

Current Practice

Kangaroo mother care

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Introduction

Kangaroo Mother Care (KMC) is a method of providing skin-to-skin contact by placing a preterm/low birth weight (LBW) infant vertically between mother's breasts to provide closeness between infant and mother. It has proved effective in meeting a baby's needs of warmth, breastfeeding, protection from infection, stimulation, safety and love.

Although, for centuries, women of many cultures have carried infants against their breasts, KMC was 'rediscovered' in Bogota, Columbia in 1984 by neonatologists Edgar Rey and Hector Martinez¹. Due to non-availability of incubators, they adopted KMC for preterm and LBW babies who were otherwise stable and needed only to feed and grow. KMC is now successfully applied in many industrialized and low-income countries including North America, United Kingdom, Ethiopia, Indonesia, Madagascar, Netherlands, Vietnam and South Africa. They practise this in addition to or instead of conventional methods of LBW infant care. World Health Organisation has recently published practical guidelines for KMC².

Benefits of KMC

When held skin-to-skin at mother's breast, temperature quickly becomes sufficient to maintain infant's body temperature. Therefore KMC provides effective thermal control and reduces risk of hypothermia^{3,4,5}. It is the only effective and affordable method to prevent neonatal hypothermia in health care units with limited resources. Many studies show that these babies had better weight gain and earlier hospital discharge^{5,6,14}. Furthermore randomised controlled trials carried out in low-income countries showed that this method increased the prevalence and duration of breastfeeding^{5,7,14}.

Once preterm infants are stable, subsequent illnesses (lower respiratory tract infections, apnoea, aspiration pneumonia, septicaemia) and re-admissions are less with practice of KMC^{7,8,14}. A few published randomised controlled trials comparing KMC with conventional care (incubation and restricted parent access) conducted in low-income countries^{5,7} showed no difference in survival between the two groups.

KMC should be encouraged as soon as possible after birth because it improves bonding between mother and baby and reduces maternal stress⁹. Some studies have shown that mothers prefer skin-to-skin contact to conventional incubator care since it increases their confidence, self-esteem, and feeling of fulfilment^{5,14}. In addition KMC has a significant positive impact on the infant's cognitive and motor development¹⁰.

Physiological functions such as cardiovascular stability, respiratory rate, oxygenation, gastrointestinal adaptation and sleep patterns observed in infants held skin-to-skin is as good or better than those observed in infants receiving conventional premature infant care^{11,12}. A study done by Patricia Messmer et al¹³ found a significant increase in sleep time for neonates during KMC.

KMC can be adopted as a new kind of postnatal transportation by holding the infant skin-to-skin with mother or care giver¹⁴. Therefore this is particularly useful in countries where there are inadequate facilities for neonatal transport. Lower costs for health care system in low-income countries is yet another advantage of KMC. This may partly be due to a shorter length of hospital stay and less number of re-admissions of these infants^{5,8}.

How to perform KMC

Almost every LBW baby can be cared for with KMC when they are medically stable. It can be practised continuously or intermittently. Short sessions can begin initially in the recovery period and gradually progress to continuous care when baby is more

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stable. Non resident mothers should practise KMC for at least half an hour for the infant to benefit fully.

KMC does not need special equipment or facilities. Baby, dressed in nappy, is placed upright against mother's bare chest, between her breasts and inside her blouse (figures 1 and 2). Baby's head is turned to a side so that ear is at the same level as the mother's heart. Both mother and the baby should be covered in with blanket if it is cold.



Figure 1



Figure 2

Babies can be breast fed while in kangaroo care. If baby is not mature enough to suck from breast alternative methods such as tube feeding and cup feeding can be practised in this position. Monitoring of temperature, breathing and colour is important till KMC is well established and mother is confident.

The concept of KMC should be explained and demonstrated to mother. Staff at all levels of neonatal care should be able to educate parents, assist in feeding and discuss any queries they might have. Once baby is feeding well, maintaining stable body temperature in KMC position and gaining weight, mother and baby can go home. KMC at home is particularly important in cold climates.

KMC in special situations

- It can be used for term babies with hypothermia in colder climates.

- It is useful in neonatal abstinence syndrome seen in maternal substance abuse, as these babies are usually unsettled. It encourages these mothers to stay with baby for longer periods of time.

Usefulness in Sri Lanka

LBW babies contribute substantially to the neonatal morbidity and mortality in Sri Lanka. According to statistics¹⁵, LBW rate was 16.1 per 1000 live births in 2001 and neonatal mortality rate 12.9 per 1000 live births in 1996. Possible reasons are inadequate care during pregnancy and delivery and limited resources available for the care of newborn.

Good quality care of LBW/preterm infant could reduce neonatal morbidity and mortality. According to a review done by Cochrane database KMC reduces morbidity and mortality of LBW infants¹⁶. Therefore, a country with scarce resources like ours can adopt KMC to reduce the problems associated with management of these infants. Moreover, KMC is a safe and easy-to-use method. It does not need expensive and sophisticated equipment or expertise, and can be applied even in peripheral maternity units. With proper implementation, KMC may become a safe and effective method in management of preterm and LBW babies in Sri Lanka.

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