

Current antibiotic choices for early and late onset sepsis in UK neonatal intensive care units

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Background

With increasing antibiotic resistance, and an extremely vulnerable patient group, judicious use of antibiotics on the NICU is required to achieve appropriate pathogen coverage.

To understand current practice, we aimed to compare UK NICU guidelines for early and late onset sepsis against National Institute for Health and Care Excellence (NICE) recommendations^[1].

Methods

Between January and May 2024, we contacted UK NICU's via email/telephone and requested a copy of their written antibiotic guidelines.

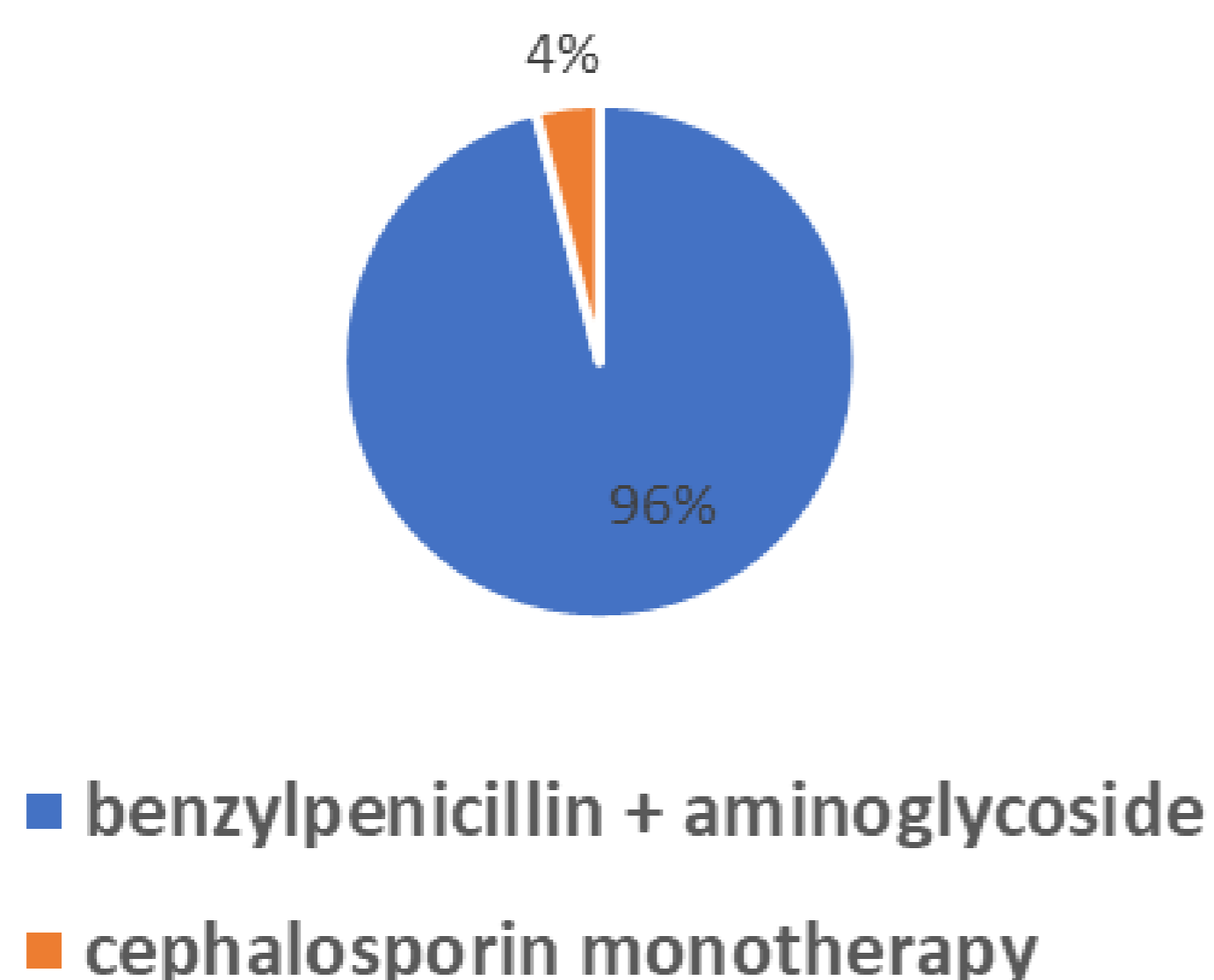
Results

We obtained guidelines from 53/53 (100%) NICUs

Early Onset Sepsis recommendations:

- recommendation was primarily benzylpenicillin and an aminoglycoside 96%(51/53); 4% used cephalosporin monotherapy.
- Gentamicin was the most commonly used aminoglycoside 85% (45/53)

first line agent of choice for EoS

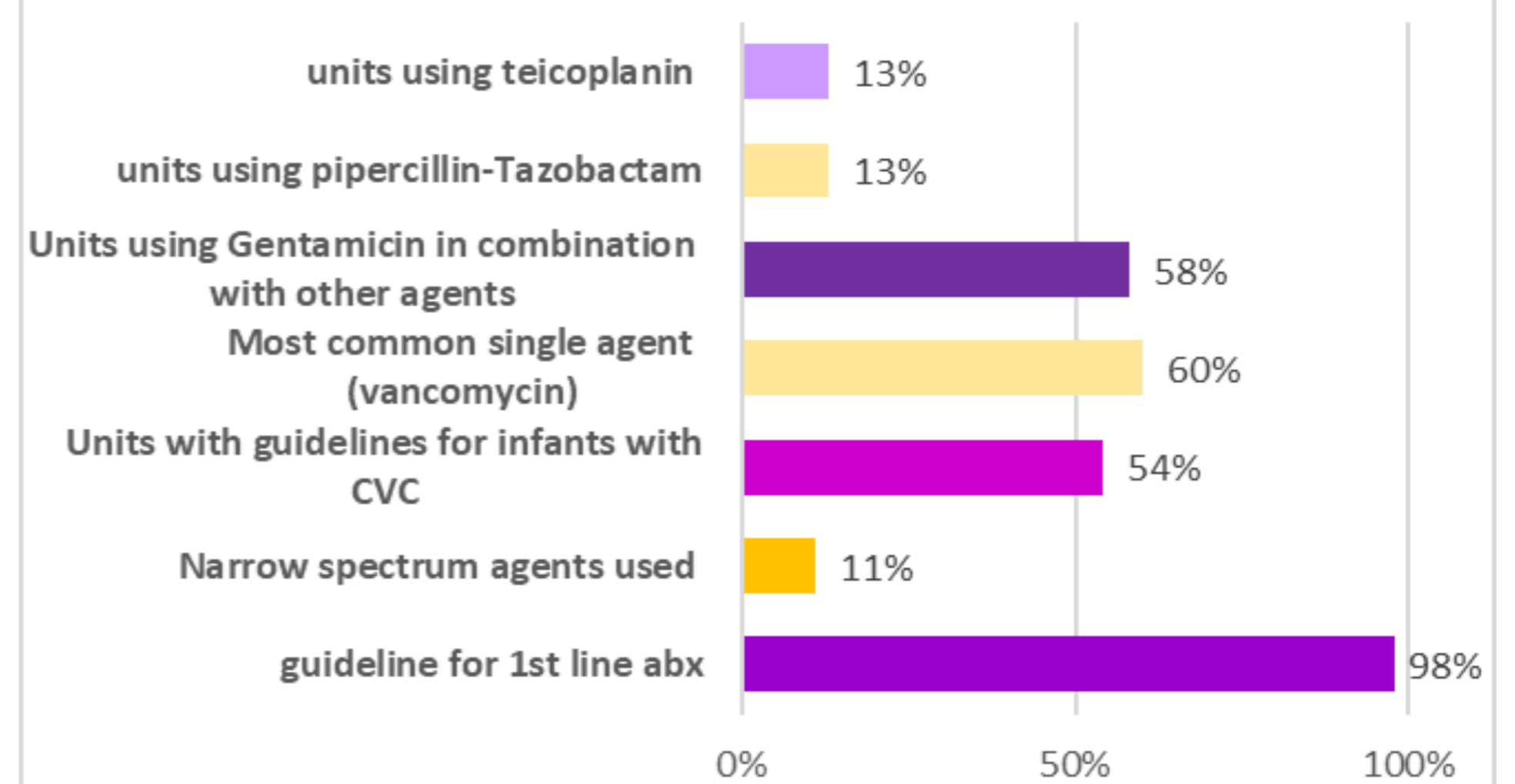


Results Continued

Late Onset Sepsis Recommendations

- 98% (52/53) have a guideline for first line antibiotics. The agents vary widely.
- 77% (41/53) use narrow spectrum agents in-line with NICE guidelines
- 54% (29/53) units had specific recommendations for infants with indwelling central venous catheters (CVCs).
- Most common single agent being vancomycin in 60% (32/53), with gentamicin in 18% (10/53).
 - Gentamicin was used in combination with other agents in 58% (31/53) units.
- Piperacillin-Tazobactam and Teicoplanin were both used in 13% of units

Late Onset Sepsis Agents of Choice



Conclusions

Many units dictate no specific antibiotics for LoS in preterm infants, practice is varied in infants with indwelling CVCs. This potentially reflects these situations not being addressed in current NICE guidance.

Reference

[1] Neonatal infection: antibiotics or prevention and treatment, NICE guideline [ng195] Published: 20 April 2021, updated 19 March 2024: <https://www.nice.org.uk/guidance/>

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