

Bacteriologic survey of hepatic and cardiac lesions in commercial poultry carcasses

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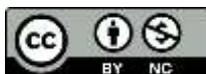
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Abstract

The aim of this study was to survey the infectious lesions of liver and heart of commercial poultry carcasses caused by bacteria, to assess the role and the rate of incidence of bacteria other than *E. coli* in development of liver and heart lesions in commercial poultry flocks, and to determine the antimicrobial sensitivity of the isolated bacteria. Samples were taken from heart blood and liver's visceral surface of 614 carcasses obtained from 150 flocks (including 118 broiler flocks, 14 laying flocks, 12 turkey flocks, 2 breeder flocks, 2 quail flocks and 2 partridge flocks) located in 18 provinces of Iran. The bacterial isolates were classified into genus and species based on microbiological standard methods. Out of 484 isolates, 382 (78.92%) *Escherichia coli*, 37 (7.64%) *Salmonella*, 18 (3.71%) *Proteus*, 17 (3.51%) *Staphylococcus aureus*, 9 (1.85%) *Streptococcus*, 7 (1.44%) *Pseudomonas aeruginosa*, 6 (1.23%) *Klebsiella*, 5 (1.03%) *Staphylococcus epidermidis* and 4 (0.71%) negative coagulase *Staphylococci* were detected while in 165 cases, no bacteria were found. *Salmonella* was detected in a young turkey flock (7-day old). Antimicrobial sensitivity test was performed for 100 *E. coli* isolates from broiler flocks, 2 *E. coli* isolates from quail flock and 30 *Salmonella* isolates. The resistance pattern of *E. coli* isolates included 56 patterns. The highest drug resistance was observed to doxycycline, flumequine, tetracycline and enrofloxacin. In 30 *salmonella* isolates, 17 resistance patterns were observed. The highest drug resistance was observed to ampicillin and nalidixic acid. All *Salmonella* isolates belonged to serogroup D. Results showed that *Escherichia coli* was the most common pathogen isolated from heart and liver lesions but other bacterial infections should also be noticed. Drug resistance patterns even in isolates of one farm may vary; therefore, performing antimicrobial sensitivity test is necessary prior to prescribing any antibacterial agent in a farm.

Keywords: *Escherichia coli*, *Salmonella*, Heart, Liver, Drug resistance

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