

ANTIMICROBIAL SUSCEPTIBILITY AND BIOFILM FORMATION OF *KLEBSIELLA PNEUMONIAE* STRAINS

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Introduction. The antimicrobial resistance of *Klebsiella* spp. strains poses a challenge for the management of the infections they might induce. *K. pneumoniae* is responsible for both community-acquired and healthcare-associated infections.

Keywords: *K. pneumoniae*, antibiotic susceptibility, biofilms, trophic ulcers

Purpose. This study was aimed to determine antimicrobial susceptibility, as well as the ability to produce biofilm, characteristic of *K. pneumoniae* strains isolated from trophic ulcers.

Material and methods. Eighty-four strains of *K. pneumoniae* were isolated from trophic ulcers and identified via morphological, cultural and biochemical assessment. The antimicrobial susceptibility and biofilm-forming ability testing was performed using the Kirby-Bauer disk diffusion technique and the quantitative adhesion test, respectively.

Results.

Strains of *K. pneumoniae* isolated from trophic ulcers showed a marked resistance to antimicrobial preparations. The multidrug-resistant strains made up 42.8%. Moreover, 73 (86.9%) isolates exhibited biofilm-forming ability. Biofilm-producing strains were more resistant to the tested antibiotics compared to non-producing strains.

Conclusions. Most strains of *K. pneumoniae* isolated from trophic ulcers showed a marked antimicrobial resistance and a high biofilm-forming capacity.

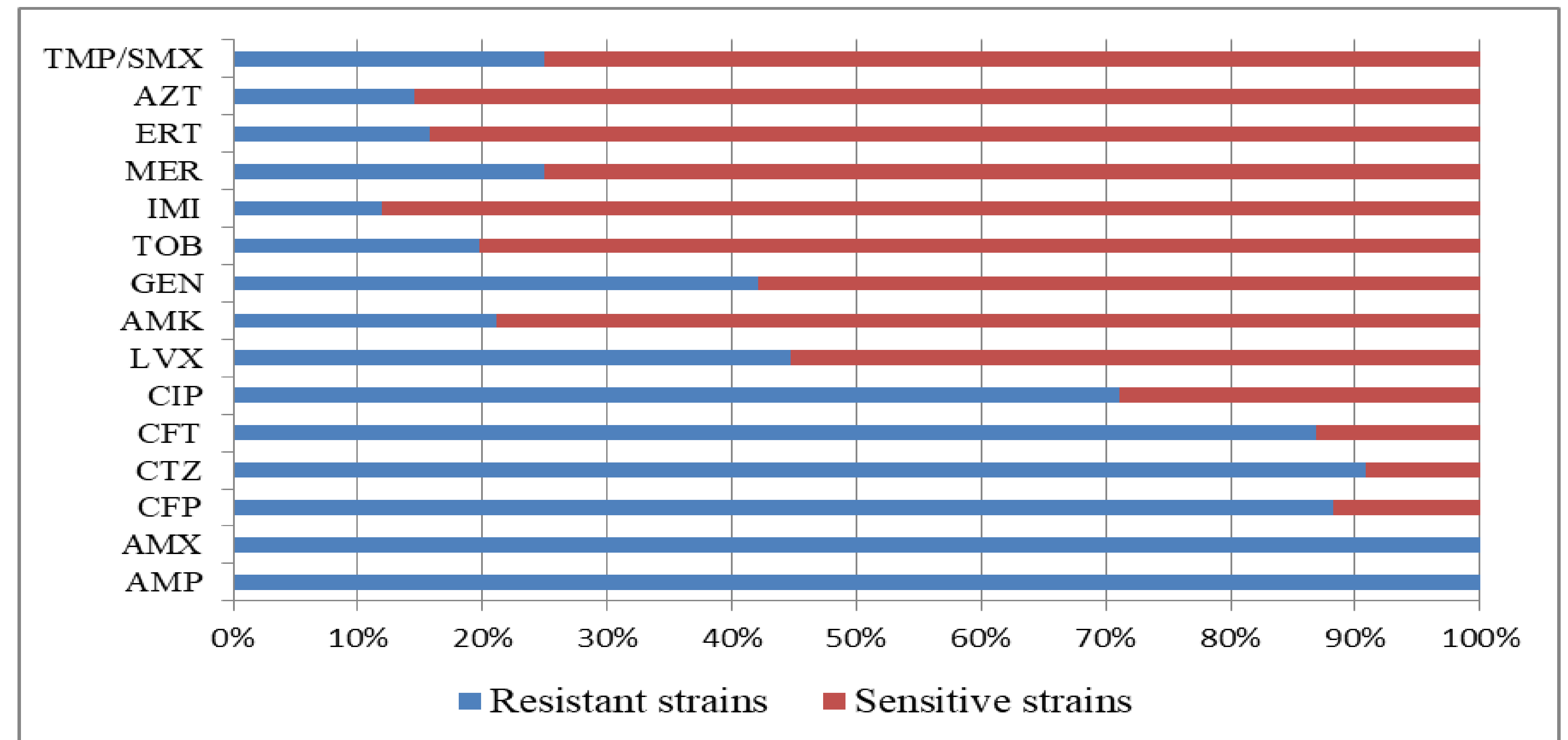


Fig. 1. Antimicrobial susceptibility and resistance of *K. pneumoniae* strains

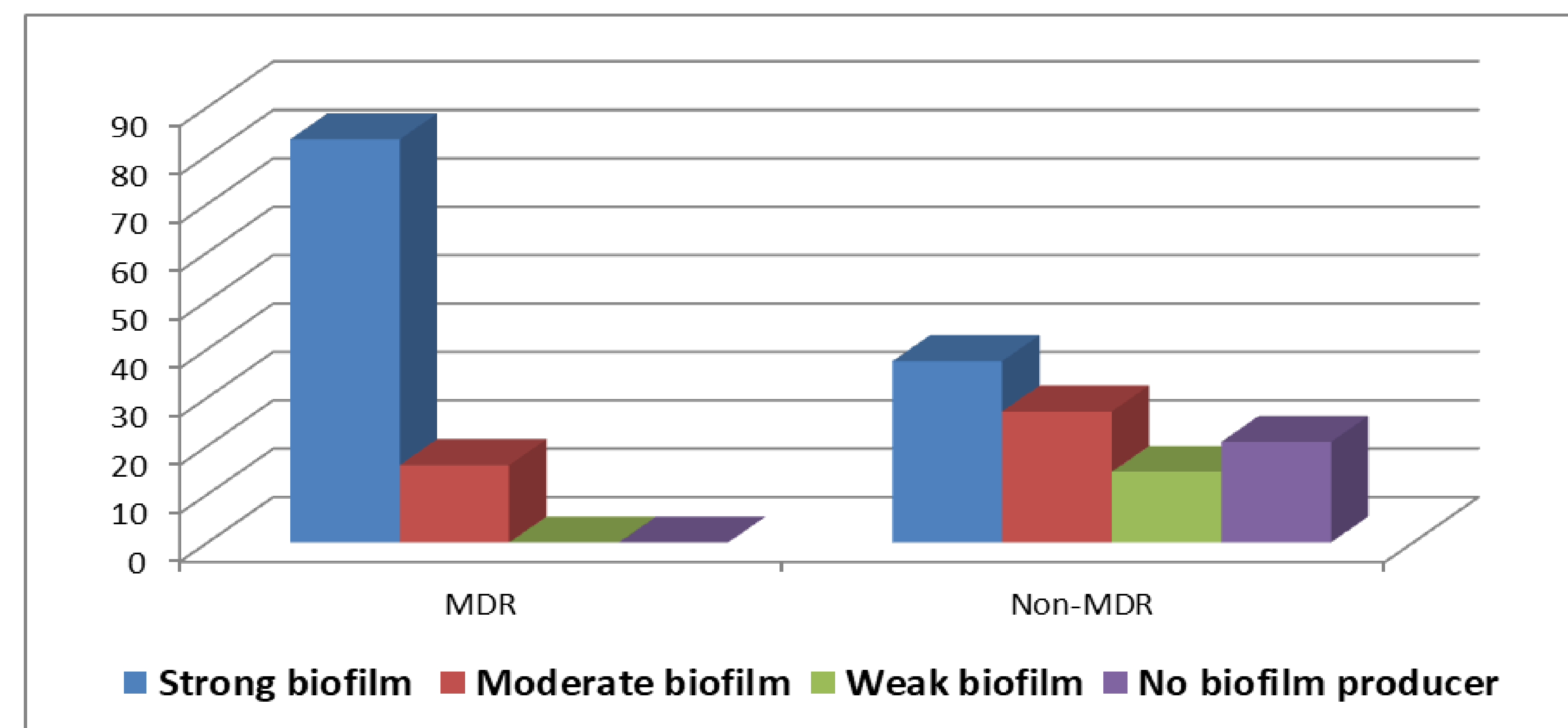


Fig. 2. Correlation between MDR and Non-MDR strains of *K.pneumoniae* and biofilm formation ability by the phenotypic method