

Bacteriology of ear discharge in HIV-infected children on ART in the ARROW trial in Uganda and Zimbabwe



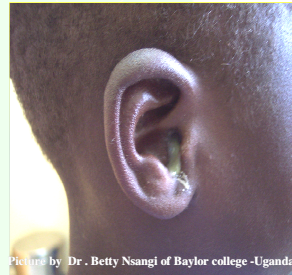
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Background

- Otitis media (OM) is common in HIV-infected children
- There are few data on:
 - common causative agents of OM
 - the antimicrobial sensitivity patterns
 - the variation with age among HIV-1 infected African children on antiretroviral therapy (ART)



Methods

- ARROW (Anti Retroviral Research fOr Watoto) is a randomised trial investigating first-line treatment and monitoring strategies in 1207 previously untreated HIV-1-infected children initiating ART
- Children who presented with an ear discharge during follow-up had ear swabs taken to determine the causative organisms and sensitivity patterns using standard microbiological techniques

Results

- 266 samples of pus discharge from ears were collected from 153 patients over a 3 year period
- The median age was 2.5 years, IQR 2.3-2.9; 52% males
- 209 (79%) cultures were positive
- The most commonly isolated organism was *Pseudomonas aeruginosa* as shown in figure 1
- The overall rate of infection in 3040 child-years of follow up was 6.8 events / 100 child-years
- The ear infection rates (EIR) decreased with age and increasing time on ART as shown in figure 2 and 3 respectively

FIG 1: Isolated organisms from ear discharge

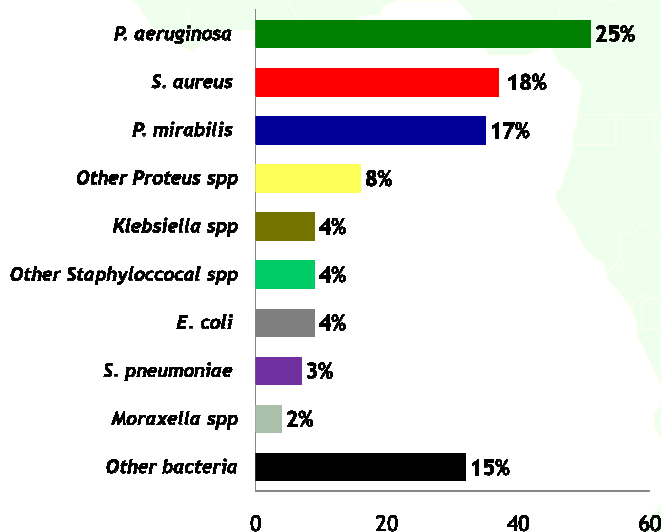


FIG 2: Decreasing ear infection rate (EIR) with age

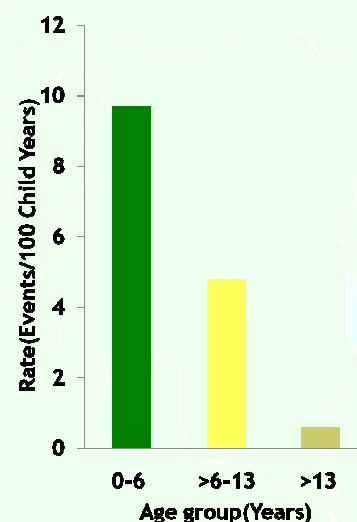
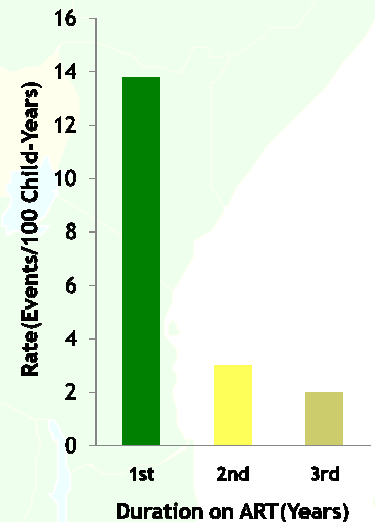


FIG 3: Decreasing EIR with increasing duration on ART



SUSCEPTIBILITY OF ISOLATED ORGANISMS

- Pseudomonas aeruginosa* was mostly susceptible to ciprofloxacin(95%), gentamicin(80%), polymyxin B(94%) and carbapenems(99%)
- Other isolates were susceptible to amoxicillin/clavulanic acid(94%) and ceftriaxone(75%)
- The majority of the isolates were resistant to cotrimoxazole(96%)

Conclusion

- Ear infection rates in HIV-infected children decreased with age and increasing time on ART
- Pseudomonas aeruginosa* and *Staphylococcus aureus* were the most commonly isolated organisms
- Most isolated organisms were resistant to cotrimoxazole

COLLABORATORS AND ACKNOWLEDGEMENTS

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