Bacterial Isolation and their antibiogram from the Broilers of Mahakoushal Region (M.P.) India

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ABSTRACT

A total of 103 samples of poultry of different age groups of non specific infections were tested. The cultural examination revealed presence of the organisms in descending order E. coli, Staphylococci, Enterobactor, Pseudomonas, Bacillus, Streptococci and Klebsiella. Antibiogram of these samples showed Cefotiofur sodium, Levofloxacin, Amikacin, Ciprofloxacin, Chloramphenicol, Gentamicin Amoxyclin, and Ampicillin as most effective antimicrobials while Doxycycline, Streptomycin and Oxytetracycline are moderately effective.

Keywords: Poultry-Broiler, Antimicrobial susceptibility, Bacteria, Non-specific infection, Mahakoushal region (M.P)

INTRODUCTION

Broilers play a very important role in national economy of India. We have well acquainted with many bacterial, viral, protozoal and parasitic diseases of poultry. (Buxton et al (1952). There is a lot of mortality due to specific diseases but 4-5% of mortality is due to non-specific bacterial infections. These causative agents are known to cause acute diseases revealed by septicemic changes (Biester, 1969). The present study was therefore undertaken to isolate and identify the bacterial agents involved in non-specific infections in poultry and in vitro antibiotic susceptibility (Antibiogram) of the isolated organism.

MATERIAL AND METHODS

One hundred and three samples were collected from heart blood, fecal sample, lungs, gall bladder and intestine of the birds on post mortem of the birds which have not shown any specific bacterial, viral, protozoal, and parasitic infections. These samples were collected from college poultry farm and commercial chicks, broiler, grower and layers.
Organisms were isolated as per Cruickshank et al. (1975). Bacteria were identified on the basis of staining, colony morphology, cultural and biochemical character of pure isolates. These bacterial isolates were subjected to in vitro antibiotic susceptibility test (Antibiogram) as described by Bauer et al. (1966) with antibiotic disc supplied by Hi Media Mumbai. The antibiotic discs used were of following strengths. Amikacin (Ak 25mcg), Amoxycilin (Am 30 mcg), Levofloxacin (Le 10 mcg), ciprofloxacin (Cf10 mcg), Enrofloxacin (Ex 25mcg), Cefitiofur sodium (Xnl 15mcg) (pfizer), Furazolidone (Fr 30 mcg), Ampicillin (Amp 10 mcg), Streptomycin – (S 10 mcg), Gentamicin (G-10 mcg), Oxytetracycline – (O 30 mcg), Chloramphenicol – (C-30mcg), Doxycycline – (Do 30 mcg).

RESULTS AND DISCUSSION

Out of one hundred and three samples tested from chicks, growers, layer and broilers, the percentage of isolates is summarized in Table No.1. Isolation of these bacteria has been reported earlier by so many workers from poultry. E. Coli from poultry have been reported by Davis (1938): (1962) Staphylococci by Williams and Daines (1942) Streptococci by Buxton (1952) and Agrimi (1956). Respiratory tract disease syndromes that occur in birds associated with Escherichia coli infection by Cheville et al (1978).

Thus from the above table Cefitiofur sodium, (96.66%), Levofloxacin (91.93%), Amikacin (88.33%)
Ciprofloxacin (82.25%), Enrofloxacin (64.51%) Chloramphenicol (66.12%) were found to be effective followed by Gentamicin (51.78%), Ampicillin (50%), Amoxycilin (35.29%) Doxycycline (28.57%) Streptomycin (20.69%), Oxytetracycline (20%) and furazolidone (11.9%) respectively.

REFERENCES


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