

Abstract:

OBJECTIVES: To identify by type and sensitivity to drugs the bacteria found in ears of school-going children with chronic otitis media in Garissa district. **METHODS:** Study design: This was a descriptive prevalence study of CSOM bacterial flora in eligible ears conducted among a cohort of children attending public and private primary as well as Islamic religious schools, screened for chronic ear discharge in Garissa district, Kenya. Procedure and bacteriological techniques: We used sterile swab-sticks to collect a specimen of the discharge from eligible ears of consenting pupils at the induction stage of the zinc supplementation trial for treatment of chronic suppurative otitis media conducted between January and July 2010. All pupils below 18 years present on day of visit were eligible. Both aerobic and anaerobic bacterial cultures were done to identify clinically and epidemiologically important bacteria. Sensitivity tests were based on disc diffusion methods. Results are presented as frequencies and proportions. **RESULTS:** Of the pupils seen, 61% were still in pre- or lower primary school. Majority were aged 13 and 14 years. Of the 261 ear swab samples processed, 336 isolates - either in mixed or pure flora - were identified, being almost exclusively aerobes. *Proteus* spp., *Enterococcus*, *Staphylococcus aureus* and *Pseudomonas* spp. were isolated in 32.7%, 28.6%, 12.8% and 11.3% respectively. *Proteus* was susceptible to majority of the antibiotics tested for, while *Enterococcus* was poorly susceptible. **CONCLUSIONS:** Aerobic bacteria were most prevalent in this study. Several of the bacteria identified are known to require iron for their growth. This may be important for CSOM treatment if biofilm formation is involved in pathogenesis. Majority of the isolates were susceptible to basic antibiotics compared to *Enterococcus* bacteria. This portends an important consideration for clinical management and therapeutic decision-making. Additionally, given the prevalence of *Enterococcus* bacteria, which is an indicator of faecal contamination of the environment, there is need to consider relevant public health components in managing childhood CSOM besides the clinical ones alone.