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Prevalence and susceptibility patterns against antibiotics of *E. coli* isolated from raw chicken in Lebanese markets**Jack C Khalil, Chantal J Abou Jaoudeh and Lara Hanna Wakim**
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Escherichia coli, despite being a commensal organism that lives normally within the microflora of humans and animals, can be sometimes pathogenic causing serious illness and this is becoming a global clinical concern in both human and veterinary medicine. This study was conducted to ultimately determine the prevalence and susceptibility patterns against antibiotics of different *E. coli* serotypes isolated from raw chicken in Lebanese retail market and to limit or reverse resistance arising from the irrational use of antibiotics. Raw chicken meat samples (200) obtained from broilers of retailers and grocery shops in Lebanon were examined for the presence of *E. coli* in accordance to ISO 16649-2. These isolates were then screened for their antibiotics susceptibility patterns against 14 antibiotics (penicillin, ampicillin, amoxicillin, neomycin, streptomycin, doxycycline, tetracycline, fosfomycin, gentamicin, cephalixin, tylosin, tilmicosin, chloramphenicol and erythromycin). The antimicrobial activity of the antibiotics was *in vitro* tested against detected microorganism isolates by Kirby-Bauer disc diffusion method. Our findings revealed a statistically significant prevalence of identified *E. coli* (40%) in the tested samples indicating a high public exposure risk. Results of antibiograms revealed that *E. coli* isolates were resistant to at least three or more of the antibiotics tested and presented high resistance to penicillin (100%), ampicillin (100%), amoxicillin (100%), erythromycin (100%), tetracycline (100%) and streptomycin (100%) with either a very small inhibition zone or no presence of an inhibition zone at all. Further investigation on the sanitation and hygiene systems applied on the food flow of Lebanese poultry is necessary.

Biography

Jack C Khalil has his expertise in laboratory work and he is currently a researcher at the Holy Spirit University of Kaslik (USEK), Lebanon. His area of interest is food and environmental microbiology. His experience as research assistant made him more passionate about research.

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