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Sensitivity pattern of micro organisms of septicemia in neonatal intensive care unit of tertiary hospital, Bangladesh

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Introduction: Neonatal septicemia is a clinical syndrome of systemic illness accompanied by bacteremia occurring in the first 28 days of life. Micro-organism causing neonatal septicemia varies from country to country and also region to region and time to time. In many situations, conventional antibiotics are not sensitive to causative micro-organism. Our aim of the study is to identify causative organism and sensitivity pattern of micro-organism in Neonatal Intensive Care Unit, (NICU).

Methods & Subject: Total 300 patients were enrolled in this study with clinically diagnosed septicemia with prior antibiotic treatment or not. This study was done in NICU of tertiary Hospital, Chittagong Medical College, Bangladesh during the period of January 2013 to July 2014. Blood culture was done in Bact/ Alerd 3D system and culture incubated in Fractionated Antibiotic Neutralization (FAN).

Result: Out of 300 cases, 204 cases were culture negative and 96 cases were culture positive. *Klebsiella* is the commonest causative organism 52(54.17%), followed by *Pseudomonas* 16(16.67%), *Acinetobacter* 14(14.58%), *S. aureus* 6(6.25%), *E. coli* 6(6.25%), *E. coli* with other Coliform 2(2.08%). In this study, sensitivity of *Klebsiella* was mostly to Ciprofloxacin, Imipenem, Azithromycin, Co-trimoxazole, Piperaciline and Tazobactam. Sensitivity to *Pseudomonas* was mostly to Amikacin, Imipenem, Ciprofloxacin, Azithromycin and Cefoperazone+ Sulbactam. Sensitivity to *Acinetobacter* was mostly to Amikacin, Imipenem, Ciprofloxacin, Netilmicin. Sensitivity to *S. aureus* was mostly to Vancomycine, Amikacin, Imipenem, Meropenem. Sensitivity of *E. coli* was mostly to Amikacin, Ciprofloxacin, Ceftazidin. Most of the culture positive organisms resistant to conventional Ampicilin, Gentamycin and a number of organisms were resistant to Meropenem and Imipenem.

Conclusion: Conventional antibiotics Ampicillin and Gentamycin are almost resistant to organism causes neonatal sepsis in our NICU.

Biography

Chiranjib Barua Chowdhury obtained his MBBS in 1985 from Sylhet Medical College, Bangladesh and Post-graduation Diploma in Child Health in 1997. He received Fellowship in Pediatrics (FCPS) in January 2001 and Doctor of Medicine (MD) in Neonatology from Bangabandhu Sheik Mujib Medical University Bangladesh, in 2006. He has obtained PhD from Chittagong University in 2011. He has in total 15 publications in different topics of Neonatology & Pediatrics which were published in different national & international Journals. In December 2014, he was honored with Post-graduation in Pediatric Nutrition by Boston University. Currently, he is working as an Associate Professor in Neonatology, Chittagong Medical College, Bangladesh.

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