MAKERERE UNIVERSITY

INCIDENCE AND RISK FACTORS FOR EARLY NEONATAL DEATH AMONG BABIES WITH SEVERE NEONATAL MORBIDITIES IN MULAGO HOSPITAL

PRINCIPAL INVESTIGATOR: MUSOOKO MOSES:

MBChB (Mak) Registration no: 2010/HD11/225U

SUPERVISORS:

ASSOC PROF DAN KAYE:

Department of Obs/Gyn -Makerere University College of Health Sciences (MakCHS)
MBChB (Mak), MMED OBS/GYN (Mak), PHD

DR. JOLLY NANKUNDA: SENIOR CONSULTANT PAEDIATRICIAN

Department of Paediatrics and Child health, Mulago Hospital
MBChB (MaK), MMED PAED & Child Health (Mak), PHD

DR. SARAH NAKUBULWA: LECTURER/ PHD STUDENT

Makerere University College of Health Sciences (MakCHS)
M.B.Ch.B (Mak), MMED OBS/GYN (Mak), Lecturer Dept of OBS/GYN, Mak CHS

A DISSERTATION SUBMITTED TO SCHOOL OF GRADUATE STUDIES, MAKERERE UNIVERSITY AS A PARTIAL FULFILMENT FOR THE AWARD OF A MASTER OF MEDICINE IN OBSTETRICS AND GYNECOLOGY

MAY 2013

ABSTRACT

Introduction

Early Neonatal Death is death of a baby with in the first seven days of life. It is a major contributor to perinatal mortality rates especially in developing nations. Perinatal mortality is a major problem with the low- and middle-income countries carrying the greatest burden of up to 98% and approximately half of these deaths occur on the first day of life.

General objective: To determine the incidence and risk factors for early neonatal mortality among newborns with severe neonatal morbidities at Mulago National Referral Hospital.

Methods:

This was a single prospective cohort study in Mulago Hospital Labour ward and Special Care Unit. The participants were newborns hospitalized at Mulago hospital during the study period with severe neonatal morbidities who fulfilled the eligibility criteria and whose mothers gave informed consent to participate in the study.

A total of 341 babies with severe perinatal complications who met the eligibility criteria were identified at the labor ward and SCU. Their mothers were then identified. Babies whose mothers gave informed consent were recruited in the study. Information surrounding the mother's pregnancy and delivery and any medical conditions was recorded. These babies were followed up in the SCU and reviewed everyday for a maximum of 7 days or until death or discharge, which ever came first to determine their condition by that date. At each review, physical examination was done and information was recorded on clinical progress forms.

Data analysis: Data was coded and entered into a computer using EPI data version 3.2 software and was then exported into STATA version 10. Univariate analysis was performed for baseline characteristics and incidence of early neonatal death. For categorical variables, percentages were reported while as means and standard deviations were used for numerical

variables. At bivariate analysis, Chi-square test and student t-test was used to assess the strength of association between each independent factor and the outcome variable and the level of significance was assessed using the p value and the 95% confidence interval. Associations of a p-value of less than 0.05 were considered significant. At multivariate analysis, Logistic regression was performed to determine the risk factors for early neonatal death and risk ratios were used to assess the strength of association.

Results: The incidence of early neonatal death as found as 10.9% (109/1000) babies with severe neonatal morbidities or 3 per 100 person-days. Grunting respiration in the newborn (RR 31.29; 95% CI 4.17-234.20; p-value 0.001) and lack of monitoring of labour (RR 6.0; 95% CI 1.40-25.67 p-value 0.016) were factors significantly associated with early neonatal death.

Recommendation:

- There is need to improve further fetal heart monitoring in labour and neonatal resuscitation to prevent grunting respiration which is a significant association to neonatal death.

- There is also need to innovate more and improve care of babies with grunting respiration to prevent them dying.