Determinant of the Causes of Neonatal Asphyxia Based on Medical Records at Dr. H. Koesnadi Bondowoso General Hospital
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ABSTRACT

Neonatal asphyxia is a leading cause of infant mortality in Indonesia and has ranked as the top case at dr. H. Koesnadi General Hospital Bondowoso (2019-2021). This study aims to analyze the relationship between determinant factors including parity, multiple pregnancy, hypertension, oxytocin induction, umbilical cord compression, meconium-stained amniotic fluid, prolonged labor, shoulder dystocia, prematurity, and LBW and the incidence of neonatal asphyxia based on medical records. The study employed a case-control design with a quantitative approach, examining 172 medical records consisting of 86 case and 86 control groups. Data analysis was conducted univariately and bivariately using the Chi-Square test with Odds Ratio (OR) calculation. Bivariate analysis results showed that prolonged labor had a highly significant association with neonatal asphyxia (p = 0,000; OR = 32,273), making it the dominant risk factor. Parity was also significantly associated (p = 0,004; OR = 2,472), while multiple pregnancy showed a significant but protective relationship (p = 0,043; OR = 0,488). Factors such as maternal hypertension (p = 0,443; OR = 1,265), prematurity (p = 0,758; OR = 1,100), and LBW (p = 0,092; OR = 1,679) did not show statistically significant associations, despite a trend toward increased risk. Oxytocin induction, umbilical cord compression, meconium-stained amniotic fluid, and shoulder dystocia also showed no significant correlation. It is concluded that neonatal asphyxia at the study site is primarily influenced by obstetric factors (particularly prolonged labor) and maternal characteristics. The primary recommendations are enhanced early detection and rigorous monitoring of high-risk deliveries to reduce infant mortality rates.

Keywords: Neonatal Asphyxia, Prolonged Labor, Parity, Risk Factors, Medical Records.