not always available. Both the Integrated Management of Newborn and Childhood Illnesses (IMNCI) programme,[7] and the Programme for Integrated Management of Childhood Illness include KMC as an **essential component** in these infants' care.[8]

Application for practice

KMC should be considered a universal standard care method for preterm/low birth weight infants and be delivered in a culturally appropriate way, to the extent that is allowed by the local health and medical care system.

Welcome to the 1st International Conference and Workshop on the expansion of the Baby Friendly Hospital Initiative for Neonatal Care: Neo-BFHI 2011
14-16 September 2011
Uppsala, Sweden
www.akademikonferens.uu.se/neobfhi2011

7. WHO/UNICEF. Home visits for the newborn child: a strategy to improve survival. URL: http://whqlibdoc.who.int/hq/2009/WHO_FCH_CAH_09.02_eng.pdf
8. WHO/UNICEF. Integrated Management of Childhood Illness. URL: http://whqlibdoc.who.int/publications/2008/9789241597289_eng.pdf

Peer counselor or health worker which do mothers prefer? A commentary on two articles

By Amal Omer-Salim, Nutritionist, Med. Licentiate, MSc, Uppsala University, Sweden
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In the context of HIV/AIDS in low-income settings, the choice to breastfeed or formula feed is fraught with difficulties and dilemmas for both mothers and health workers. Here we present two articles that touch upon the experiences of HIV positive mothers in making the choice, with the aid of a health worker or a trained peer counselor. The first study conducted in Ethiopia describes the fear of breastmilk ("poisonous milk") that has developed as a consequence of the HIV pandemic. Sadly, it appears that nurse counselors are largely contributing to the spread of this fear. Proper counseling training of health workers is thus all the more important. The second study was carried out in Uganda as part of a larger intervention that involves peer counseling to improve exclusive breastfeeding. The findings are more encouraging. Mothers were satisfied with their peer counselor. The peer counselor's familiar and respectful approach and providing explanations as well as information would appear to be important reasons why mothers preferred a peer counselor to a health worker.

The latest WHO guidelines on HIV and infant feeding (http://whqlibdoc.who.int/publications/2010/9789241599535_eng.pdf) call for national health authorities to decide which infant feeding option is most appropriate for promotion through the maternal and child services. This

would then take some of the burden of assessment and choice of best feeding option off the shoulders of health workers and mothers. However in the transition, there may be some confusion and concern, especially in those settings where the general promotional message changes. As expressed by one nurse counselor in Ethiopia discussing the new WHO guidelines *"I really hope that the new recommendation is only for discussion, not for actual practice. How can we tell these mothers? They have been told repeatedly about the risk of HIV transmission through breastfeeding, and now all of a sudden breastfeeding is 'good again'."*

Application for practice

Policy and programs need to address these concerns in all training of health workers who work with communities affected by HIV/AIDS. Another point to think about is how to integrate peer counseling with basic health service delivery so that mothers receive consistent information and advice. We would like to hear your views and experiences from the field!

POISONOUS MILK AND SINFUL MOTHERS: THE CHANGING MEANING OF BREASTFEEDING IN THE WAKE OF THE HIV EPIDEMIC IN ADDIS ABABA, ETHIOPIA

Koricho et al.
International Breastfeeding Journal 2010, 5:12

Breastfeeding remains normative and vital for child survival in the developing world. However, knowledge of the risk of Human Immunodeficiency Virus (HIV) transmission through breastfeeding has brought to attention the controversy of whether breastfeeding can be safely practiced by HIV positive mothers. Prevention of mother to child transmission (PMTCT) programs provide prevention services to HIV positive mothers including infant feeding counseling based on international guidelines. This study aimed at exploring infant feeding choices and how breastfeeding and the risk of HIV transmission through breastfeeding was interpreted among HIV positive mothers and their counselors in PMTCT programs in Addis Ababa, Ethiopia.The study was conducted in the PMTCT clinics in two governmental hospitals in Addis Ababa, Ethiopia, using qualitative interviews and participant observation. Twenty two HIV positive mothers and ten health professionals working in PMTCT clinics were interviewed.

The study revealed that HIV positive mothers have developed an immense fear of breast milk which is out of proportion compared to the evidence of risk of transmission documented. The fear is expressed through avoidance of breastfeeding or, if no other choice is available, through an intense unease with the breastfeeding situation, and through expressions of sin, guilt, blame and regret. Health professionals working in the PMTCT programs seemed to largely share the fear of HIV positive mother's breast

milk, and their anxiety was reflected in the counseling services they provided. Formula feeding was the preferred infant feeding method, and was chosen also by HIV positive women who had to beg in the streets for survival. The fear of breast milk that seems to have developed among counselors and HIV positive mothers in the wake of the HIV epidemic may challenge a well established breastfeeding culture and calls for public health action. Based on strong evidence of the risks when infants are not exclusively breastfed, there is a great need to protect breastfeeding from pressures of replacement feeding and to promote exclusive breastfeeding as the best infant feeding option for HIV positive and HIV negative mothers alike.

URL: http://www.internationalbreastfeedingjournal.com/content/pdf/1746-4358-5-12.pdf

"SHE WOULD SIT WITH ME": MOTHERS' EXPERIENCES OF INDIVIDUAL PEER SUPPORT FOR EXCLUSIVE BREASTFEEDING IN UGANDA

Nankunda et al.
International Breastfeeding Journal 2010, 5:16

Different strategies have been used to improve the initiation and duration of breastfeeding. Peer counsellors are reported to improve exclusive breastfeeding levels, but few studies have assessed the satisfaction of women with the support given, especially in Africa. In this paper we describe women's experiences of peer counselling for exclusive breastfeeding in an East African setting.

In the Ugandan site of PROMISE-EBF, a multi-centre community randomised trial to evaluate the effect of peer counselling for exclusive breastfeeding on infant health, 370 women in the intervention arm participated in a study exit interview. Individual peer counselling was offered to women in 12 of the 24 study clusters, scheduled as five visits: before childbirth and during weeks 1, 4, 7 and 10 after childbirth. During the visits, the women were given information and skills to help them breastfeed exclusively. After the 10-week visit, they were interviewed about their feelings and experiences related to the peer counselling.

Overall, more than 95% of the women expressed satisfaction with the various aspects of peer counselling offered. Those who had received five or more visits were more likely to give positive responses about their experience with peer counselling than those who had received fewer visits. They explained their satisfaction with time spent with the peer counsellor in terms of how much she discussed with them. Most women felt their knowledge needs about breastfeeding were covered by the peer counsellors, while others expressed a desire to learn about complementary feeding and family planning. Attributes of the peer counsellors included their friendliness, being women and giving support in a familiar and relaxed way. Women were positive about the acquisition of knowledge

and the benefit to their babies from the peer counselling. They preferred a peer counsellor to a health worker for support of exclusive breastfeeding because of their friendly approach.
Individual peer counselling to support exclusive breastfeeding was positively received by the women.

URL: http://www.internationalbreastfeedingjournal.com/content/pdf/1746-4358-5-16.pdf

Awareness and reported violations of the WHO International Code and Pakistan's national breastfeeding legislation; a descriptive cross-sectional survey

M Salasibew et al
International Breastfeeding Journal
2008, 3:24 doi:10.1186/1746-4358-3-24

National legislation in Pakistan adopted the International Code of Marketing of Breastmilk Substitutes in 2002 to restrict the promotion of infant formula feeding. The objectives were to assess health professionals' awareness of this law in urban government hospitals and describe their reports of violations, including receiving free samples, gifts and sponsorship. Structured interviews were conducted with health staff between July and August 2006 at 12 urban government hospitals in Islamabad, Rawalpindi and Peshawar including paediatricians, obstetricians, nurses, resident doctors, midwives and lady health visitors (LHVs). Of the 427 health workers interviewed, the majority were not aware of the national breastfeeding law (70.5%; n = 301) or the International Code (79.6%; n = 340). Paediatricians, and staff who had been working for 10 years or more, were more likely to be aware of the law. More than one third had received small gifts such as pens, pencils and calendars; 12.4% had received sponsorship for training or conferences; and 15.9% had received free samples of infant formula from the Companies. Staff that were aware of the law were also more likely to report receiving gifts. Most hospital health professionals were unaware of national breastfeeding legislation in Pakistan, and infant formula companies were continuing to flout the ban on gifts, free samples and sponsorship for health staff.

URL: http://www.internationalbreastfeedingjournal.com/content/pdf/1746-4358-3-24.pdf

Editor's comment: *It is quite rare to find scientific articles focusing on the prevalence of violations of the International Code and national laws. This study from Pakistan shows that the level of awareness of the national breastfeeding law was low among health workers and violations very common. One explanation suggested by the authors is that there were no rules and regulations to implement the national law, reinforcing the message that simply passing a law is not sufficient to prevent violations of this kind. A cross-sectional survey gives a snapshot of the situation at a given point in time. It would be interesting to repeat the survey to see if and how the situation has changed in Pakistan, following the more recent developments in drafting the national rules and regulations.*

The World Alliance for Breastfeeding Action (WABA) is a global network of individuals and organisations concerned with the protection, promotion and support of breastfeeding worldwide based on the Innocenti Declaration, the Ten Links for Nurturing the Future and the WHO/UNICEF Global Strategy for Infant and Young Child Feeding. Its core partners are International Baby Food Action Network (IBFAN), La Leche League International (LLLI), International Lactation Consultant Association (ILCA), Wellstart International, and the Academy of Breastfeeding Medicine (ABM). WABA is in consultative status with UNICEF and an NGO in Special Consultative Status with the Economic and Social Council of the United Nations (ECOSOC).

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