

## CHARACTERISTICS OF STAPHYLOCOCCI ASSOCIATED WITH UDDER INFECTIONS OF BUFFALOES IN IRAQ

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(Received : September 20, 1983; Revised : March 28, 1984)

### ABSTRACT

Of the 138 staphylococci isolated from buffalo milk samples, 85 were coagulase positive and 53 coagulase negative. Out of 39 and 46 coagulase positive strains from clinical and subclinical cases, 29 (74.36%) and 22 (69.56%), respectively, were chromogenic, while only 15 (28.85%) coagulase negative strains from apparently normal udders had this property. All the coagulase positive staphylococci from clinical cases and 95.65% from subclinical cases were haemolytic, majority of them being  $\beta$ -haemolytic. Most of the coagulase negative strains (90.38%) from subclinical cases were non haemolytic. Further, majority of coagulase positive strains, 97.43% from clinical and 89.13% from sub-clinical cases, could ferment mannitol while only 28.85% coagulase negative strains could do so.

The use of human international set of phages for typing of *Staph. aureus* (coagulase +ve) strains from buffalo milk was found to be of low value. Only three of the 56 strains tested could be typed and these belonged to phage group I and III, the phage pattern of two strains being 29/6/42E/47/53/75/77/65/81, while that of third strain 6/42E/67/47/54/84. Staphylococcal strains with similar pattern (groups I and III) have been reported to be associated with hospital sepsis cases.

Staphylococci are known to be associated with suppurative lesions and food poisoning in human beings. In dairy animals staphylococci are also well recognised as the causative agent of mastitis; in Iraq these organisms are the most important cause of mastitis in cattle (Al-Falluji and Robesko, 1973; Majeed, 1979; Zorha, 1979) and in buffaloes (Yass *et al.*, 1983a). The pathogenicity of staphylococcal strains have been related to a number of criteria including coagulase

production. According to Coles (1980), coagulase production is an important criterion for classification as pathogens. Further, the use of phage typing of staphylococci, particularly coagulase positive strains, has been made in the epidemiological investigation of food poisoning outbreaks in human population. It is particularly helpful in determining the source of toxigenic staphylococcal strains — the person and/or food responsible for food epidemic.

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