

EVALUATION OF THERAPEUTIC EFFICACY OF MASTACURE, A HOMEOPATHIC MEDICINE, IN SUB-CLINICAL MASTITIS IN BUFFALOES

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Sub-clinical mastitis is a herd problem in cattle and buffaloes and it is responsible for heavy economic losses to dairy industry. It has long duration (months or even years) and is 15-40 times more prevalent than clinical mastitis. Sub-clinical mastitis serves as source of infection to other healthy animals within the herd. Antibiotic therapy is commonly employed to treat sub-clinical mastitis. The wide and indiscriminate use of antibiotics has resulted into development of drug resistance leading to therapeutic failure and undesirable presence of antibiotic residue in milk. In recent years, few homeopathic medicines have been claimed for their efficacy in treatment of mastitis. Keeping these facts in view, the present study was planned to evaluate Mastacure, a homeopathic medicine (manufactured by Gurudev Veterinaries, Sirsa (Haryana), India for treatment of sub-clinical mastitis in lactating buffaloes.

A total of 424 quarter milk samples of 106 apparently healthy lactating buffaloes were screened for sub-clinical mastitis. As per International Dairy Federation criteria, based on somatic cell count and isolation of bacteria, 23 buffaloes (21.6 %) and 42 (9.9 %) quarters were found positive for sub-clinical mastitis. Bacteria isolated were *Staphylococcus epidermidis* (32.3 %), *Staphylococcus aureus* (26.1 %), *Streptococcus agalactiae* (21.4 %), *Streptococcus dysgalactiae* (11.9 %) and Diphtheroids (7.1 %). No mixed infection was found.

Buffaloes found positive for sub-clinical mastitis were randomly divided into three groups on the basis of bacterial sensitivity towards different therapeutic agents. In group I, thirteen quarters of nine buffaloes were infused with intra-mammary preparation containing procaine penicillin G 100000 units, streptomycin 100 mg, sulphamerazine 0.5 g and hydrocortisone acetate 20 mg (Pendistrin SH) for three days at 12 hour intervals after each milking. In group II,

eleven quarters of six buffaloes were treated with intra-mammary infusion of ampicillin sodium 75 mg and cloxacillin 200 mg combination (Vetclox plus) for three days at 12 hour intervals after each milking. The milk samples from groups I and II buffaloes were collected twice i.e. prior to treatment and three days after withdrawal of treatment. In group III, eleven quarters of eight animals were treated with Mastacure, a homeopathic medicine (containing Chamomila, Apis mel, Merc. Sol., Cal. Phos., Aconite, Pulsatilla, Conium and Phellindrium) @ 30 drops orally twice a day for 30 days. For laboratory examination, milk samples were collected once before treatment and on days 10, 20 and 30 after start of therapy. The milk samples so collected were subjected to bacterial cultural examination and somatic cell count for evaluation of therapeutic efficacy of homeopathic medicine.

The infusion of Pendistrin SH in group I resulted in greater bacteriological cure (84.6 %) followed by Mastacure, a homeopathic medicine (77.7 %) in group III and Vetclox plus (72.7 %) in group II buffaloes (Table I). There was also marked decrease in somatic cell count in milk samples of all treated animals collected after treatment when compared with those of pre-treatment values. However, homeopathic medicine treated quarters of group III showed largest decrease in mean somatic cell count followed by treatments with antibiotics in groups II and I. On the basis of these findings, it may be concluded that Mastacure, a homeopathic medicine gave encouraging results which were comparable to antibiotic therapy in treating sub-clinical mastitis in buffaloes. Sharma *et al* (2004) recorded a bacteriological cure of 47.6 % with Mastacure and 70 - 80 % with antibiotics in sub-clinical mastitis in cows. Earlier workers also reported that homeopathic medicines gave lower cure rate in comparison to antibiotics in bovine sub-clinical mastitis. Sonnenwald (1986) and Klocke *et al.* (2002). The higher cure rate with Mastacure in present study might be due to species difference of cows and buffaloes and difference in nature of infecting organisms. However, further studies are required on the immune response of mammary gland to homeopathic medicines which could help in explaining the variations recorded therapeutic efficacy of homeopathic medicines in bovine mastitis.

Table 1. Therapeutic efficacy of Mastacure, a homeopathic medicine and intra-mammary antibiotic preparations in sub-clinical mastitis in buffaloes

	Group I*	Group II*	Group III*
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	Treated	Cured	Treated	Cured	Treated	Cured by day 10	Cured by day 20	Cured by day 30
Quarters	13	11 (84.6 %)	11	8 (72.7 %)	18	12 (66.6 %)	14 (77.7 %)	14 (77.7 %)

* Treated with Pendistrin SH marketed by M / S Sarabhai Zydus.

** Treated with Vetclox plus marketed by M / S Sarabhai Zydus.

*** Treated with Mastacure, a homeopathic medicine marketed by Gurudev Veterinaries, Sirsa (Haryana), India.

Acknowledgement

Authors are grateful to Dr. Kamal Jindal. Proprietor, Gurudev Veterinaries, Sirsa (Haryana), India for supplying Mastacure, a homeopathic medicine, free of cost for the therapeutic trial

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