Letter to the Editor Zoonotic Disease



Lumpy skin disease emergence in Pakistan, a new challenge to the livestock industry

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To the Editor,

Lumpy skin disease (LSD) causes significant economic loss in the livestock industry. The causative agent of this disease is the Lumpy skin disease virus (LSDV), a double-stranded DNA virus belonging to the genus Capripoxvirus and family Poxviridae. The LSDV frequently causes fatal disease in domestic cattle and water buffalos. Their common clinical signs and symptoms are anorexia, nodules on the skin, reduced body weight, and a decrease in milk production, while in a few infected cattle, complications of mastitis and myiasis have been noted. Blood, nasal secretions, saliva, sperm, and milk are all ways for the virus to leave the body. The LSDV is spread through direct transmission by arthropods, particularly bloodsucking insects, and contaminated feed and water in the last stage of the disease [1].

The first case of LSD was reported in 1929 in Zambia, which then spread to Sub-Saharan Africa, South-Eastern European, and Asian countries. In Asia, the emergence of LSD was first reported in Bangladesh, which spread to India, Bhutan, Nepal, Hong Kong, Vietnam, Myanmar, and Thailand [1]. The first case of LSD was reported in November 2021 in district Jamshoro, Sindh, Pakistan [2]. The Sindh livestock department declared an epidemic of LSD when approximately 36,000 cattle had been infected by the end of April 2022, with a death rate of 0.8%. The emergence of LSD affected five million dairy farmers and meat sellers, causing significant economic fallout. Moreover, the virus might infect people through the milk and flesh of ill animals [3].

Regarding epidemiological scenarios and socioeconomic restraints, the livestock sectors in industrialized nations, including Pakistan, are falling behind in terms of adequate measures for addressing new viruses. The virus can spread inexorably and increase the number of infections due to insufficient diagnostic settings and viral identification in a specific time frame. The illness causes severe losses in afflicted herds, resulting in huge economic losses. The disease also prevents affected nations from accessing lucrative export markets, exacerbating the financial consequences of an LSD epidemic [4]. As a result, government and non-governmental organizations must pay particular attention to managing the lumpy infection and the appropriate administration of vaccines before infectious illnesses can develop. Adequate surveillance of this illness must be carried out with great care, and the public must be made aware of the impending danger from the disease. All of these techniques can assist in obtaining knowledge, de-escalate emergent cases, and restricting the virus spread in the underdeveloped globe, including Pakistan.

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Conflict of Interest

The authors declare no conflicts of interest.

REFERENCES

- 1. Seerintra T, Saraphol B, Wankaew S, Piratae S. Molecular identification and characterization of Lumpy skin disease virus emergence from cattle in the northeastern part of Thailand. J Vet Sci. 2022;23:e73.
- 2. Pakistan's Sindh starts inoculating cattle as lumpy skin disease spreads to Punjab [Internet]. Riyadh: Arab News; https://www.arabnews.pk/node/2058036/pakistan. Updated 2022. Accessed 2022 Apr 7.
- 3. Lumpy skin disease is spreading fast in Pakistan [Internet]. [place unknown]: VaccinesWork; https://www.gavi.org/vaccineswork/lumpy-skin-disease-spreading-fast-pakistan. Updated 2022. Accessed 2022 May 17.
- 4. Lumpy skin disease. Johnston: National Animal Disease Information Service (NADIS); https://www.nadis.org.uk/disease-a-z/cattle/lumpy-skin-disease/. Updated 2022. Accessed 2022 Jul 21.