

Prevalence and Antibiotic Susceptibility of Bacterial Isolates from Mastitis Milk of Cow and Buffalo in Udaipur, India

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Abstract : -Mastitis disease has been known as one of the most costly diseases of dairy cattle and observed as an inflammatory disease of cow and buffalo udder. Mastitis badly affected animal health, quality of milk and economics of milk production along with cause's great economic loss. Bacteria have been representing the most common etiological agents of mastitis. The antibiotic sensitivity test was important to attain accurate treatment of mastitis. The aim of present research work was to explore prevalence and antibiotic susceptibility pattern of bacterial isolates recovered from cow and buffalo clinical mastitis milk sample. During the period of April 2010 to April 2014, total 1487 clinical mastitis milk samples of cow and buffalo were tested to check the prevalence of mastitis causing bacterial isolates. Milk samples were collected aseptically from the udder at the time of morning milking. The most prevalent bacterial isolates were *Staphylococcus aureus* (24.34%) followed by coliform bacteria (15.87%), coagulase negative *Staphylococcus aureus* (13.85%), non-coliform bacteria (13.05%), mixed infection (12.51%), *Streptococcus* spp. (10.96%). Out of 1487, 140 (9.42%) mastitis milk samples showed no growth on culture media. Identification of bacteria made on the basis of Standard Microbial features and procedures. Antibiotic susceptibility of bacterial isolates was investigated by Kirby-Bauer disk diffusion method. In vitro Antibiotic susceptibility test of bacterial isolates revealed higher sensitivity to Gentamicin (74.6%), Ciprofloxacin (62.1%) and Amikacin (59.4%). The lower susceptibility was shown to Amoxicillin (21.6%), Erythromycin (26.4%) and Ceftizoxime (29.9%). Antibiotic sensitivity pattern revealed Gentamicin are the possible effective antibiotic against the major prevalent mastitis pathogens. Present research work would be helpful in increase production, quality and quantity of milk, increase annual income of dairy owners and improve health of cow and buffaloes.

Keywords : antibiotic, buffalo, cow, mastitis, prevalence

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