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## Clinical management of Lumpy Skin Diseases (LSD) in a calf with homeopathy medicine in field conditions: A case report

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### Abstract

A four months old crossbred Jersey calf was affected with a history of anorexia for the past five days and presence of cutaneous nodules all over the body for past five days. On Clinical examination pyrexia (40.4 °C), Tachycardia (110 bpm), Tachypnoea (70), Congested mucous membrane and Lymphadenopathy. Haematology results revealed elevated leucocytes count in the blood. Based on the history, clinical signs and laboratory findings, it was diagnosed as Lumpy Skin Diseases (LSD) in the field. The affected calf was treated with Inj. Oxytetracycline, Inj. Ivermectin and Inj. Flunixin. In addition, homeopathy medicine was also prescribed for a period of 20 days. The disappearance of nodules was noticed and the calf was recovered uneventfully after the treatment.

**Keywords:** Lumpy skin diseases (LSD), Calf, Homeopathy

### Introduction

Lumpy skin disease (LSD) is a contagious viral disease that affects cattle and water buffaloes in India. LSD is caused by LSDV, which belongs to the Capripoxvirus genus in the Poxviridae family. It is closely antigenically related to sheep and goat pox virus (Woods *et al.*, 1988) [6]. Lumpy skin disease (LSD) was first reported in North Rhodesia (Zambia) in the year 1929, which was initially thought to be due to an allergic reaction in cattle caused by biting insects. In India, lumpy skin disease was first reported from Mayurbhanj and Bhadrak Districts in Odisha in August 2019 (Sudhakar *et al.* 2020) [5]. Lumpy skin disease causes severe loss to farmers in terms of chronic debility, decreased milk yield, poor growth rate, infertility, abortion and even death (Abutarbush *et al.* 2013) [1]. The LSD virus causes an acute disease in cattle, characterized by elevated body temperature, skin nodules, skin swelling, weight loss, and lymph node enlargement (Gamil *et al.* 2024) [2]. The LSD virus is mechanically transmitted by arthropod vectors (mosquitoes, flies, ticks etc) and contaminated needles. Clinically, the disease is characterized by distinctive nodular lesions on the skin which consequently result in loss of production and fertility in turn resulting in economic losses. As the treatment is only symptomatic, therefore, prevention is a more effective way to avoid economic losses (Sikder *et al.* 2021) [3].

### Case History and Observation

A four months old crossbreed jersey calf was affected with a history of anorexia for the past 5 days and the presence of cutaneous nodules all over the body. The animal had been treated by a quack for the past 2 days and no improvement was noticed by the owner. On clinical examination, pyrexia (40.4 °F), Tachycardia (110 bpm), Tachypnoea (70), Congested mucous membrane and Lymphadenopathy were observed. Pus discharge from the right lateral thoracic wall was also observed in the affected calf.

### Diagnosis and Treatment

The diagnosis of LSD is based on typical clinical signs combined with laboratory confirmation of the presence of the virus or antigen.

A field presumptive diagnosis of LSD can be done on the basis of presence of skin nodules, enlargement of lymph nodes draining the affected areas, pox lesions on the mucous membrane of the mouth, pharynx, epiglottis, tongue, mucous membranes of the nasal cavity, edematous brisket region. Preliminary diagnosis of LSD can also be done by palpation of enlarged Pre-Scapular lymph nod.

The blood sample was collected for a Complete Blood Count (CBC) and it revealed elevated leucocytes. Based on the history, clinical signs and laboratory findings, it was diagnosed as Lumpy Skin Diseases (LSD). The affected animal was treated with Inj. Oxytetracycline (Long acting) 15mg/kg IM, Inj. Ivermectin 0.2mg/kg SC and Inj. Flunixin 2.2 mg/kg IV. In addition to that, Homeopathy is a combination of Ars alb, Variolinum, Kaliphos, Nat Mur, Silicea, Merc sol (Yogeshwari G 2023) <sup>[7]</sup> and Dulcamera (useful in lung involvement) at 200C potency. A cocktail of homeopathic medicine was given as oral drops (10 drops/time) for four times in a day @ 6 hours interval for 20 days. The disappearance of nodules was noticed and the animal was recovered uneventfully after a course of treatment.



Before treatment



After treatment

## Conclusion

Lumpy Skin Disease (LSD) causes huge economic losses in the livestock industry due to the weakness of the affected animal, decrease in milk production, loss of hide values and delayed response to the daily clinical treatment. Based on the case report, it concluded that homeopathic medications may also be used to treat lumpy skin disorder in cattle for faster recovery. Further, to prevent the spread/occurrence of LSD disease, animals should not be left for grazing in the vector-borne areas and complete restriction on movement of the animals at village or district or state level is strictly to be implement.

## Conflict of Interest

Not available

## Financial Support

Not available

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