Identification of peripartum near-miss improves perinatal audit

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Introduction

• Today, perinatal audit focuses basically on cases of perinatal mortality ⇔ In most centers in Western Europe, perinatal mortality is low
• Association between acidosis at birth and poor neonatal outcome
• Identification of metabolic acidosis at birth may increase index cases eligible for evaluation of perinatal care

Methods & Results

Aim

Does identification of metabolic acidosis at birth improves perinatal audit?

• Single-center, observational study, from January 2010 until December 2012
• Umbilical cord blood analysis at birth for every neonate
• Acidosis (Sundström criteria): pHa ≤ 7.05 and/or pHv ≤ 7.17

Respiratory acidosis (RA): arterial and venous Base Excess > -10 mmol/L

Metabolic acidosis (MA): arterial and/or venous Base Excess ≤ -10 mmol/L

• Failure of umbilical cord blood sampling/analysis: Apgar score ≤ 6 at 5 minutes as clinical equivalent for MA
• Retrospective chart review of obstetric and pediatric files (at least 6 months follow-up) for all cases of MA

Results

Incidence of MA: 6.6% (59/893)
Incidence of RA: 1.1% (9/893)

6614 neonates

Acidosis: 187/6614 (2.8%)
Intra-uterine demise: 39/6614 (5.9%)
Normal: 6388 (96.6%)

RA: 128/6614 (1.9%)
MA: 59/6614 (0.9%)

Normal: 52/59 (88.1%)
Neonatal demise: 2/59 (3.4%)
Early encephalopathy: 5/59 (8.5%)

No neurologic sequelae: 3/59 (5.1%)
Neurologic sequelae: 2/59 (3.4%)

Discussion

1. Incidence of fetal mortality: 6%
   Incidence of MA at birth: 9%

2. Incidence of babies surviving with cerebral palsy is very low: 0.3%. Both babies were born after instrumental delivery for fetal distress

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