Invasive Salmonella Typhi in Korogwe, Tanzania

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Outline

- Background
- Methods
- Age-specific Salmonella Typhi
- Susceptibility pattern
- Summary and discussion
Fever in Tanzania is commonly diagnosed as malaria but it might be due to other causes such as bacterial infection (bacteremia).

If poorly managed bacteremia could lead to septicemia and death among children.

Unfortunately, there is limited facilities for performing microbiological tests especially in rural settings.
Background - II

- Improvement of clinical and laboratory facilities in Korogwe prior to implementation of Phase 3 malaria vaccine trial in Korogwe.

- Evaluation of inpatient children 2-59 months with febrile episode included blood culture

- To establish epidemiology of bacteria and antimicrobial susceptibility pattern of common pathogen among children admitted in Korogwe District Hospital.
Methods - I

- Aseptic collection of blood samples
- Incubation of blood culture bottle in Bactec 9050.
Basic media were used to culture aliquots from positive culture bottles.

- Antimicrobial susceptibility testing using disc diffusion technique.
- IQC’s and EQA’s participation.
RESULTS
Types of isolates

Number of isolates:

- **Salmonella typhi**: 80
- **Streptococcus pneumoniae**: 60
- **Non-typhoidal Salmonellae**: 40
- **Haemophilus influenzae**: 30
- **Other Streptococcus species**: 20
- **Others**: 15
- **Staphylococcus aureus**: 10
- **Pseudomonas spp**: 5
- **Klebsiela pneumoniae**: 2

Other Streptococcus species include:
- *Other Streptococcus* species
- *Streptococcus pneumoniae*
- *Salmonella typhi*
Salmonella Typhi by Age groups

Proportion with Salmonella typhi (%) by Age groups

Age (months)

0-5 6-11 12-17 18-23 24-35 36-47 48-59

0 20 40 60 80 100
Age-specific Salmonella Typhi

![Bar chart showing the frequency of Salmonella Typhi cases by age (months)](chart.png)
Salmonella Typhi susceptibility

![Graph showing antibiotic resistance](image)
Summary and Discussion

- Salmonella Typhi isolates predominated among underfives in Korogwe.

- Majority of the Salmonella Typhi isolates 57 (64.0%) were among children below 2 years.

- MDR was predominant with emerging resistance to ciprofloxacin and ceftriaxone.

- Underscores the need for similar studies in rural settings.

- Typhoid conjugate vaccine could be included in infants routine immunization schedule.
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Asanteni

Thank you