

## Studies on Some Aspects of Sub Clinical Mastitis in Cattle

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**Abstract :** The present study was conducted on 200 quarters from 50 apparently healthy cows. Samples are subjected to California Mastitis Test (CMT), cultural examination, and mPCR. Milk samples were also subjected to changes in composition Viz. fat, protein, and lactose. The prevalence of subclinical mastitis based on culture examination was 30(60/200), 36 (72/200), and 40 percent (93/200) based on CMT, culture examination, and mPCR on a quarterly basis. The prevalence of subclinical mastitis on animal basis was 40 (20/50), 46 (23/50), and 52 percent (26/50) based on CMT, Culture examination, and mPCR. The highest prevalence was observed in IVth parity on a quarterly basis and in Vth parity on cow basis. On culture examination, *Staphylococcus aureus* was the most prevalent organism (50.56%), followed by *Streptococcus dysag lactiae* (11.33%), *E. coli* (7.8 %), *Staphylococcus agalactiae* (13.48 %), *Staphylococcus epidermidis* (2.2 %), *Streptococcus hyicus* (6.94%), *Streptococcus uberis* (5.16%), *Klebsiella pneumonia* (6.74%). On isolation by bacterial mPCR, *Staphylococcus* spp. (42%) was the major pathogen. Organisms isolated in mixed infections are *Streptococcus* spp., *Klebsiella pneumonia*, *E.coli* and *Pseudomonas aeruginous*. The average mean value of fat, protein, and lactose content in subclinically affected milk samples were  $3.40 \pm 0.101$ ,  $3.009 \pm 0.033$ , and  $4.48 \pm 0.03$ , and the mean value of fat, protein, and lactose content in normal milk were  $4.13 \pm 0.035$ ,  $3.39 \pm 0.021$ , and  $5.10 \pm 0.016$ . The mean blood level of reduced glutathione in subclinical mastitis ( $30.44 \pm 1.87$  ng/ml) was lower than healthy cows ( $47.98 \pm 4.04$ ng/ml). The concentration of malondialdehyde ( $10.026 \pm 0.21$ mmol/L) in subclinical mastitis was significantly higher as compared to healthy group cows ( $2.19 \pm 0.23$ mmol/L).

**Keywords :** cow, subclinical mastitis, mPCR, California Mastitis test

**Conference Title :** ICVPLHE 2020 : International Conference on Veterinary Pathology, Livestock Health and Epizootiology

**Conference Location :** Dubai, United Arab Emirates

**Conference Dates :** December 17-18, 2020