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PS-006. Investigation and comparison of antimicrobial and disinfectant resistance in different serotypes of *Salmonella* isolated from poultry in Aegean region

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Aims: Poultry are the major food-producing animals in several countries and have been implicated as sources of antimicrobial-resistant *Salmonella*. The susceptibility to disinfectants has been less reported and very little is known about disinfectants which are used as food preservative. The aims of the present study was to investigate the prevalence of antibiotic resistance and compare it with the susceptibility of selected disinfectants in *Salmonella enterica* serotypes isolated from poultry in Aegean region. **Methods-Results:** A total of 50 *Salmonella enterica* isolates from poultry were included in this study. *Salmonella enterica infantis* (30%) and *Salmonella enterica enteritidis* (14%) were the most frequent serogroups in this study. Antimicrobial susceptibility testing was performed according to the Clinical and Laboratory Standards Institute (CLSI) guidelines. Presence of class 1 integron among the isolates was investigated using primers specific conserved region. Different resistance gene arrays were identified among class 1 integrons. Aminoglycoside adenyltransferase (aadA1) and aminoglycoside acetyltransferase (aacA4) gene cassettes was detected in all of isolates. Six different disinfectants;chlorhexidine gluconate 20% (CHX), benzalkonium chloride 50% (BC), 1,2 benzisothiazolinon/ 2-methyl-2H isithiazolin-3 one 1.02-1.04 g/ml (BIT/MIT), 5 chloro 2 methyl -2H isothiazolin-3 one/ 2-methyl-2H isothiazolin-3 one + Broponol 1.05-1.07 g/ml (CIT/MIT+Broponol), 5 chloro 2 methyl -2H isothiazolin-3 one/ 2-methyl-2H isothiazolin-3 one 1.02 g/ml (CIT/MIT) and Microcare SB were utilized in this study. All of these disinfectants were used as preservative in food industry. The isolates showed a high susceptibility to CIT/MIT, MIT/BIT, CIT/MIT+Bropanol, CHX, BTC and a low susceptibility to Microcare SB. The minimal inhibitory concentrations (MICs) of these disinfectants were determined. **Conclusion:** The data obtained in this study suggested that class 1 integrons are widely distributed among serogroups of *Salmonella enterica* and demonstrated disinfectant resistance serotyped Salmonella. The study shows the need for monitoring the antimicrobial and disinfectant resistance varied in different Salmonella serotypes.

Keywords: *Salmonella enterica*, integron, disinfectant