Prevalence, Susceptibility Patterns and Virulence Factors of Bacterial Isolates from Neonate-Mother Pair in Benin City, Nigeria

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Neonatal sepsis remains a major cause of morbidity and mortality in neonates. The prevalence of bacterial isolates in neonates admitted due to sepsis together with mothers and their susceptibility to routinely used antibacterial agents were investigated. Ethical Approval was obtained from the Hospital Management Board while informed consents were obtained from their parents. Forty-five (45) saliva samples from neonates (with signs and symptoms of sepsis admitted at the neonatal unit of Central Hospital, Benin City, Nigeria) were obtained. Vaginal swab samples were also obtained from their mothers to attain a total of ninety samples i.e forty-five neonate-mother saliva-vaginal swab sample pairs. Samples were immediately transported to the Laboratory and processed using standard microbiological protocols. All samples showed significant bacterial growth. At least one similar bacteria were recovered from each neonate-mother pair. Bacteria isolated include Staphylococcus aureus, Klebsiella oxytoca, Klebsiella spp., Escherichia coli, Enterobacter spp., Proteus mirabilis, Acinetobacter sp., Proteus vulgaris, Pseudomonas aeruginosa, Streptococcus agalactiae, Citrobacter sp. and Streptococcus pneumoniae. Both neonatal and maternal isolates were sensitive to unacitin, azithromycin, cefotaxime and cefuroxime. Bacterial isolates also showed varying degrees of resistance to bactericidal action of normal serum. Isolates also produced haemolysin. This study gives important insight to the role of saliva in bacteriological analysis of sepsis and has implications for neonatal survival.

Keywords: Bacterial, neonatal, antibiotics.

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