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A case study on lumpy skin disease and its management

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Abstract
The present study reports the clinical management of Lumpy skin disease in indigenous cow. A Kangeyam cow with the clinical symptoms of circumscribed skin nodules of different body parts at ICAR KVK Erode district Instructional Farm. Clinical examination showed that high temperature with normal respiration and pulse rate. Based on the clinical signs the case was diagnosed as Lumpy Skin Disease and transmitted by arthropod vectors. The case was treated with combination therapy and the skin lesions also cured by proper application turmeric & neem oil.

Keywords: Kangeyam cow, LSD

Introduction
Lumpy skin disease (LSD) is caused by lumby skin disease virus (LSDV). It is a virus from the pox viridae, genus Capripox virus and characterised by multiple skin lesions, fever, enlargement of superficial lymphnodes, profuse salivation, lacrimation and nasal discharge as well as oedema and swelling of the joints (Davis, F.G. 1991). It is transmitted by arthropod vectors such as mosquitoes, bititng flies and ticks. Although infected animals recover within 2-3 weeks, there is reduction in milk yield in lactating cows for several weeks. The mortality rate is around 10-20% and mortality rate is around 1-5%. This clinical case study reports the outbreak of LSD in Kangeyam indegenous cow and its successive management.

Case Report

LSD Affected Kangeyam cow

History & Clinical examination
An Indigenous Kangeyam cow aging five years maintained at ICAR KVK MYRADA instructional farm Erode district. Suddenly the cow exhibited symptoms of circumscribed skin nodules of different body parts especially on neck region and had a history of reduced appetite. On clinical examination it was found that body temperature was 39.8 ^{0}C, pulse & respiration were within the normal range. Based on the history and clinical signs, the case was tentatively diagnosed as Lumpy skin disease.

Treatment
The animal was isolated from other farm animals immediately and maintained separately. The animal was treated with combination therapy of antibiotic Enrofloxacin @ dose rate of 10 mg per animal, Anti Inflammatory Meloxicam @ dose rate of 0.5 mg per/Kg Body weight of the animal and antihistamines.

Topical application of antiseptic ointment with fly repellent properties (Turmeric, Neem paste/ Neem oil) over there eroded skin lesions. The same treatment was continued for three days. The farm workers were instructed to wear gloves while handling animals and the shed was disinfected in regular intervals of time. The animal was fully recovered from lumpy skin disease and the appetite of animal was improved and the skin lesions also healed properly.

Discussion

Based on the clinical signs and history the present case was confirmed as LSD which is similar to the earlier reports Al - Salihi KA. 2014. Under field conditions, a large number of flies that feed on the erupted lesions must carry or atleast become contaminated with pathogen during the feeding process. (Arman Issimov *et al*., 2020) [4]. Lumpy Skin Disease (LSD) inflicts significant economic lossess in cattle production with impact of livelihoods of small holders (Shashi B. Sudhakar *et al*., 2020) [5]. The treatment of LSD is only symptomatic and targeted at preventing secondary bacterial complications using combination of antimicrobial and anti- Inflammatory drugs (Salib Fx *et al*., 2011; Abutarbush SM *et al*., 2013) [1, 2]. LSD can be confused with many diseases, including: Pseudo lumpy skin disease (caused by Bovine Herpesvirus), Bovine papular stomatitis (Para poxvirus), Pseudo cowpox (Para poxvirus), Cowpox, Cutaneous tuberculosis, Demodicosis (Demodex), Insect or tick bites, Urticarial, Photosensitisation, Papillomatosis (Fibropapillomas-"warts"), Rinderpest, Dermatophilosis, Besnoitiosis, Hypoderma bovis infection and Oncocercosis. Signs such as fever and milk drop are non-specific, and can be seen with many other diseases early diagnosis and symptomatic treatment may be carried out to manage the LSD in cows. Regular feeding of soft feed and pasture is recommended for infected animals.

Conclusion

The Lumpy Skin Disease has led to substantial production losses for dairy cattle farming owing to drop in milk yield, decreased fertility among cows and bulls, abortion, damaged skin and hides, decrease or increase in weight and untimely death. Creating awareness about the important of this disease and its management and at field level through extension programmes & Awareness campaigns to minimize this disease incidence and economic loss

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