

Isolation of *Staphylococcus aureus* from bovine mastitis and its antibiotic sensitivity pattern in an organized farm in Thanjavur region

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Staphylococcus aureus is a contagious opportunistic, commonest and economically important pathogen that causes clinical and/or subclinical mastitis in dairy cows throughout the world. Indiscriminative use of antibiotics has led to the emergence of multi drug resistant strains, particularly Methicillin-resistant *S. aureus* (MRSA). The present study was carried out to investigate the prevalence of *S. aureus* in cattle with clinical and sub-clinical mastitis in an organized farm in Orathanadu, Thanjavur. Milk samples were collected in sterile containers from 30 cows showing clinical mastitis and sub-clinical mastitis for isolation, identification, antibiogram and PCR of *S. aureus*. Briefly, the collected milk samples were enriched in nutrient broth and a loopful of inoculum from enrichment broth was streaked onto Mannitol salt agar (MSA) and incubated at 37°C for 24 hrs. The characteristic golden yellow coloured colonies were observed on Mannitol Salt Agar (MSA) and identified by Grams staining, biochemical tests such as oxidase, catalase and IMVic test and further, the isolates were confirmed by species specific PCR for *nucA* gene which amplified at 279 bp of *S. aureus* and the isolates were subjected to antibiotic sensitivity test. The results revealed that the isolates were sensitive to Enrofloxacin, Ciprofloxacin, Gentamicin, Oxytetracycline and Ceftriaxone in order of sensitivity pattern and all the isolates were resistant to Methicillin antibiotic. Thus, the high prevalence(7%) of Methicillin resistant *S. aureus* causing mastitis presents an alarming concern for both animal and human beings on the public health point of view.