

Risk Factor Analysis of Neonatal Asphyxia (P21.1) at RSUD dr. H. Koesnadi Bondowoso

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ABSTRACT

Neonatal asphyxia is the failure of a newborn to breathe spontaneously and regularly immediately after birth, characterized by hypoxia and hypercarbia. Data from RSUD dr. H. Koesnadi Bondowoso show that neonatal asphyxia consistently ranked first among the top ten diseases from 2020-2023. This study aimed to analyze risk factors associated with neonatal asphyxia. This quantitative study used an analytical observational method with a case-control design and 1:1 ratio. A total of 140 neonatal infants and their mothers' medical records were selected using systematic random sampling. Data analysis included univariate analysis (frequency distributions and percentages) and bivariate analysis (chi-square). The results showed significant associations between neonatal asphyxia and hypertension during pregnancy (p -value = 0.000; OR = 3.974), anemia (p -value = 0.000; OR = 6.238), history of previous neonatal death (p -value = 0.000; OR = 8.883), anesthesia use (p -value = 0.000; OR = 79.615), prolonged labor (p -value = 0.002; OR = 2.541), meconium-stained amniotic fluid (p -value = 0.002; OR = 3.931), oxytocin induction (p -value = 0.001; OR = 4.621), prematurity (p -value = 0.002; OR = 3.931), and low birth weight (p -value = 0.034; OR = 4.281). Primiparity, PROM, and malpresentation showed no significant association, antepartum hemorrhage couldn't be analyzed. In conclusion, hypertension during pregnancy, anemia, previous neonatal death, anesthesia use, prolonged labor, meconium-stained amniotic fluid, oxytocin induction, prematurity, and low birth weight are risk factors for neonatal asphyxia. Need for improved early detection and monitoring of high-risk pregnancies and deliveries, along with further studies using broader variables and larger sample sizes.

Keywords: Risk factors, neonatal asphyxia, case-control study