RPA Newborn Care Guidelines
Royal Prince Alfred Hospital

Thermal Management at Resuscitation

Introduction

The maintenance of body temperature within a narrow range may be important for the health and survival of the extremely low birth weight infant. Thermal stress in neonates has been associated with increased morbidity and mortality. High evaporative losses are anticipated during the early period of resuscitation, especially in the preterm and extremely low birth weight infant.

From January 1, 1998 to December 31, 2000, 227 infants less than 30 weeks gestation were admitted to the nursery and of these 66 infants (29%) had admission temperatures < 35.5°C.

In a randomised trial, Vohra et al demonstrated that occlusive skin wrapping immediately after birth resulted in higher rectal temperatures in infants < 28 weeks gestation.

Aim

To Preventing heat loss in infants born <30 weeks gestation or <1500g by minimising evaporative and convective heat loss using an occlusive plastic (polyethylene) wrap at birth

Interventions

On delivery

- Place occlusive plastic wrap over the bed of the resuscitaire (approximately the width of the resuscitaire) Do not allow plastic to over heat.
• Receive the infant into dry pre-warmed towels (as per unit policy)
• Place the infant onto resuscitaire on the occlusive plastic wrap, without drying, and fold wrap over the infant covering the entire body excluding the head. **Leave cord exposed**
• Dry the infant’s head
• Apply Tubifast blue (SSL international, UK) to infant’s head

• Continue active resuscitation - **see resuscitation protocol**
• Clamp and cut the cord leaving approximately 5 cms of cord for umbilical line placement
• Leave plastic wrap on infant for transfer to NICU. Use warmed towels to nest infant. Cover resuscitaire with plastic wrap and set radiant heater to 80 – 100% power
On admission to the nursery

- Weigh infant with occlusive wrap insitu
- Place infant into prewarmed (36 degrees) and humidified (85 %) Drager 8000 IC or Airshields C2000 incubator. This should be set in anticipation of infant admission.
- Check axillary temperature with BD digital thermometer and record.
- Once stabilised and umbilical lines are secured remove plastic wrap and dry infant
- To insert lines, all attempts should be made to only open one side of the crib at a time to avoid convective heat loss.
- Apply pre-warmed Eucerin to infants < 27 weeks gestation - see small baby protocol.
References


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