

EFFECT OF GESTATIONAL AGE, BODY WEIGHT AND SERUM CREATININE CONCENTRATION ON SERUM VANCOMYCIN CONCENTRATION IN THE TREATMENT OF NEONATAL SEPSIS: A SINGLE-CENTER PILOT STUDY

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Neonatal sepsis is a serious medical condition characterized by systemic infection in infants younger than 28 days. Therapy for late neonatal sepsis is a combination of vancomycin and meropenem. The aim of this single-center pilot study is to examine the influence of newborn body weight, gestational age, and creatinine values on the serum concentration of vancomycin in the treatment of neonatal sepsis. The study included 13 patients admitted to the Pediatrics Clinic University Clinical Center Niš, with a diagnosis of neonatal sepsis in the period from June to October 2024. The value of serum vancomycin between 10 and 15 µg/ml was recorded in 38.5% of subjects, which is preferred therapeutic range. Due to the small sample size, the effect of gestational age, body weight, and serum creatinine concentration on serum vancomycin concentration weren't found to be statistically significant. However, descriptive statistics show that a significant difference can be found between these groups, suggesting a potential effect worth further investigation.

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