

## STUDIES ON MASTITIS IN BUFFALOES IN IRAQ I. PREVALENCE RATE AND ETIOLOGY\*

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The prevalence rate of clinical mastitis in 151 buffaloes in Iraq was found to be 25.17% (12.08% on quarter basis) and that of subclinical mastitis 31.94% (11.68% on quarter basis). The hind quarters were affected more frequently than the fore quarters.

Bacteriological examination of quarter milk samples revealed that staphylococci were the chief aetiological agents in both clinical and subclinical mastitis, followed by *Str. agalactiae*, *Str. dysgalactiae*, and *C. pyogenes*. Infections due to other organisms were rare.

Data on the occurrence of mastitis in relation to possible predisposing factors, such as lactation number, age and stage of lactation, showed that the prevalence rate of mastitis increased with increase in lactation number and age; it became the highest during the fifth lactation and at 9-10 years of age; after that it tended to decline. The incidence of mastitis was the highest in the first two months of lactation, and declined in the subsequent months.

Mastitis occurs in all species of domestic animals, but it is of great economic importance in dairy animals. Extensive studies have been made on the prevalence, diagnosis and treatment of mastitis in cows, but less attention has been given to mastitis in buffaloes. This paper reports on some investigations conducted in 1981-82 on the prevalence of clinical and sub-clinical mastitis and the micro-organisms associated with these infections in a few organized herds of buffaloes in Iraq.

### MATERIAL AND METHODS

For this study, Government buffalo breeding farm, Missan, and private buffalo farms around Baghdad were selected. The udder of each buffalo was examined clinically, and information pertaining to the breed, age, lactation number, and stage of lactation, was recorded.

Milk samples were collected from individual quarters separately in sterilized tubes with aseptic precautions. The first few streams of milk were discarded. The milk samples immediately after collection were taken on ice to the College in Baghdad or the Public Health Laboratory at Missan for bacterial isolations. This was done by streaking the samples on 5% sheep blood agar plates, which were incubated at 37°C for 48-72 hours. The colonies suspected to be those of mastitis pathogens were picked up and subcultured for obtaining pure cultures. The isolates were identified on the basis of their morphology, cultural characteristics, and biochemical reactions. The staphylococcal isolates

were studied for pigment formation and coagulase production. The streptococcal isolates were tested serologically for Lancefield group identification, using a rapid latex test system, Streptex, as recommended by Wellcome Research Laboratories, London.

### RESULTS

#### *Prevalence rates*

A total of 151 lactating buffaloes, 70 in the Missan farm and 81 in four private herds in White Gold village near Baghdad, were examined. The results are given in Table 1. The total prevalence rate of clinical mastitis was found to be 25.17% and that of subclinical mastitis 31.94% (12.08% and 11.68%, respectively, on individual quarter basis). The hind quarters were affected in 60% and the fore quarters in 40% (Table 2).

#### *Frequency distribution of mastitis pathogens*

The results of cultural examination of milk samples are summarized in Table 3. Organisms other than coagulase-positive staphylococci, streptococci and *Corynebacterium pyogenes*, when isolated from apparently normal samples, were disregarded unless the number excreted was high.

#### *Occurrence of mastitis in relation to predisposing factors*

Observations on mastitis in relation to lactation number, age and stage of lactation are given in Tables 4, 5 and 6.

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