




Antimicrobial Resistance in Neonatal Units: The Future Has Arrived

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To the Editor: Antimicrobial resistance (AMR) is on the rise globally, with 4.93 million lives lost to infections with resistant pathogens in 2019 alone [1]. Recent studies have highlighted the high AMR rates in neonatal sepsis [2]. Just a decade ago, resistance to ampicillin and gentamicin in NICUs was seen as an ominous sign of things to come [3]. Now, we find ourselves amid an epidemic of resistant “superbugs.”

AMR data from our NICU from the last 18 mo revealed that 55% (133/237) of neonatal bloodstream infections (BSI) were caused by multidrug resistant (MDR) pathogens [2]. There were 17,295 live births during that period, with a neonatal mortality rate of 23/1000 live births, while the incidence of culture-proven BSI was 14/1000 live births. The commonest pathogens were *Elizabethkingia anophelis* (32%), *Klebsiella spp* (20%), and *Acinetobacter spp* (14%). *Elizabethkingia anophelis* is intrinsically resistant to penicillins, cephalosporins, carbapenems and colistin. 76% of all *Elizabethkingia anophelis* isolates, 79% of *Acinetobacter spp*, 62% of all *Klebsiella spp*, and 52% of all *E. coli* isolates were MDR. Six isolates of klebsiella and one of acinetobacter were sensitive only to colistin, and two acinetobacter isolates were resistant to all antibiotics except minocycline. The mortality rate in neonates with MDR infections was high (54/133; 41%).

AMR in neonates leads to a prolonged hospital stay and increased mortality and morbidity. The recent trend towards better sensitivity to older antibiotics like minocycline, cotrimoxazole, and fluoroquinolones may change, leaving us with few antibiotics to manage infections in the future

[4]. With very few new antibiotics in the pipeline, the focus shifts to infection control measures and antibiotic stewardship. Hand hygiene, kangaroo mother care, and early initiation of the mother’s own milk are low-cost, lifesaving interventions. But trials of novel antibiotic regimens in neonates are urgently needed to ensure that our NICUs are safe havens for vulnerable infants.

Declarations

Conflict of Interest None.

References

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