

## عنوان مقاله:

Antibiotic Resistance Profile and Multiple Antibiotic Resistance Index of Campylobacter Species Isolated from Poultry

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## نویسندگان:

Z. M Shakir - *Heath Department, National Center for Occupational Health and Safety, AL-Najaf Governorate, Iraq*

A. O Alhatami - *Department of Public Health, Faculty of Veterinary Medicine, University of Kufa, Kufa, Iraq*

Y Ismail Khudhair - *Department of Internal and Preventive Medicine, College of Veterinary Medicine, University of Al-Qadisiyah, Al-Diwaniyah, Iraq*

H Muhsen Abdulwahab - *Department of Pathology and Poultry Diseases, Faculty of Veterinary Medicine, University of Kufa, Kufa, Iraq*

## خلاصه مقاله:

Campylobacter is a major public health problem, leading to foodborne diarrhea in the world. The current study aimed to isolate Campylobacter in different sources of poultry and determine antimicrobial susceptibility. A total of 150 fecal and 29 cloacal swabs were obtained from poultry farms (14 cloacal swabs) and live bird markets (LBMs), respectively, and 37 cecal swabs were also acquired from a local slaughterhouse located in the middle Euphrates region. Campylobacter Species (spp.) was first isolated and characterized by conventional bacteriological methods. Secondly, the antimicrobial susceptibility of isolates was investigated by disc diffusion method. The overall prevalence of Campylobacter spp. isolated from fecal cloacal and cecal poultry samples was 24% (36 out of 150). All strains were resistant to Nalidixic acid and Ciprofloxacin (100%), with high resistance to Tetracycline (88.8%), Ampicillin (83.3%), Sulpha/Trimethoprim (80.5%), Erythromycin (50%), and Ceftriaxone (50%), but less resistant to Gentamicin (30.5%), Amoxi-Clav (27.7%), and Chloramphenicol (22.2%). The majority of isolates (97.2%) scored a multiple antibiotic resistance (MAR) index of 0.3 or more, and 35 (97.2%) isolates were resistant to three or more antibiotic classes. Particularly, 61.1% of the isolates were multidrug resistance (MDR), 36.1% of the isolates were extensively drug resistant, and 2.8% of the isolates were Pan drug resistant. Moreover, the current study detected 24 multiple resistance patterns from 36 isolates of Campylobacter spp., and most of the isolates (27 out of 36) displayed an important route of resistance to Nalidixic acid, Ciprofloxacin, and Tetracycline. Based on the results, increased resistance rates to commonly used antibiotics in Campylobacter were recovered from poultry farms, LBMs, and local slaughterhouses. The majority of strains were MDR to commonly used antimicrobials with elevated MAR indices, requiring implementation of a national strategy to improve husbandry practice and the effective use of antibacterial agents, alternatives, and vaccines.

## کلمات کلیدی:

antimicrobial resistance, Campylobacter, LBMs, MAR index, Poultry farms, Slaughterhouse

لینک ثابت مقاله در پایگاه سیویلیکا:

