

Ulcerative mammillitis in a crossbred Jersey cow and its therapeutic management

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Abstract

Ulcerative mammillitis is a sporadic disease of cows caused by Bovine Herpes Virus-II. The current clinical case reports ulcerative mammillitis in a cross-bred jersey cow in Kashmir that showed tick infestation, along with the clinical manifestation of udder oedema, blisters, ulcers, and localized dark brown scabs on teats that bled when touched. The vital parameters were all within the normal range and the cow was also mastitis-free, as confirmed by the CMT test. Based on clinical signs and lesions, the illness was identified as ulcerative mammillitis. Since there is no particular treatment available, all the affected quarters were treated for 7 days with a 1 percent potassium permanganate solution before and after milking. Injection Ivermectin, was also administered at weekly intervals to kill ticks. As a nutritional supplement, powder Ceff-fort Care was offered orally and herbal aerosol spray Dressol fast relief was used four times a day as a topical skin treatment. For pain and inflammation bolus Serakind for 5 days was given orally along with Ceftriaxone injection, administered intramuscularly for 5 days to hasten the recovery. After one week, the cow recovered fully without any untoward manifestation.

Keywords: Ulcerative mammillitis, Therapy, Kashmir

Ulcerative mammillitis is a rare viral illness that has been seen on an irregular basis in dairy cows and buffaloes, with a high incidence in temperate parts of the world (Firyal *et al.*, 2019). The illness is caused by the Herpesviridae family's Bovine Herpes Virus-II (BHV-2) and is characterized clinically by the development of ulcers and scabs on teats or teat-udder junctions with substantial pain and discomfort (Radostits *et al.*, 2007). Mastitis, the most dangerous illness in dairy cows, develops during the chronic phases of ulcerative mammillitis. The virus can be transmitted by the milker's hands, milking equipment, biting insects, sperm, and the air (Kemp *et al.*, 2008). The disease has been observed in dairy animals of all ages, with heifers in their first lactation being particularly susceptible (Sharma *et al.*, 1998). Hormonal fluctuations at parturition, calving stress, periparturient udder oedema, and immunosuppression are all important risk factors (Kemp *et al.*, 2008). This clinical case reports ulcerative mammillitis from Kashmir in a crossbred Jersey cow, along with its effective therapeutic management.

Case History and Observations

A recently purchased crossbred jersey cow was presented to the Veterinary Centre of District Ganderbal in

Kashmir with a history of parturition 2 months back, post parturient udder oedema, blister formation, ulcers, and tick infestation on inner thighs, udder, and teats. Clinical examination revealed that the afflicted teats were swollen. Udder skin (particularly between quarters) and the base of teats were discovered to be covered with localized dark brown scabs that bled when touched (Fig 1). The cow also refused to milk, indicating that she was in a lot of discomfort due to pain. Vital indicators such as body temperature, respiration rate, and pulse rate were within acceptable limits. The milk's physical appearance was normal and mastitis-free, as validated by the California Mastitis Test (CMT). Based on the clinical symptoms and early lesions, the illness was identified as ulcerative mammillitis. As there is no effective treatment for this virus, the treatment was limited to supportive care.

Treatment and Discussion

To treat the patient, a 1 % potassium permanganate solution was prepared and applied to all afflicted quarters before and after milking for 7 days. To kill ticks, two subcutaneous injections of Ivermectin (Hitek) 3ml were given at weekly intervals. In addition, nutritional supplement Ceff-fort Care (Lutim pharmaceuticals) was offered to cow orally @ 20 gm/day as supportive therapy for udder oedema, and herbal aerosol spray Dressol fast relief (of Cattle Remedies) as a topical skin treatment

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Fig. 1: Ulcerative mammillitis in cross bred jersey

to control skin infections was used four times a day. Additionally, a bolus Serakind twice a day for 5 days was given orally to manage pain and inflammation. Additionally, Intacef (Ceftriaxone) injection, 3 gm was also given intramuscularly for 5 days to hasten the recovery and to prevent the spread of disease, the owner was also instructed to isolate the diseased cow as soon as possible and advised to milk it after the healthy animals had been milked. However, powder Ceffort Care was continued for the next 5 days as prophylactic to avoid the development of post mammillitis mastitis complex. After one week, the cow recovered fully without any untoward manifestation.

Ulcerative mammillitis was diagnosed based on the presence of swelling, ulcers, blisters, and dark brown scabs that bled when touched and similar findings were described by (Kachhawa *et al.*, 2017 and Syed *et al.*, 2009) from India in cows suffering from ulcerative mammillitis. There is no specific treatment available for ulcerative mammillitis, however, to alleviate pain and inflammatory signs anti-inflammatory drug Serakind bolus (Mankind pharmaceuticals) was used for 5 days and the use of anti-inflammatory drugs in such cases was in agreement with the findings of Kachhawa *et al.*, (2017). The use of a 1% solution of potassium permanganate (KMnO₄) was

effective for local treatment of teats and udder in the cow suffering from mammillitis. KMnO₄ is used as a teat dip for prevention, treatment, and control of bovine mastitis and in general teat dipping is categorized among highly recommended mastitis control programs (Oliver *et al.*, 2001). Following treatment with an anti-inflammatory drug the pain and inflammation resolved in our case. Antibiotic therapy in case of ulcerative mammillitis using Ceftriaxone injection was in accordance with the findings of (Syed *et al.*, 2009). The use of antibiotics in cases of ulcerative mammillitis helps in controlling the development of secondary complications like mastitis. Besides the use of therapeutic agents, for improving the cure rate, the owner of the cow was also advised to isolate the diseased cow as soon as possible and milk it after the healthy animals had been milked.

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