

Extended Abstract

Differences in postnatal hypothermia in newborns immediately after birth in different health care settings in India

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Hypothermia is increasingly recognized as a major cause of neonatal morbidity and mortality in resource poor settings. High prevalence of hypothermia has been reported widely from warmer high mortality regions of Africa and South Asia. The World Health Organization recognizes newborn thermal care as a critical and essential component of essential newborn care; however, hypothermia continues to remain under-documented, under-recognized and under-managed. Statement of the Problem: Immediately after birth it is crucial for the newborns to maintain normal body temperature for successful transitional adaptation. Postnatal thermal adaptation of newborns requires essential newborn care to be provided by health care professionals and close family members of the baby. The number of institutional deliveries has increased in India in the last decade but has not much altered the neonatal mortality rate. Provision of essential newborn care through education and training is of paramount importance to this effect. This study shows how the postnatal thermal adaptation differs for newborns delivered in tertiary care hospital and primary health centers in India. Methodology: We continuously recorded and plotted changes in both abdominal and sole skin temperature from birth to 12 hours of life in term newborns delivered vaginally. Findings: Neonates are under significant cold stress when delivered in primary health centres due to limited resources and lack of awareness among health professionals. Hypothermia during the newborn period is widely regarded as a major contributory cause of significant morbidity in developing countries and, at its extreme, mortality. High prevalence of hypothermia has been reported from countries with the highest burden of neonatal mortality, where hypothermia is increasingly gaining attention and significance as a critical intervention for newborn survival. The World Health Organization (WHO) adopted thermal control among the essential components of newborn care. However, the context, paradigms and risk factors for thermal care within these low resource settings differ markedly from high-income countries, which has important implications for design and delivery of thermal care interventions. Approximately half of women in low- and middle-income countries deliver at home, with most deliveries conducted by traditional birth attendants and relatives. Lack of awareness regarding hypothermia is conspicuous from the absence of vernacular equivalents for the term. Caregivers have limited understanding of the special thermal care needs of the newborn, and often perceive newborn thermal care requirements as similar to those of adults. Many practices adopted during delivery and the early neonatal period inadvertently expose the newborn to higher risk of hypothermia, thus compounding the baseline risk already present due to inherent physiological susceptibility during this period. The folklore of 'fever' transcends across civilizations and cultures, and has been well documented throughout history with its etymological roots in the ancient language of Latin.¹ Such recognition seems to have eluded 'hypothermia' and still continues to do so. A possible explanation could lie in the superior ability of human touch to detect fever compared with hypothermia.⁸⁶ Until the development of the clinical thermometer, human touch remained the only mode of thermometry and still continues to play an important role in temperature detection throughout the world.