

OP-12: National survey of practices adopted for reconstitution, storage, administration, and disposal of antibacterial agents in neonatal units in Sri Lanka

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Introduction: Optimal use of antibacterial agents (ABAs) includes correct practices of reconstitution, storage, administration, and disposal of leftovers. Inappropriate practices contribute to emergence and spread of antibacterial resistance. These practices are challenging in neonatal units (NUs) due to the small volume required and administration difficulties. This survey was done to describe the practices adopted for reconstitution, storage, administration and disposal of ABAs in NUs in Sri Lanka.

Methods: This cross-sectional descriptive national survey included all the public hospitals having a NU. Study participants were nurses working in neonatal intensive care and special care baby units in these hospitals. From each unit, the in-charge nursing officer, and one or more nurses selected by the in-charge nursing officer provided the data. Data were collected by trained data collectors in 2020/21 using a pre-tested content and face validated structured self-administered questionnaire. Descriptive statistics were used in analysing the data.

Results: Participants, 297 nurses working in NUs from 60 hospitals, named cefotaxime, benzylpenicillin and meropenem as the commonly used ABAs in NUs. Although the majority (94.0%) indicated that they received training in handling ABAs, many incorrect practices were observed; none listed the correct steps in reconstituting ABAs while only eight listed the correct steps in getting the dose. About 90.0% failed to correctly name the solution used for reconstitution as sterile water. Regarding discarding the balance reconstituted ABA, 43.0% followed the product information leaflet and 10.0% discarded immediately, while 16.0% discarded after 24 hours. About 80.0% correctly indicated that they would store the reconstituted ABA in the refrigerator if it had to be given to another neonate later. A wide range of incorrect practices were followed to discard left-over ABAs including pouring it into the wash basin.

Conclusions: Diverse and unsatisfactory practices are adopted for reconstitution, storage, administration and disposal of antibacterial agents in neonatology units in Sri Lanka.

Keywords: antibacterial agents, neonates, nurses, reconstitution, storage

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