BACTERIOLOGICAL PROFILE OF LATE ONSET NEONATAL SEPSIS IN A BRAZILIAN NEONATAL INTENSIVE CARE UNIT

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BACKGROUND AND AIMS

Late-onset neonatal sepsis is a healthcare-associated infection and a major cause of neonatal mortality, with the incidence of 1-5:1000 newborns. Risk factors for this disease include prematurity, low birth weight, use of central venous catheters and other devices.

METHODS

This was a retrospective study, conducted in the Hospital “Irmandade da Santa Casa de Misericórdia de São Paulo”/Brazil, from January/2011 to December/2016. We conducted a retrospective descriptive study performed on a Brazilian NICU from January/2011 to December/2016. We included all newborns in NICU with late-onset neonatal sepsis and bacteremia.

RESULTS

The admission rate in this NICU is around 300 newborns per year. The cohort was 107 newborns admitted in NICU, which had 147 episodes of late-onset neonatal sepsis during the six years study. The mean gestational age was 31.6 weeks (95% CI 30.7-32.5 weeks); the frequency of low birth weight was 82.2% (n=89), and the lethality rate was 26.2% (n=28) in 30 days. Invasive devices were used in 79.4% (n=85) and parenteral nutrition was received in 70.1% (n=75) of the newborns. The most prevalent etiology was Coagulase-negative Staphylococcus (CNS) with 40.5% (n=60) of cases and 71.7% (n=38) oxacillin resistance. The second most prevalent etiologic agent was Klebsiella with 29.7% (n=44) of cases and 54.5% (n=24) extended-spectrum beta-lactamase. Only one of the gram-negative bacteria was carbapenem-resistant.

GRAPHIC2: Number of oxacillin resistant Coagulase-negative Staphylococcus strains between 2011 and 2015 (n)

GRAPHIC3: Number of antibiotic resistant *Klebsiella* strains between 2011 and 2015 (n)

GRAPHIC1: Number of the pathogens isolated from late onset neonatal sepsis's blood cultures between 2011 and 2015 (n)

CONCLUSIONS

Most of the bacteria causing late-onset neonatal sepsis were antibiotic-resistant strains. Strategies to improve the management of these neonates remain a concern to reduce healthcare-associated infection and the antibiotics resistance.