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A combination of conventional and alternative ethnoveterinary medicine for the treatment of lumpy skin disease in a she-buffalo: A case report

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Abstract

A graded murrah buffalo of 5 years age in 2nd lactation was presented to the Veterinary Dispensary, Jeelakarragudem, West Godavari District, with clinical signs of general malaise, ocular and nasal discharge, pyrexia, and sudden decrease in milk production. The striking feature noticed on the skin of the buffalo was presence of characteristic nodules all over the body of approximately 1-2 cm diameter. Based on the signs and lesions, it was diagnosed as Lumpy skin disease and was treated with antibiotics, NSAID's, and ethnoveterinary formulations. The animal recovered by day 5 and skin lesions got faded by day 15.

Keywords: Lumpy skin disease, buffaloes, capripox virus, alternative medicine, conventional medicine

1. Introduction

Lumpy skin disease (LSD) is a serious viral disease of cattle and buffalos caused by the LSD virus (LSDV), that belongs to the Capripox virus genus of the Poxviridae family [3]. LSDV infection shows large variations in clinical presentation that range from sub-clinical infection to death [4]. These can include fever; eruption of skin nodules covering the neck, back, perineum, tail, hind legs and genital organs; superficial lymph node enlargement and, in a few animals, oedema of the limbs and brisket together with lameness, and severe economic losses due to emaciation, decreased or cessation of milk production, low weight gain, abortion, myiasis and permanent damage of hides which causes lowering of their commercial value [1, 2]. Unfortunately, there is no specific treatment available for LSD [6]. The present work is a combination of both conventional and alternative medicine in the treatment of LSD in a she-buffalo.

2. Methodology

2.1 Case history

A five-year-old, graded murrah buffalo in 2nd stage of lactation was presented to dispensary with history of sudden decrease in milk yield to 2 litres from 6 litres per day, anorexia, suspended rumination for 3 days.

2.2 Clinical examination

Clinical examination revealed hyperthermia of 102-degree Celsius, decreased ruminal movements and most importantly presence of intracutaneous nodules of 1-3cm diameter which vary from greyish white fibrous mass to pus like material upon maturation (Fig.1). These lesions were also in variable sizes and some were even coalescing. They are present all over the body with marked distribution over perineum, hind limbs, udder, back and tail of the animal. The lesions were painful to touch and of progressive nature. Based on the pathognomonic lesions or wounds on the body, the disease was diagnosed as Lumpy Skin Disease (LSD).

2.3 Treatment

Treatment was done with a combination of conventional and ethnoveterinary medicine. Conventional therapy with antibiotic Inj. Amoxicium forte @ 10 mg/kg Body weight, I/v; inj. Meloxicam @ 0.1 mg/kg body weight, I/m; Inj. VIT A @ 1.5 million units I/m; Inj. Tribivet @ 15 ml, I/v; Inj. DNS- 1000ml, I/v for 5 days.

Ethnoveterinary medicine with oral preparation consisting of betel leaves @ 10 no., black pepper-10g, salt @ 10g, jaggary 250g, all together made into a paste and fed orally TID for 15 days.

For external wounds, are first washed with povidone iodine solution and a paste made of handful of basil leaves, neem leaves, garlic, turmeric powder, custard apple leaves, mixed in coconut oil and applied on lesions for 15 days.

3. Results and Discussion

The animal showed signs of recovery from day 3 and after 15 days of treatment, the buffalo recovered completely with improvement of skin condition, healing of wounds and the buffalo skin appeared glossy (Fig.2). The Animal was feeding normally and was active with normal temperature of 99.2 °C after 15 days of therapy. The characteristic intracutaneous nodular lesions of LSD with greyish white fibrous mass to pus like mass healed by 15 days without forming into ulcers or abscess. Moreover, there were no remnants of wounds or scars left after 15 days of treatment.

According to Tuppurainen *et al.* (2018) ^[6], the only treatment available in LSD is supportive care of cattle using wound care sprays, use of antibiotics to prevent secondary skin infections and anti-inflammatory painkillers to keep up the appetite of affected animals, whose line of treatment is similar to present study. Few authors used alternative medicine in treatment of cattle with LSD and got similar results like us by using cocktail of Herbal mixture composed of turmeric powder, aloe vera jelly, baking soda, neem leaves, betel leaves, garlic & pepper is fed to cattle BID for 14 days and along with this, the affected animals were mopped/washed with neem-soaked water ^[5]. A combination of conventional and alternative therapy for treatment of LSD was used by very few authors from India and this is one such study.



Fig 1: Characteristic intracutaneous nodules in a she-buffalo affected with LSD



Fig 2: Healing of nodular lesions after 15 days of therapy

4. Conclusion

The combination of convention and ethnoveterinary medicine yielded very good results and can be followed in treatment of LSD because, the use of antiviral drugs requires lot of expenditure for farmer and use of this cost-effective method helps in control of disease especially in developing countries like India.

5. References

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