

ABSTRACT

Background: Sepsis neonatorum is increasingly recognized as an important global neonatal health challenge. Infant risk factors that affect neonatal sepsis include low apgar score and preterm birth. **Objective:** This study aims to determine the correlation between Apgar score and gestational age with sepsis neonatorum. **Method:** This research is an analytic study with a retrospective case-control design using medical records of patients in Dr. Soetomo Hospital. A case group was taken by purposive sampling from medical records of all patients who had sepsis neonatorum in 2019, and a control group was taken by random sampling. Then statistical analysis was conducted by calculation of odds ratio and Chi-square test **Results:** There were 108 samples for each group. Among the 108 subjects of the case group, 57.4% of were male, 73.15% were born at <37 weeks of gestational age, 76.85% had low birth weight, 64.80% had sesarean section, 59.30% lived, 67.60% had Apgar score < 7 at 1st minute, 50.90% had Apgar score < 7 at 5th minute, and 23.1% were referral casses. The statistical analysis showed a significant correlation between gestational age <37 weeks with sepsis neonatorum (p=0.000; OR=7.78, 95% CI 4.249 – 14.256). Sepsis neonatorum was also related to low Apgar score (<7) at 1st minute (p=0.000; OR=16.69, 95% CI 8.099–34.378) and 5th minute (p=0.000; OR=35.00, 95% CI 10.457 – 117.142). Preterm neonates with sepsis neonatorum were not related to low Apgar score at 1st minute (p=0.457; OR=1.61, 95% CI 0.680-3.804) and 5th minute (p=0.278; OR=1.40, 95% CI 0.575–3.411). **Conclusion:** Low Apgar score <7 and gestational age <37 weeks could make neonates more at risks of sepsis neonatorum.

Keywords: Sepsis neonatorum, low Apgar score, preterm birth.