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ANTIBIOTIC SUSCEPTIBILITY OF BACTERIA CAUSING EAR INFECTIONS: CROSS-SECTIONAL STUDY AT NATIONAL HOSPITAL OF SRI LANKA

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Bacterial isolates from patients with ear infections have exhibited resistance to one or more antimicrobial agents. Only a few studies have been carried out on the antibiotic susceptibility of bacteria causing ear infections in Sri Lanka. This has imposed a significant burden on clinicians when choosing the right antibiotic for treating ear infections. Hence, a cross-sectional study was carried out to determine the antibiotic susceptibility of bacteria in ear infections. Ear swabs were collected from patients from August through October 2018 by the microbiology laboratory at the National Hospital of Sri Lanka (NHSL). The antibiotic sensitivity test (ABST) was performed on bacteria following protocols published by the Clinical Laboratory Standard Institute (CLSI). SPSS software was used to analyse data. Of the patients who visited the ENT clinic during the study period, 146 suspected cases with ear infections had been reported to the microbiology laboratory. Out of them, 138 patients (94.5%) were positive for pathogenic bacteria. Six pathogenic bacterial species were identified from the ear swabs. *Pseudomonas aeruginosa*, coliforms, *Staphylococcus aureus*, MRSA, *Proteus* sp., and *Acinetobacter* were the most common pathogens causing ear infections. The most frequently isolated species from ear swabs was *P. aeruginosa*, whilst the least commonly isolated species was *Proteus* sp. Our findings indicated that ampicillin had the highest overall resistance followed by erythromycin and cefuroxime, whereas most bacterial isolates exhibited susceptibility to vancomycin, teicoplanin, imipenem and ceftazidime. Thus, antibiotic resistance should be considered in prescribing the right antibiotics when treating patients with ear infections.

Keywords: Antibiotic Sensitivity Test, Antimicrobial agents, Ear infections, Pathogenic bacteria