The Relationship Between Birthweight and Neonatal Mortality

Objective: To determine the relationship between birthweight and neonatal mortality.

Methods: We conducted a hospital-based case control in Dr. Kariadi Hospital Semarang, Indonesia. Data were taken from medical records of babies who fulfilled inclusion criteria and admitted from January 2010 until December 2011. Neonatal mortality was defined as a death of neonates (until 28 days). Birth weight was determined at birth with same scale and categorized into some categories. Statistical analyses used: X² and logistic regression.

Results: We obtained 278 (18% from totally babies who admitted) neonatal deaths as a Case Group and 280 babies as Control group from level 2 ward Kariadi Hospital. Between two groups respectively: Very low birth weight babies has (OR 0.5; 95% CI; 0.2–0.8). Low birth weight babies has (OR 1.5; 95% CI; 1.1–2.2), and appropriate birth weight has (OR 1.1; 95% CI; 0.8–2.5).

Conclusion: Low birth weight was a risk factor for neonatal mortality.

Risk Factors for Neonatal Mortality Rate

Background: Neonatal mortality rate plays a role for almost 40 per cent of under-five child mortality, around the world. An understanding about the factors related to neonatal mortality is important to prevent neonatal deaths. Birth weight was known as one of the risk factors and many studies have been conducted.

Objective: To determine the risk factor for neonatal mortality.

Methods: We conducted a hospital-based case-control study in Kariadi Hospital Semarang, Indonesia. Data was taken from medical records of babies who fulfilled inclusion criteria and admitted from January 2010 until December 2011. Neonatal mortality was defined as a death of neonates (until 28 days). Risk factors were studied included: birth weight, gestation period, sex, type of delivery, length of stay (LOS). Statistical analyses used: X² and logistic regression.

Results: We obtained 278 (18% from totally babies who admitted) neonatal deaths as a Case Group and 280 babies as Control group from level 2 ward Kariadi Hospital. We found between two groups prematurity has (OR=1.6; 95% CI:1.1–2.6), low birth weight in prematurity (OR=2.0; 95% CI:1.2–3.5) and sepsis in prematurity (OR=2.2; 95% CI:1.1–4.2) while other risk factors (birth weight, type of delivery, LOS) have lower points.

Conclusion: Sepsis in prematurity was a risk factor for neonatal mortality.

Early Diagnostics of Necrotizing Enterocolitis in Newborn Infants Underwent Perinatal Asphyxia

Background and Aim: Defensins are antimicrobial peptides against gram positive and gram negative bacteria, fungus and viruses. The goal of the study is to reveal diagnostic fecal markers of necrotizing enterocolitis (NEC) among the various gestational age children who underwent perinatal asphyxia.

Methods: The 95 newborn children have been included to study. Main group consisted of 960–4210 g birth weighing 69 infants with structural pathologies of central nervous system. Main group were classified in two subgroups: 40 preterm newborns (gestational age 30–37 weeks) with structural pathologies of central nervous system and 29 term babies with 38–40 weeks of gestational age. 26 children (14 premature and 12 in term infants) were included in control group. Stool for analyses was taken in 3-rd, 7-th, 15-th and 30-th days of life. The concentration of human β-defensin-2 (HBD-2) was determined by immune-enzyme analysis (ELISA Kit Immune Diagnostic, Bensheim, Germany).

Results: In premature babies NEC development associated with the 246.2–257.5 ng/g on 3-rd day; 173.7–206.9 ng/g on 7-th day; 161.5–188.9 ng/g on 15-th day; 155.2–167.4 ng/g on 30-th day of HBD-2 concentration. In term babies NEC developed in 246.2–268.5 ng/g on 3-rd day; 166.9–255ng/g on 7-th day; 161.5–226 ng/g on 15-th day; 155.2–208 ng/g on 30-th day of HBD-2 concentration.

Conclusion: Thus, definition of fecal HBD-2 in dynamics at newborn children underwent to perinatal asphyxia allows to diagnose NEC at the initial stage of development which gives the base to begin in time treatment.

Probiotics for Prevention of Necrotizing Enterocolitis in Preterm VLBW Neonates - Systematic Review of Randomised Controlled Trials. (Update 2011)

Background: Systematic reviews indicate significantly lower risk of NEC and mortality, and shorter time to full feeds after probiotic supplementation in preterm (Gestation < 35 weeks) VLBW neonates.1-3 Few more RCTs have been published since then.

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RISK FACTORS FOR NEONATAL MORTALITY RATE

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Background: Neonatal mortality rate plays a role for almost 40 per cent of under-five child mortality, globally. An understanding about the factors related to neonatal mortality is important to guide the development of focused and evidence-based health interventions to prevent neonatal deaths.

Objective: To determine risk factor for neonatal mortality.

Methods: We conducted a hospital-based case-control study in Kariadi Hospital Semarang, Indonesia. Data was taken from medical records of babies who fulfilled inclusion criteria and admitted from January 2010 until December 2011. Neonatal mortality was defined as a death of neonates (until 28 days). Risk factors were studied included: birth weight, gestation period, sex, type of delivery, length of stay (LOS). Statistical analyses used: X² and logistic regression.

Results: We obtained 278 (18% from totally babies who admitted) neonatal deaths as a Case Group and 280 babies as Control group from level 2 ward Kariadi Hospital. Between two groups respectively: Very low birth weight babies has (OR 0.5; 95% CI; 0.2–0.8). Low birth weight babies has (OR 1.5; 95% CI; 1.1–2.2), and appropriate birth weight has (OR 1.1; 95% CI; 0.8–2.5).

Conclusion: Low birth weight was a risk factor for neonatal mortality.

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PROBIOTICS FOR PREVENTION OF NECROTIZING ENTEROCOLITIS IN PRETERM VLBW NEONATES - SYSTEMATIC REVIEW OF RANDOMISED CONTROLLED TRIALS. (UPDATE 2011)

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Abstracts

Aim Update our systematic review of probiotic supplementation (Started within first 10 days, duration: 37 days) in preventing 3 stage II NEC in preterm VLBW neonates.

Method Standard Cochrane Neonatal Review Group search strategy was followed. CENTRAL, MEDLINE, EMBASE, CINAHL databases, proceedings (from 2009) of the Pediatric Academic Society meetings and Gastroenterology conferences were searched in September 2011.

Results Total 17 RCTs (N=3147) including recently published 5 new RCTs (N=840) were eligible for inclusion in the meta-analysis. The risk of NEC [RR: 0.99; 95% CI: 0.87, 1.12; p<0.0001] and death [RR: 0.54; 95% CI: 0.41, 0.72; p<0.0001] was significantly lower and the time to full feeds was significantly shorter in the probiotic group (WMD=-2.29 days; 95% CI: -4.25, -0.32; p<0.00001). Risk of sepsis was similar in both groups (RR: 0.92; 95% CI: 0.80, 1.06). Subgroup analysis, according to baseline incidence of NEC (< 6% and 26%) also showed significant benefits of probiotics in both scenarios.

Conclusions The results of our updated Meta analysis continue to show the benefits of probiotic supplementation. We have now provided additional evidence of its benefits in units with high as well as low baseline incidence of NEC.


1377 NECROTIZING ENTEROCOLITIS IN MULTIPLE GESTATIONS: COMPARISON WITH SINGLTONS
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NEC is one of the most important surgical disease in the first few days after birth. The aim of this study is to describe incidence of Necrotizing enterocolitis in multiple gestations compared with singletons, determining the neonatal outcome, risk factors and co-morbid factors.

A retrospective review of the discharge records of multiple-gestation and singletons infants admitted into the neonatal intensive care units between January 2002 and January 2009 was performed.

The medical charts of all infants developing NEC or suspected NEC were reviewed and perinatal data recorded. The risk and co-morbid factors of two main groups (developing NEC and not developing NEC) were analyzed.

During the study period we considered 409 infants from multiple gestations and 895 singletons. The percentage of infants with NEC in multiple gestation (18%) was higher than singleton prematurity at the same Hospital (4%) (p<0.05). Patients with suspected or advanced NEC showed longer time of meconium evacuation if compared to the others (mean 5 vs. 2 days, p<0.05). Patients who received bowel enemas starting from day 2 after birth did not develop NEC or advanced NEC (p<0.05). Mortality was associated with lower gestational age and lower Appgar score at 1 minute (p<0.05).

The analysis of multiple pregnancies showed that the incidence of NEC(stage II but Stage III) increased with respect to singleton pregnancies only when considered in relation to a higher prematurity rate.