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Profile and Antibiotic Susceptibility of Bacterial Pathogens Associated With Diabetic Foot Ulcers From a Rural Area.

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Abstract

OBJECTIVE: This cross-sectional study assesses the profile and antibiotic susceptibility of aerobic bacterial pathogens associated with diabetic foot ulcers (DFUs). MATERIALS AND METHODS: Two swab samples from 140 DFUs with various Wagner grades were processed for identification using routine culture methods and antimicrobial susceptibility by Kirby-Bauer disc diffusion method. **RESULTS:**5 (89.29%) samples were found to be positive for bacteria on culture. A higher incidence of positive culture (94.32%) was found in individuals with a blood sugar level > 200 mg/dL. The highest number of culture-positive cases was observed in Wagner grade 2 DFUs (45%). Overall infection was monomicrobial in 83.20% (104) and polymicrobial in 16.80% (21) of samples. Staphylococcus aureus (21.09%) and Pseudomonas aeruginosa (19.05%) were the most common isolates. Linezolid (100%) and imipenem (75.70%) were the most effective antimicrobial agents against gram-positive and gram-negative isolates, respectively. **CONCLUSIONS:** The results show an overall increase in bacterial resistance to antimicrobial agents and emphasize the importance of an antimicrobial susceptibility pattern in the selection of appropriate antibiotic(s) to institute the rational antibiotic therapy.

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