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Research Paper

BACTERIOLOGICAL ANALYSIS OF MASTITIS IN GOAT

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Mastitis suspected ewes were brought to the veterinary dispensary; milk samples were collected and examined for the bacteriological load. The pathogenic bacteria isolated were found to be *Staphylococus* sps (75%), *E.coli* (33.3%), *Bacillus* (8.23%) and *Pseudomonas* (8.23%) respectively. The mono bacterial infection with *Staphylococcus* is predominant over the mixed infection with *E.coli*, *Bacillus* and *Pseudomonas*.

Keywords: Goat, Mastitis, Staphylococcus, E.coli

INTRODUCTION

Mastitis is a critical disease in dairy animals, which affects the economy of farmer with reduced milk yield and milk quality. Mastitis is the inflammation of udder with physical changes of udder and physiological changes in milk (Nazifi *et al.*, 2011). The etiology of mastitis was mainly by pathogenic microbes like *staphylococcus* (Contreras *et al.*, 2007), *coliforms* (Pal *et al.*, 2011) and other organisms like *Pseudomonas* and *Bacillus sps*.

MATERIAL AND METHODS

In the present study animals brought to veterinary dispensary with the history of ewes showing swollen udder, and difficult in milking even some ewes are not allowed their kids for suckling. The animals on clinical observation found to be with swollen udder which feels pain on palpation. The milk was collected aseptically from the affected quarters (12) and send for bacteriological examination.

RESULTS AND DISCUSSION

The microbial load in collected milk samples was analyzed to be *Staphylococus sps*, *E.coli*, *Bacillus* and *Pseudomonas*. Among 12 milk samples 9 shows positive for *Staphylococus sps*, 4 positive for *E.coli*, and one sample positive for both *Bacillus* and *Pseudomonas*. The prevalence of microorganisms in the present study was reported as *Staphylococus sps* (75%), *E.coli* (33.3%), *Bacillus* (8.23%) and *Pseudomonas* (8.23%) respectively. Similar results with be *Staphylococcus* (coagulase positive

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Staphylococcus spp. (44.76%) and coagulase negative Staphylococcus spp. (22.86%) was the predominant organism isolated from mastitis milk samples followed by Streptococcus spp., E.coli, Bacillus spp., Cornyebacterium spp. and Pseudomonas spp. Ajuwape et al. (2005) reported the similar kind results with coagulasenegative Staphylococcus (50.9%) as predominant organism followed by Escherichia coli (15.1%), Streptococcus spp. (9.4%), Bacillus cereus (7.5%), Mannhiemia haemolytica (5.7%), Corynebacterium spp. (5.7%) and Klebsiella pneumoniae (5.7%).

The other major pathogen responsible for mastitis was E.coli with 33.3% these results are in similar with the results of Ameh and Tari (2000), while Sreepriya et al. (2016) reported the prevalence of E.coli with 50% incidence in goat mastitis. Radostitis et al. (2000) reported that the Streptococcus sps, E.coli, Klebsiella spp, Enterobacter Citrobacter spp, spp, Pseudomonas spp, Serratia spp, Proteus spp. The Bacillus cereus found in one sample in the present study the prevalence of this organism also reported by the studies of Ajuwape et al (2005) with Bacillus cereus (7.5%). The presence of E.coli in the study was mainly due to the poor hygiene in shelter and contaminated water source.

On analysis it reveals that *Staphylococus sps* plays predominant role for mastitis in ewes followed by *E.coli*. Even the other organisms like *Bacillus* and *Pseudomonas* were detected the *Staphylococcus sps* and *E.coli* plays important role. The mono microbial infection with *Staphylococcus* and *E.coli* and mixed infection with both these organisms and mixed with *Bacillus* and *Pseudomonas* also observed in the present study. The incidence of mono microbial

infection with *staphylococcus spp* observed in 7 quarters, *E.coli* in 1 quarter while the mixed infection was observed with both Staphylococcus and *E.coli* in 2 quarters and with staphylococcus, *Bacillus* and *Pseudomonas* in 1 quarter. Sreepriya *et al.* (2016) reported the mixed infection of Staphylococcus with *E.coli* and *Klebisiella*. The *Staphylococcus sps* and *E.coli* were isolated from the gangrenous mastitis cases in goat by Pal *et al.* (2011). The mono bacterial infection predominates mixed infection in goat mastitis. Sarker and Samad (2011) also reported the predominance of mono bacterial infection (76.27%) over the mixed microbial infection (16.95%).

One of the major causes of mastitis in goat farming was found to be poor management with low hygiene at the farm as well as animals itself. The unhygienic condition of farm and animals results in mastitis with coliforms (Radostitis *et al.*, 2000).

The Staphylococcus sps were the predominate as like in other mastitis cases in other animals while the presence of coliforms is majorly due to improper management in farms as well as unclean animals. One of the predisposing factor for mastitis in goat were found to be overcrowding which results in scope of spreading microorganisms from infected animals to healthy animals even from infected quarter to healthy quarter in same animal.

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