

A retrospective descriptive study assessing prevalence of antimicrobial resistance among all pediatric patients at Kamuzu Central Hospital, Malawi.

P3-L1

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- The prevalence of AMR at Kamuzu Central Hospital pediatric wards is high(47.8%), emphasizing critical need for routine blood cultures in pediatric units as a strategy for surveillance and to aid antimicrobial stewardship.

BACKGROUND

Severe bacterial infections cause significant disease burden in developing countries including Malawi. The situation is compounded by scarcity of resources, inconsistent availability of antibiotics and increasing antimicrobial resistance (AMR).

METHODS

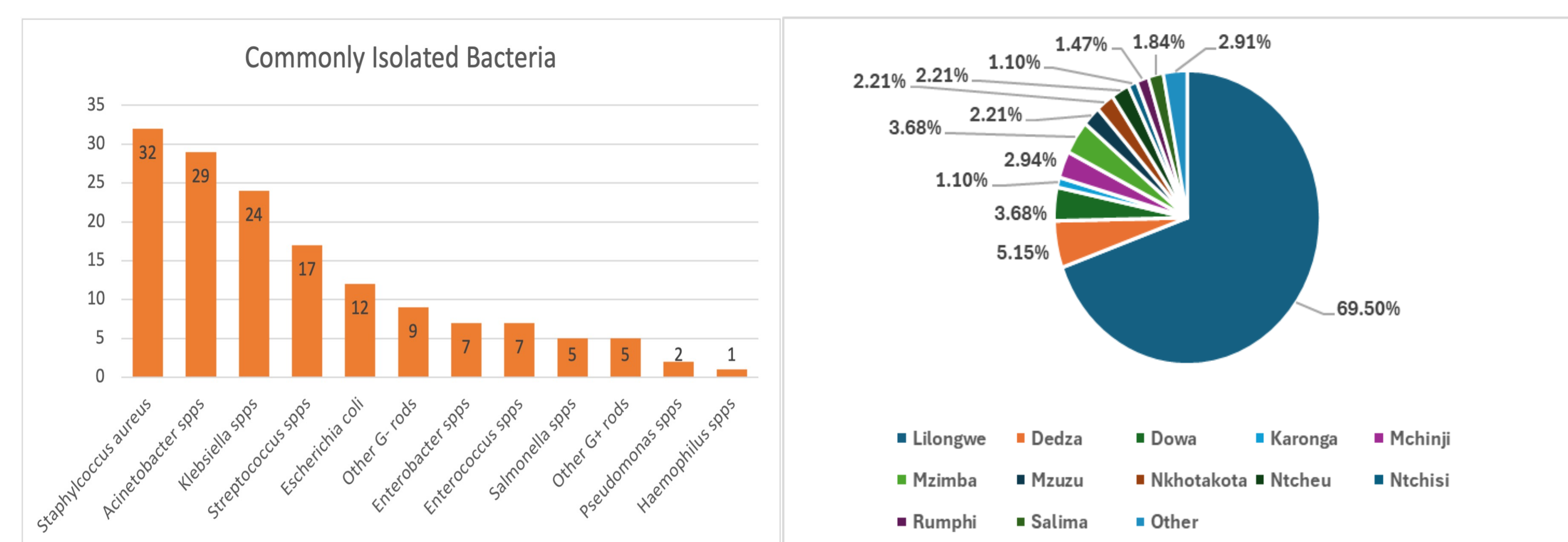
- This was a descriptive retrospective study where we analyzed blood culture results of pediatric patients admitted to Kamuzu Central Hospital, Lilongwe, Malawi.
- Data used were from January 2018 to January 2022 and were compared with clinical metadata.
- Analysis of data was done using STATA version 16.1 and R version 4.2 statistical software packages.

RESULTS

- Data of 272 isolates from blood culture were obtained; 47.8% (130/272) of participants presented with organisms resistant to first-line antibiotics.
- There were 13.4% (22/164) resistant Isolates to 2nd-line antibiotics which included resistance to piperacillin/tazobactam and meropenem.
- Gram-negative isolates constituted 54.3% (89/164) of the isolates of which *Acinetobacter* spp was 32% (29/89); while 45.7% (75/164) of the isolates were gram-positive of which 42.7% (32/75) was *Staphylococcus aureus*. Of the *Escherichia coli* isolates totaling 12, 50% (6/12) were highly resistant to piperacillin/tazobactam.

RESULTS CONTINUED

- Using Fisher's exact test, the antibiotic prescribed after a blood culture test result was significantly associated with the isolate observed ($p=0.016$).



CONCLUSIONS

This study highlights high rates of antimicrobial resistance to commonly used antibiotics in pediatric ward at the referral hospital in Lilongwe, Malawi. This calls for the need to revise treatment guidelines in the wake of empiric antibiotic choices for pediatric patients as well as intensify maximal use of blood culture tests as part of management of febrile illness as well as reinforcement of antimicrobial stewardship in pediatric patient care.

ADDITIONAL KEY INFORMATION

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