**Antimicrobial Resistance Pattern of *E. coli* and *Salmonella* in Layer Poultry**

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# A clinical report submitted by

Intern ID: D-42

Roll No: 2007/46

Registration No: 333

 *In Partial Fulfillment for the Degree of Veterinary Medicine*

**Chittagong Veterinary and Animal Sciences University**

**Khulshi, Chittagong**

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*E. coli* and *Salmonella* resistance to the commonly used antimicrobials both in the public health and veterinary practice is one of the major threats of health care worldwide. The present study was undertaken to determine the antimicrobial resistance pattern of *E. coli* and *Salmonella* strains isolated from commercial layer from different layer farm under Chittagong district of Bangladesh, during the period September to December, 2012. Isolation and identification of *E. coli* and *Salmonella* was done by using different methods. Isolated *E. coli* and *Salmonella* were tested for resistance to 10 different antimicrobial agents, using disc diffusion method. The *E. coli* were found 100% resistant to Tetracycline, Ciprofloxacin, Enrofloxacin and Pefloxacin followed by Amoxycillin (84.62%), Kanamycin (69.24%), Colistin (63.75%), Doxycyclin (53.75%) and Neomycin (23.08%). Besides *E. coli* isolates show high sensitivity to Gentamycin (100%) and Neomycin (76.92%). Among the *Salmonella* isolates 100% were found resistant to Amoxycillin and Tetracycline followed by Enrofloxacin (87.5%), Ciproflpxacin (87.5%), Pefloxacin (87.5%), Doxycycline (50%), Colistin (50%) and Kanamycin (50%). *Salmonella* isolatesshowed high sensitivity (100%) to Gentamycin and Neomycin. The present study confirms the significant increase of the resistance level in *E. coli* and *Salmonella* isolated from poultry isolates. This is, probably, due to increase use of antibiotics as feed additives for growth promotion and prevention of disease, overlooking the proper withdrawal period, resistance transfer among different bacteria, and possible cross-resistance between antibiotics used in domestic animals and those used in human medicine.Key word: Layer bird, E. coli, Salmonella, Antimicrobial, Antimicrobial Resistance, Public health. B |
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