



ISSN (E): 2277- 7695

ISSN (P): 2349-8242

NAAS Rating: 5.03

TPI 2018; 7(4): 494-495

© 2018 TPI

www.thepharmajournal.com

Received: 09-01-2018

Accepted: 13-02-2018

I Ashraf

Division of Clinical Veterinary Medicine,
Ethics and Jurisprudence, F.V.Sc and A.H,
SKUAST-K, Jammu and Kashmir, India

HU Malik

Division of Clinical Veterinary Medicine,
Ethics and Jurisprudence, F.V.Sc and A.H,
SKUAST-K, Jammu and Kashmir, India

Muheet

Division of Clinical Veterinary Medicine,
Ethics and Jurisprudence, F.V.Sc and A.H,
SKUAST-K, Jammu and Kashmir, India

A Muhee

Division of Clinical Veterinary Medicine,
Ethics and Jurisprudence, F.V.Sc and A.H,
SKUAST-K, Jammu and Kashmir, India

O Shah

Division of Clinical Veterinary Medicine,
Ethics and Jurisprudence, F.V.Sc and A.H,
SKUAST-K, Jammu and Kashmir, India

U Amin

Division of veterinary pathology, F.V.Sc
and A.H, SKUAST-K, Jammu and
Kashmir, India

SA Beigh

Division of Clinical Veterinary Medicine,
Ethics and Jurisprudence, F.V.Sc and A.H,
SKUAST-K, Jammu and Kashmir, India

S Bashir

Division of veterinary epidemiology F.V.Sc
and A.H, SKUAST-K, Jammu and
Kashmir, India

N Handoo

Division of veterinary surgery and
radiology, F.V.Sc and A.H, SKUAST-K,
Jammu and Kashmir, India

H Hammadani

Division of livestock production and
management, MCRS, F.V.Sc and A.H,
SKUAST-K, Jammu and Kashmir, India

N Nazir

Division of Clinical Veterinary Medicine,
Ethics and Jurisprudence, F.V.Sc and A.H,
SKUAST-K, Jammu and Kashmir, India

A Jan

Division of Clinical Veterinary Medicine,
Ethics and Jurisprudence, F.V.Sc and A.H,
SKUAST-K, Jammu and Kashmir, India

Correspondence

I Ashraf

Division of Clinical Veterinary Medicine,
Ethics and Jurisprudence, F.V.Sc and A.H,
SKUAST-K, Jammu and Kashmir, India

Longitudinal study on prevalence of sub clinical mastitis in winter season of cattle from Kashmir valley

I Ashraf, HU Malik, Muheet, A Muhee, O Shah, U Amin, SA Beigh, S Bashir, N Handoo, H Hammadani, N Nazir and A Jan

Abstract

The longitudinal study was conducted in Kashmir division of Jammu and Kashmir to access prevalence of sub-clinical mastitis in bovines. Study was conducted from January 2017 to February 2018. A total of 810 cattle samples were collected from apparently healthy quarters of lactating crossbred cattle of Kashmir region. The diagnostic protocol employed for the study was Somatic cell count, California mastitis test (CMT), pH and Electrical conductivity. Animal wise and quarter wise incidence of SCM was 47.58% and 26.67%, respectively. The study indicates that animal with apparently healthy quarter's harbors infection which can progress to clinical condition if animal is not treated for subclinical mastitis. So the study indicates that animals should be periodically examined for sub clinical mastitis and treated for subclinical mastitis.

Keywords: sub clinical mastitis, longitudinal study cattle and prevalence

Introduction

Mastitis is the inflammation of parenchyma of mammary gland, characterized by physical, chemical and usually bacteriological changes in milk and pathological changes in glandular tissues [1]. It is the most dreaded disease of dairy farmers because of reduced milk production, increased treatment costs, labour, milk discarding following treatment, death and premature culling [2]. Mastitis is also associated with number of zoonotic diseases in which milk acts as a vehicle of infection. Disease is of great economic importance owing to high treatment cost, reduced milk production, culling of high producing affected animals and extra expenses for the management of affected animals. Sub-clinical mastitis is the most important diseases of dairy animals throughout the world [3], it causes changes in the milk composition which in turn, affects the suitability of milk for processing and the quality of its products [4]. Subclinical mastitis achieves significance as it doesn't become clinically evident and is ignored by farmers despite the fact that it affects productivity and quality of milk.

Materials and Methods

Animals

The study included animals of both organized and unorganized dairy farms. Efforts were made to include animals of same breed, age, parity and under similar managerial conditions. Study included total of 810 lactating animals.

Sampling

A total of 810 milk samples were collected aseptically from apparently healthy quarters of lactating crossbred cattle of two different districts of Kashmir Valley. The relevant date including animal number, lactation number and date of calving were recorded.

Laboratory examination

Milk samples were subjected to Somatic cell count (SSC), California Mastitis test (CMT) (Pandit and Mehta, 1969), PH and E.C for the diagnosis of Sub clinical mastitis.

The exclusion criteria and inclusion criteria

The criteria employed for inclusion/exclusion in the present study was:

1. Animals with Somatic cell count (SSC) above 2 lakh were excluded from study while animals with SSC below the threshold level were included in study.

2. Animals with no history of any treatment against mastitis from 14 days prior to collection of samples were included in study while those animals with any antibiotic treatment within 14 days prior to study were excluded from study.
3. Animals which were in periparturient phase were excluded from study.

Results and Discussion

The overall animal-wise incidence of Subclinical mastitis among crossbred cattle was 47.58% and quarter-wise incidence was 26.67%. Finding of present study corroborates with the finding of [6]. However, lower prevalence rate of 36.86% was reported by [7]. Likewise, 35.25% and 36% quarter-wise and animal-wise prevalence of SCM among crossbred cattle from Pakistan was reported by [3], respectively. Unlike, above findings, [8] reported higher animal wise (73.46%) and quarter wise (73.82%) incidence of Subclinical mastitis among dairy cows. The variations observed among different studies could be due to the variation in the managerial practices being followed at various farms, prompt therapeutic interventions of clinical cases, culling of carriers in western countries, breed variation, topographic variations, milking techniques (Machine/Manual), season of study and adaption of mastitis control programme. Results of present study concluded that SCM is widely prevalent in crossbred dairy cows in field conditions, which ultimately reflects the bad quality of milk available for consumption. Thus, periodic screening of dairy farms for diagnosing SCM should be employed in the field by the farmers. From survey to farmer it was observed that managerial problem and mastitis prevention practices like dry cow therapy, pre and post-milking teat dip were not practiced by most of the dairy farmers. Increased incidence of mastitis was observed in cattle with faulty milking procedure and unhygienic conditions.

So it may be concluded that incidence of SCM is highly prevalent in animals with unhygienic conditions, faulty milking procedure, inadequate use of teat dips and less reliance on dry cow therapy. Animals with SCM mastitis poses health hazards for animals as well as humans as subclinical mastitis can proceed to clinical mastitis and consumption of milk can cause disease in humans. So present study recommend that periodic screening of animals for sub clinical mastitis and their management.

References

1. Radostitis OM, Gay CC, Blood DC, Hinchcliff KW. Veterinary Medicine (9thEdn.), W.B. Saunders (Book Power Ed. 2003). 2000, 612.
2. Yang FL, Li XS, He BX, Du YL, Li GH, Yang BB, *et al.* Bovine Mastitis in Subtropical Dairy Farms, 2005-2009. Asian Journal of Animal and Veterinary Advances. 2011; 10:68-72.
3. Bachaya H, AMA Raza, Murtaz S, IUR Akbar. Subclinical bovine mastitis in Muzaffargarh district of Punjab (Pakistan). J Anim. Plant Sci. 2011; 21:16-19.
4. Sharif A, Muhammad G. Mastitis control in dairy animals. Pak. Vet. J. 2009; 29:145-148.
5. Pandit AV, Mehta ML. Sodium Lauryl Sulphate as a substitute for Californian Mastitis test reagent, for diagnosis of subclinical mastitis in buffaloes. Indian. Vet. J. 1969; 40:111-119.
6. Sharma A *et al.* Ani Biotechnol. Smith BP. Large Animal Internal Medicine: Diseases of Horses, Cattle, Sheep, and Goats. 2nd ed., Mosby year book, 2011; 22(3):163-9. U S A, 1996 1177-1188.
7. Abunna F, Fufa G, Megersa B, Regassa A. Bovine Mastitis: Prevalence, Risk Factors and Bacterial Isolation in Small-Holder Dairy Farms in Addis Ababa City, Ethiopia. Global Veterinaria. 2013; 10(6):647-652.
8. Adane B, Guyo K, Tekle Y, Taddele H, Bogale A, Biffa A. Study on Prevalence and Risk Factors of Bovine Mastitis in Borana Pastoral and Agro-Pastoral Settings of Yabello District, Borana Zone, Southern Ethiopia. Amer-Euras J Agri Environ Sci 2012; 12(10):1274-1281.
9. Nath AK, Dutta JB. Incidence of sub clinical mastitis in dairy cows in and around Khanapara region. Indian. J. Vet. Med. 2007; 27(2):117-118.