

عنوان مقاله:

A Study of antimicrobial effects of essential oil of Thyme on Escherichia coli isolated from broiler chicken flocks with colibacillosis

محل انتشار:

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خلاصه مقاله:

Introduction and Objectives: Avian pathogenic Escherichia coli (APEC) is the major cause of colibacillosis in poultry. This disease has an important economic impact on poultry production worldwide. Antimicrobial therapy is an important tool in reducing both the incidence and mortality associated with avian colibacillosis. However, resistance to existing antimicrobials is widespread and of concern to poultry veterinarians. Nowadays, antibacterial effects of some medicinal plant oils are considered as an appropriate alternative of antibiotics. **Materials and Methods:** The purpose of this study was to determine antimicrobial effects of essential oil of Thyme against 178 E.coli isolated from broiler chicken flocks with colibacillosis infection during 2014 and 2015. Minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) of this medicinal plant oil were determined for each isolate using micro-dilution technique. The antibiotic resistance of isolates for common antibiotics on Iranian poultry industry were evaluated using Kirby-Bauer disc diffusion method test. **Results:** The highest resistance was to Tetracycline (99.43%), Erythromycin (97.75%), Trimethoprim-sulphadiazine (80.34%), Enrofloxacin (77.53%), Neomycin (75.84%), Colistin (68.54%) and Florfenicol (58.99%). Furthermore, essential oil of Thyme showed significant inhibitory effect on E.coli isolates. **Conclusion:** The results of this study show the high frequency of resistance to antimicrobial agents commonly used in Iranian poultry industry and also Thyme essential oil has antimicrobial activity against E.coli isolates. So, there is using essential oil of Thyme as a substitute of common antibiotics.

کلمات کلیدی:

E coli, antibiotic resistance, thyme, broiler flocks

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