

**EFFICACY OF PGF<sub>2</sub>α WITH CEFTIOFUR SODIUM IN TOXIC OR SEPTIC PUERPERAL METRITIS IN DAIRY COWS**

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**ABSTRACT**

The objective of this study was to evaluate the efficacy of a systemic treatment of toxic or septic puerperal metritis in dairy cows with ceftiofur and PGF<sub>2</sub>α. Twenty crossbred cows having septic puerperal metritis 1-2 weeks postpartum were treated with PGF<sub>2</sub>α (Dinoprost triomethamine 5 mg/ml) – Inj. Lutalyse @ 5 ml i/m on the first day followed by ceftiofur sodium @ 2.2 mg per kg i/m for 5 days. Ringers lactate, dextrose saline and supportive multivitamin therapy for 3 days were also administered. All the observed clinical signs septic puerperal metritis came into normal after 5 days of treatment and animals recovered uneventfully.

**KEY WORDS:** Toxic or septic puerperal metritis, Dairy cows, PGF<sub>2</sub>α, Ceftiofur.

**INTRODUCTION**

Toxic or Septic puerperal metritis is one major reproductive disorder in dairy cattle. Puerperal metritis has multiple factors contributing to its etiology, severity and duration. It occurs during the period from calving to when the anterior pituitary gland becomes responsive to GnRH approximately 7 to 14 days postpartum (Olson *et al.*, 1986). The present communication was aimed to evaluate the efficacy of PGF<sub>2</sub>α with ceftiofur sodium in toxic or septic puerperal metritis in dairy cattle.

**CASE HISTORY AND OBSERVATIONS**

A total of 20 crossbred dairy cows 1-2 weeks post-calving in their 1<sup>st</sup> to 5<sup>th</sup> lactation were presented with the history of complete anorexia, depression, mild dehydration, reduced milk yield, foetid watery reddish brown vaginal discharge, pyrexia, absence of ruminal motility and soiled perineal region. Rectal examination revealed, flaccid doughy non-retractable uterus suspended on pelvic brim with partially opened cervix. Out of 20 cases, 10 cases had suffered with retained foetal membranes (RFM) that were removed manually by local veterinarians and remaining 10 cases, were without RFM. The uterine discharges of all the animals were subjected to antibiotic sensitivity test with ceftiofur sodium and the results showed susceptibility towards the same. Based on the history, clinical examinations and lab findings, the cases were diagnosed as septic puerperal metritis.

**TREATMENT AND DISCUSSION**

All 20 cases were treated with PGF<sub>2</sub>α - Inj. Lutalyse (Dinoprost triomethamine 5 mg/ml, M/s Pfizer Animal Health Division, Mumbai) @ 5 ml i/m on the first day followed by ceftiofur sodium @ 2.2 mg per kg i/m (Xnel, Pfizer Animal Pharma Pvt. Ltd., Mumbai) for 5 days. Ringers lactate and dextrose normal saline were administered intravenously and supportive multivitamin was administered intramuscularly for 3 days. All treated cases expelled out around 10 liters of uterine discharge within 3 days. Gross uterine involution was noticed within six to eight days. All the observed clinical signs like pyrexia, anorexia, and reduced milk yield came into normal after 5 days of treatment.

In the present study a combination of PGF<sub>2</sub>α and ceftiofur sodium was found effective in the

treatment of toxic or septic puerperal metritis in dairy cows. In puerperal metritis, there is an inflammation of all layers of the uterus and it is characterized by pyrexia, anorexia, depression, dehydration, reduced milk yield and the presence of a foetid watery reddish brown vaginal discharge. The present findings corroborated with the reports of various workers (Osion *et al.*, 1986; Smith *et al.*, 1998 and Kumbhar *et al.*, 2010). Moreover, recent studies recommend the usage of ceftiofur sodium in the systemic treatment of cows affected with toxic or septic puerperal metritis (Smith *et al.*, 1998; Drillich *et al.*, 2001).

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