

Aetiology and clinical features associated with blood culture positivity among neonates with clinical sepsis admitted at Dodoma Regional Referral Hospital, Tanzania - Evaline Maziku - University of Dodoma

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Background & Objectives: Effective management of neonatal sepsis is essential in reducing mortality and complications due to septicaemia, for which an accurate diagnosis remains challenging in developing countries, due to lack of well-equipped laboratories and resources. This study intended to determine the aetiology and clinical features associated with blood culture positivity, among neonates with clinical sepsis admitted at Dodoma Regional Referral Hospital.

Methods: A cross-sectional study was carried out on 194 neonates admitted with clinical sepsis at Dodoma Regional Referral Hospital, from March to June, 2017. A total of 194 blood samples for culture and sensitivity were taken according to standard aseptic procedures. Clinical and other laboratory data were analysed. Logistic regressions model was used to identify possible clinical features associated with positive blood culture. Results: Among the 194 study new-borns with clinical neonatal sepsis, 55 (28.40%) had blood culture positive, the most isolates were Coagulase negative Staphylococci n (45.50%). Most isolates were resistant to Ampicillin, whereas most of the isolates had highest sensitivity to Amikacin and Clindamycin. After adjusting for potential confounders, the abdominal distension (AOR 0.263, 95% CI [0.088- 0.787], $p < 0.001$), signs of skin infections (AOR 0.179, 95% CI [0.029- 1.124], $p < 0.01$), umbilical pus discharges (AOR 5.745, 95% CI [1.654-19.957] $P < 0.001$) were independently associated with positive blood culture. Conclusions: Usage of WHO clinical criteria only for the diagnosis of neonatal sepsis may overestimate the prevalence of neonatal sepsis leading unwarranted use of antibiotics. The study has shown majority of the bacteria isolates in new-born with sepsis are resistant to first line antibiotic. Frequently research will guide the empiric treatment for neonatal sepsis. Recent Publications¹. Clinical features associated with blood culture positivity among neonates admitted with clinical neonatal sepsis at Dodoma Regional Referral Hospital.