

Plasmid-borne mobile colistin resistance (mcr-1) in healthy humans and poultry in Iran**Himen Salimizand**

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Background and Aim: The emergence of antimicrobial resistant bacteria has become a menace to global public health and socio-economic development. Colistin is used as the last resort antibiotic in refractory infections. However, resistant isolates are reported frequently. The aim of this study was to find mcr genes in healthy people poultry farms in Sanandaj, west of Iran.

Methods and Materials: In this study, fecal samples were collected from two groups of humans and poultry. Colistin containing screening media as well as colistin-EDTA containing medium to screen plasmid-mediated colistin resistance. PCR for prevalent mcr genes were performed. Antimicrobial susceptibility testing was done for mcr-harboring isolates.

Results: In this study, no colistin-resistant bacteria were isolated from poultry samples (0%) while two human *E. coli* isolates showed resistance to colistin (0.59%). Of which, one isolate was inhibited by EDTA and harbored mcr-1 variant. The MIC for colistin was 16 mg/L.

Conclusion: The results indicated the low prevalence of this gene in healthy individuals and poultry industry. To the best of our knowledge, this is the first report of mcr in healthy individuals from Iran.

Biography

Himen Salimizand has completed his MSc at from Pasteur Institute of Iran. He is a researcher at Kurdistan University of Medical Sciences. He has published more than 25 papers in reputed journals.