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Clinical Article

Sucessful use of lysozymes in the treatment of endometritis

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ABSTRACT

The enzyme lysozyme was successfully used for the treatment of bacterial endometritis in buffalo.

Key words: Lysozyme, endometritis

A she buffalo aged about 7 years was presented to the campus teaching clinical complex, College of Veterinary Science, Rajendranagar, Hyderabad with a history of passing mucopurulent discharges from the external genitalia. History revealed that the buffalo was mated twice by natural service but failed to conceive. On per-rectal palpation, moderate tone of uterus was observed and uterine wall was thick. On back racking of the uterus, mucopurulent discharges were expelled from external genitalia.

After evacuation of the contents of the uterus, 4 mg of lysozyme® (Himedia laboratories ltd.) enzyme diluted in 40 ml of normal saline was infused for 2 consecutive days. Following the day of treatment, there was excessive expulsion of purulent discharge from external genitalia. On day 2, the purulent discharge was less. The uterine wall was noticed to be thin and having normal fleshy consistency after 3 days of treatment.

The buffalo was bred with frozen semen after skipping of one estrous cycle. After 60 days, the buffalo was declared positive for pregnancy by per recal palpation. Similar therapeutic use of lysozyme with better conception rate was reported by Dembiński *et al.* (1994) and, Biziulevichius and Lukausks (1988). Since lysozyme was chemoattractant, there might be migration of more number of polymorphonuclear cells in the uterus. Thus, the migrated polymorphonuclear cells have eliminated the bacteria by phagocytosis. Besides this, lysozyme itself is having bactericidal activity (Hussain and Daniel,1992) by destroying the cell wall (Haribabu, 2003). It was also reported that the lysozyme modulates the synthesis of certain chemical mediators like tumor necrosis factor, interferon alpha which might have activated the phagocytosis.

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