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A Short Note on Lumpy Skin Disease in India

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ABSTRACT

Lumpy skin disease is a viral cross border sickness that affects cattle and domestic water buffaloes across Africa. Since 2012, the illness has expanded swiftly and widely in the Middle East, the Balkans, the Southern Caucasus, and portions of Russia. Despite the implementation of control and eradication efforts, the illness continued to spread from area to region before vaccination programmes had their full impact. Within a short amount of time, the illness might arise hundreds of kilometers away from the initial (focal) epidemic areas. These incursions have inspired long-overdue renewed scientific interest in LSD, resulting in the beginning of a new investigation into several aspects of the disease, including epidemiology, transmission mechanisms, and risk factors. Long-distance spread of LSDV appears to occur through infected animal migration, but differing seasonal patterns suggest that arthropod borne transmission is most likely responsible for the disease's quick and aggressive short distance spread. Understanding the mechanics of LSDV transmission will allow for more focused and successful viral containment and eradication efforts. The manner of vector borne illness transmission is most likely mechanical, although no convincing evidence supports or refutes this idea. According to new studies, the ubiquitous, synanthropic house fly, *Musca domestic*, may also play a role in LSDV transmission, but this has yet to be proven in a clinical setting. This review provides a comprehensive overview of the epidemiology, pathology, clinical signs, diagnosis, control, and management of LSD in India.

Keywords: Lumpy skin disease virus; Investigation; Ticks vectors; Pathogen transmission; Insect vectors

INTRODUCTION

Lumpy Skin Disease (LSD) is an eminently infectious viral illness that mostly affects cattle in the dairy sector. The disease was first reported in India in 2013, and since then, it has spread rapidly across the country, causing significant losses to the dairy industry.

The virus that causes LSD is known as *Capripoxvirus*, which belongs to the family Poxviridae. The virus is transmitted through direct contact with infected cattle and contaminated fomites and insect vectors. The virus causes raised, wart like skin lesions, leading to disfigurement and a reduction in the value of affected cattle. Additionally, the disease causes significant reductions in milk production, fertility, and weight gain.

Diagnosis of LSD is typically based on clinical signs, such as skin lesions and the presence of vesicles and pustules, along with laboratory testing to confirm the presence of the virus.

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Confirmation of the diagnosis requires the submission of samples to a laboratory for further analysis. There are several treatment options available for Lumpy Skin Disease (LSD) in India [1-6].

ABOUT THE STUDY

The following are some of the common treatments:

- **Vaccination:** LSD vaccine is available in India and is considered as one of the most effective methods for controlling the spread of the disease in cattle.
- **Antiviral drugs:** Acyclovir, a commonly used antiviral drug, is effective in controlling the progression of LSD in cattle.
- **Corticosteroids:** These drugs are used to reduce inflammation and swelling associated with LSD.
- **Surgical intervention:** In severe cases, surgical removal of affected skin may be necessary.

It is important to consult a veterinarian to determine the best treatment option for a specific case of LSD in cattle. Early detection and prompt treatment can help control the spread of the disease and reduce the impact on the animal and the farmer.

CONCLUSION

Control and management of LSD in India is challenging due to the limited availability of vaccines and the absence of effective treatment options. The best way to control the spread of the disease is through early detection, quarantine, and culling of infected animals. Additionally, measures such as improving hygiene and sanitation, as well as avoiding the movement of cattle from infected to non-infected areas, can help to reduce the spread of the disease. The Indian government, along with international organizations, has taken several measures to control the spread of LSD in India. These measures include the provision of technical and financial support to farmers, the implementation of mass vaccination campaigns, and the development of early warning systems to detect and respond to outbreaks of the disease. In conclusion, LSD is a serious threat to the dairy industry in India, causing significant economic losses and posing a significant challenge to control and management efforts. Further research is needed to develop effective control strategies and vaccines to mitigate the impact of the disease on the Indian dairy industry [7-11].

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

DECLARATION OF COMPETING INTEREST

None.

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