

Prevalence of Multidrug-resistant *Escherichia coli* Isolated from Ready to Eat: Crispy Fried Chicken in Jember, Indonesia

Authors : Enny Suswati, Supangat Supangat

Abstract : Background. Ready-to-eat food products are becoming increasingly popular because consumers are increasingly busy, competitive, and changing lifestyles. Examples of ready-to-eat foods include crispy fried chicken. *Escherichia coli* is one of the most important causes of food-borne diseases and the most frequent antibiotic-resistant pathogen globally. This study assessed the prevalence and antibiotic resistance profile of *E. coli* from ready-to-eat crispy fried chicken in Jember city, Indonesia. Methodology. This cross-sectional study was conducted from November 2020 to April 2021 by collecting 81 crispy fried chicken samples from 27 food stalls in campus area using a simple random sampling method. Isolation and determination of *E. coli* use were performed by conventional culture method. An antibiotic susceptibility test was conducted using Kirby Bauer disk diffusion method on the Mueller-Hinton agar. Result. Out of 81 crispy fried chicken samples, 77 (95.06%) were positive for *E. coli*. High *E. coli* drug resistance was observed on ampicillin, amoxicillin (100%) followed by cefixime (98.72%), erythromycin (97.59%), sulfamethoxazole (93.59%), azithromycin (83.33%), cefotaxime (78.28%), chloramphenicol (75.64%), and cefixime (74.36%). On the other hand, there was the highest susceptibility for ciprofloxacin (64.10%). The multiple antibiotic resistance indexes of *E. coli* isolates varied from 0.4 to 1. The predominant antimicrobial resistance profiles of *E. coli* were CfmCroAmlAmpAzmCtxSxtCE (n=17), CfmCroAmlCipAmpAzmCtxSxtCE (n=16), and CfmAmlAmpAzmCtxSxtCE (n=5), respectively. Multidrug resistance was also found in the isolates' 76/77 (98.70%). Conclusion. The resistance pattern CfmCroAmlAmpAzmCtxSxtCE was the most common among the *E. coli* isolates, with 17 showing it. The multiple antibiotic index (MAR index) ranged from 0.4 to 1. Hygienic measures should be rigorously implemented and monitoring resistance of *E. coli* is required to reduce the risks related to the emergence of multi-resistant bacteria

Keywords : antibacterial drug, ready to eat, crispy fried chicken, *escherichia coli*

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