

## **relationship between umbilical cord practices and neonatal cord outcomes among neonates attending Nakuru level five county and referral hospital**

### **ABSTRACT**

**Background:** Globally neonatal mortality rate (NMR) stands at 22 per 1000 live births, 98% of these deaths are from developing countries. NMR in Kenya stands at 22/1000 live births and in Nakuru County and Referral Hospital NMR stands at 29.1/1000 live births. In developing world, Umbilical infections contributes significantly to the etiology of neonatal mortality and morbidity with incidence rates as high as 55-197 per 1000 live births.

**Objectives:** to determine the relationship between umbilical cord practices and neonatal cord outcomes

**Methodology:** A hospital based unmatched case control study design was used to compare umbilical cord care practices and the cord outcome. Probability outcomes relative to the predictors were predicted using logistic regression.

**Results:** The prevalence of adverse cord outcomes was 56.60%. Of these 14.72% were umbilical granuloma, 17.07% were delayed cord separation and 29.52% were omphalitis. cord care using chlorhexidine digluconate ( $p < 0.0001$ ), Bathing the neonate ( $p = 0.008$ ), Use of sponge bath as a method of bathing the neonate ( $p = 0.012$ ) and health professional being the health education provider ( $p = 0.046$ ) were found to be protective of an adverse cord outcome. In multivariable analysis the Wald test was used for unadjusted and adjusted analysis to test hypothesis of homogeneity of odds ratios, primiparity (OR=1.66), use of other methods for cord care (OR=11.81), bathing by immersion (OR=1.57) remained key risk factors for an adverse cord outcome. Subset selection and model fit statistics was done. The final model consists of parity, cultural beliefs, cord care methods, bathing method.

**Conclusion:** Prevalence of adverse cord outcomes of umbilical granuloma, delayed cord separation and omphalitis was high compared to the global prevalence which indicates it's a major public health concern.

**Recommendations:** more sensitization of the health care workers on adoption of WHO policy and strengthening of the practice of home based post natal visits by community health workers

### **Key words**

umbilical cord care, cord care practices, omphalitis, delayed cord separation, umbilical granuloma

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