

Isolation and Identification of Enterobacteriaceae Causes Bovine Mastitis and Determination of Antibiotic Susceptibility

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Background & Objectives: The Enterobacteriaceae is a large family of gram negative bacteria and one of the most significant prevalent agents of a large group of the livestock diseases, particularly the cause of mastitis in the cows. Damages and losses on the livestock breeding industry the entire world. The objective of this study is to survey the Frequency of the Enterobacteriaceae causes mastitis in the cows of suburbs of Tonekabon city.

Methods: In this study, 100 heads cattle infected with mastitis were sampled in the sterile conditions, the samples were cultured in the EMB and MacConkey Agar the single colony was isolated and were identified by the screening tests, including; gram staining, oxidase, IMVIC and TSI. Then, in order to determine of the antibiotic resistance, antibiogram test was conducted by the disk diffusion Methods.

Results: Of 100 samples taken from the mastitis, 56 strains were identified. Out of all isolates 51 strains were lactose positive and 5 strains were lactose negative. Result of the phenotyping of the positive lactose strains were reported 11 strains (19/46%) *Serratia marcescens*, 9 strains (16.07%) *Enterobacter cloacae*, 7 strains (12/5%) *Serratia odoriferi*, 7 strain (12.5%) *Klebsiella penomoniea*, 6 strain (10.71%) *Citrobacter frondi*, 5 strain (8.92%) *Kelebsiella oxytoca*, 5 strain (8.92%) *Enterobacter aerogenes* and 1 strain (1.78%) *Morganella morgani* Also, 5 strains were shigella dysentery (8.22%) were isolated. On the basis of the antibiogram tests of the total 56 strains of the isolated lactoses negative and positive all of them (100%) were resistant to the Nalidixilic acid, streptomycin and tylosin.

Conclusion: Biochemical tests as the standard Methods are regarded simple cheap and enforceable in all laboratories. In this study the prevalence of Enterobacteriaceae was reported (56 %).

Keywords: Mastitis; Enterobacteriaceae; Antibiotic Resistance; Mastitis