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Review on : lumpy skin disease

Shaikh Afrin faruk

Department of B pharmacy
Pratibha tai pawar college of pharmacy,
Wadala mahadev, Ahmadnagar
Afrin935636@gmail.com

ABSTRACT :-

Lumpy skin disease serious viral skin disease occur due to virus of genus capripoxvirus in the family poxviridae. This disease causing major impact on the economic losses in the livestock industry.the first outbreak is identified in zombia in 1929.the rate of illness is heigh in case of cattle and buffalo but low death rate.it was endemic in majority of African countries until 2012 ,but it has since ,expanded to Asian countries as well. in august 2019 ,the first outbreak of lumpy skin disease reported in India. Lumpy skin disease is identified by following clinical signs and symptoms – a lump like nodules appear on the external surface of the skin mucus membrane, heigh fever, salivation , low milk production, lack of energy.there is no specific antiviral drugs available on LSDV but further studies should be directed towards the developing the antiviral drugs on LSDV.

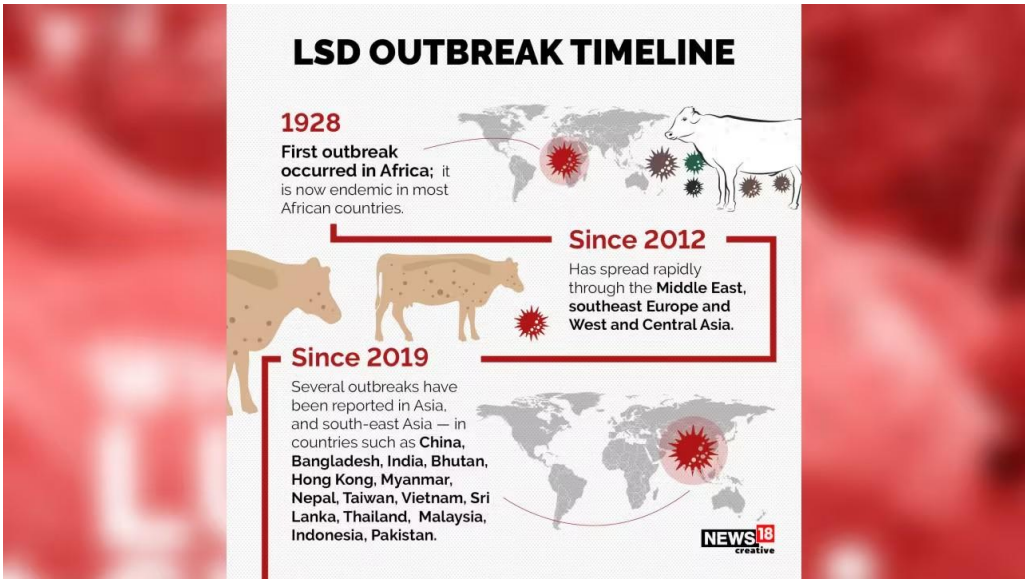
Keywords :-Lumpy skin disease , capripoxvirus, pathogens , transmission, outbreak.

Introduction :-

The lumpy skin disease is viral infectious disease caused by virus capripoxvirus belonging to family poxviridae. It is vector born disease and transmitted through vector in the family arthropods such as tick, fly and mosquito . it is transmitted by direct contact with other infected animal. The virus does to complete its replication cycle in the host cell. The lumpy skin disease is not reported in sheeps and goats. But it is mostly reported in all cattle breeds and baffalos. It was endemic in the majority of African countries until 2021, it was spread in Asian countries also.the first case and outbreak of LSD was reported in zombia in 1929 . Indian reported it's first ever lumpy skin disease outbreak in august 2019. LSD clinical signs and symptoms in cattle is lump like nodules appear on the external surface of the skin and mucus membrane, heigh fever, salivation, low milk production, lack of energy. The rate of morbidity and mortality is varies depending on the breed of cattle, immunity, insect vector involved and environment factors.

History:-

LSD was first reported in Zambia in 1929. in 1957 in South Africa, Alexander et al. (1957) demonstrated the true causative agent of LSD, with the identification of a poxvirus. In south africa , LSD occurred endemic, which affects the majority of cattle in the African countries. In 1972 the disease was reported in Sudan and west Africa in 1974. Till 2012 it was endemic in most of the African countries but now it has spread to asian countries too



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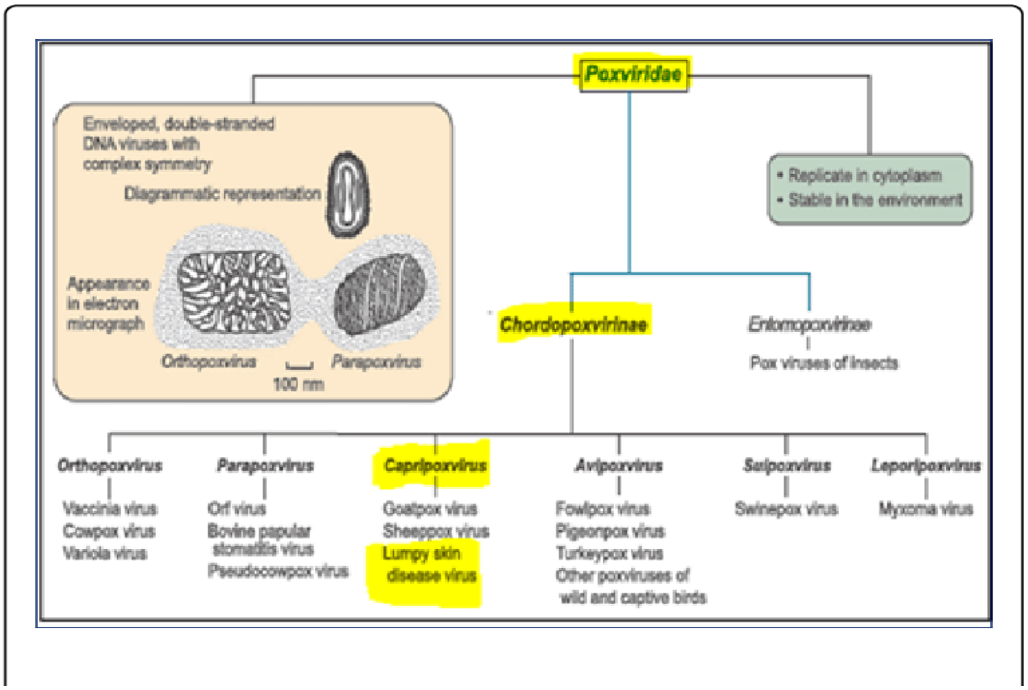
Biology of causative organism :-

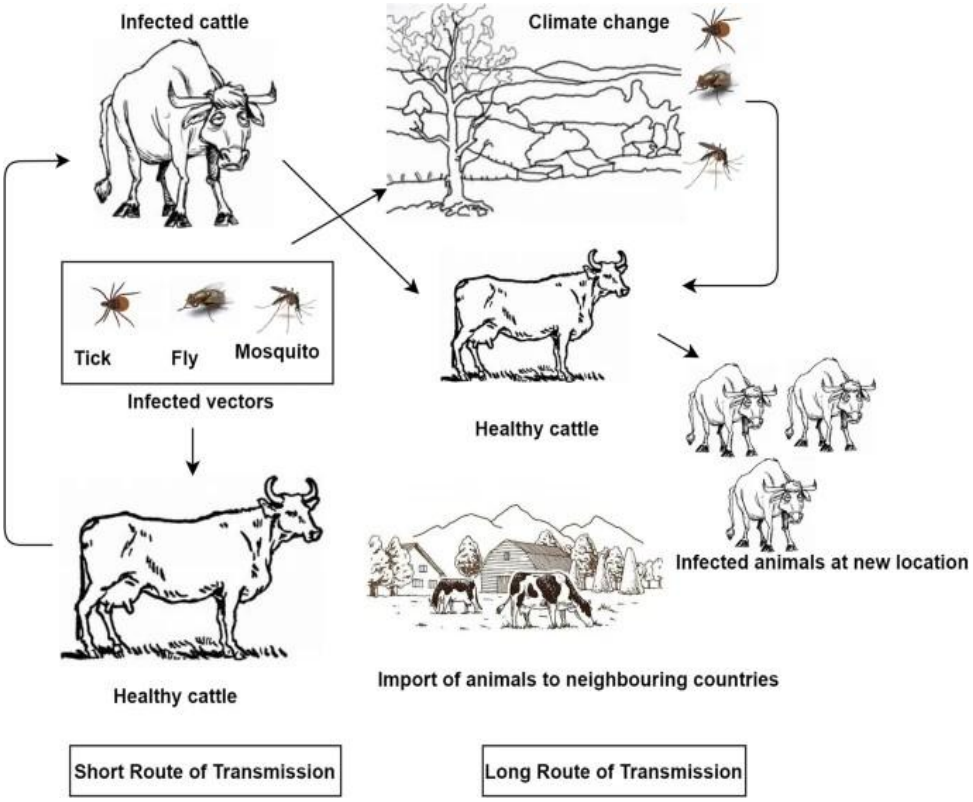
the virus poxviridae is causative organism of LSD belongs to largest virus fa**mil**y and are responsible to cause disease to domestic animals but not to sheep ,goats and dogs. The virus contains double standard DNA . poxvirus are the only DNA virus know to complete their replication cycle in the



cytoplasm.

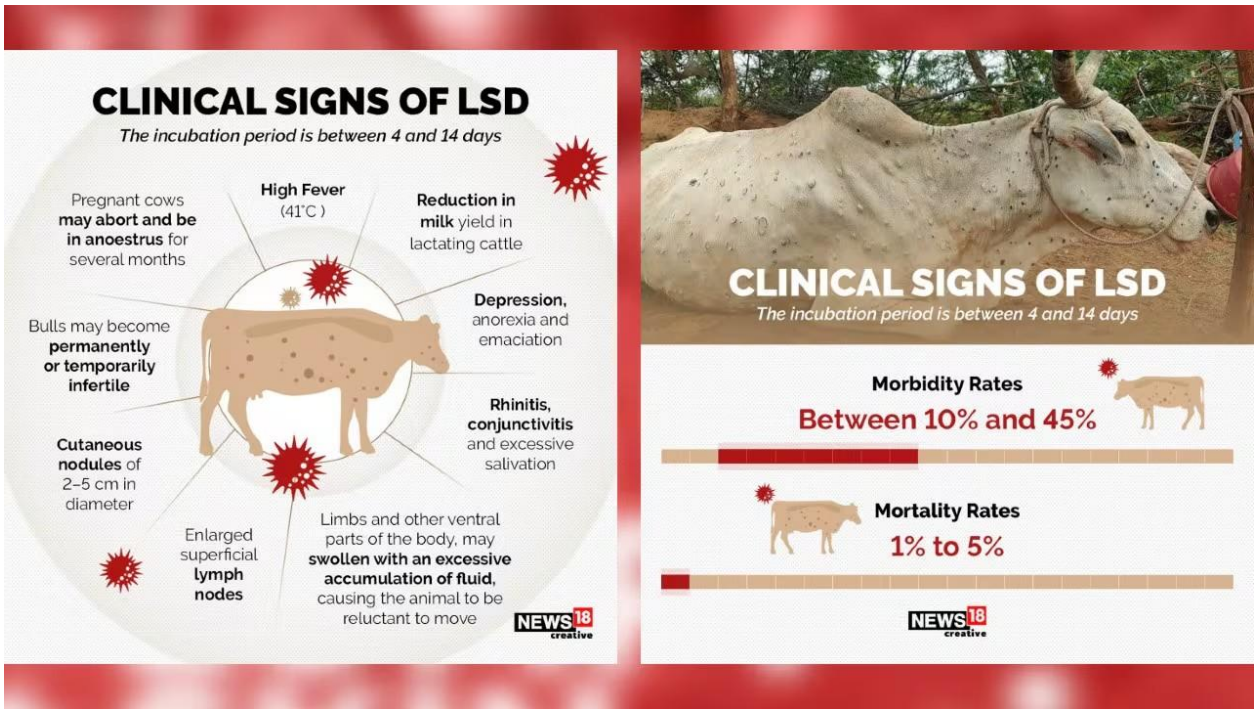
Mode of transmission :-

The role of vector - the vector are majority source of transmission of.
LSD. They belongs to family arthropods such as tick, fly and mosquito . In the mechanical model of transmission, the virus is transmitted via contaminated mouth part of vector without replication of the virus in the host cell.Other mode of transmission- the another mode of transmission is direct contact with infected cattle and the environment change such as humidity and temperature .in previous reports of transmission of LSD through semen is not experimentally demonstrated but LSD has been isolated from semen of experimentally infected bulls.



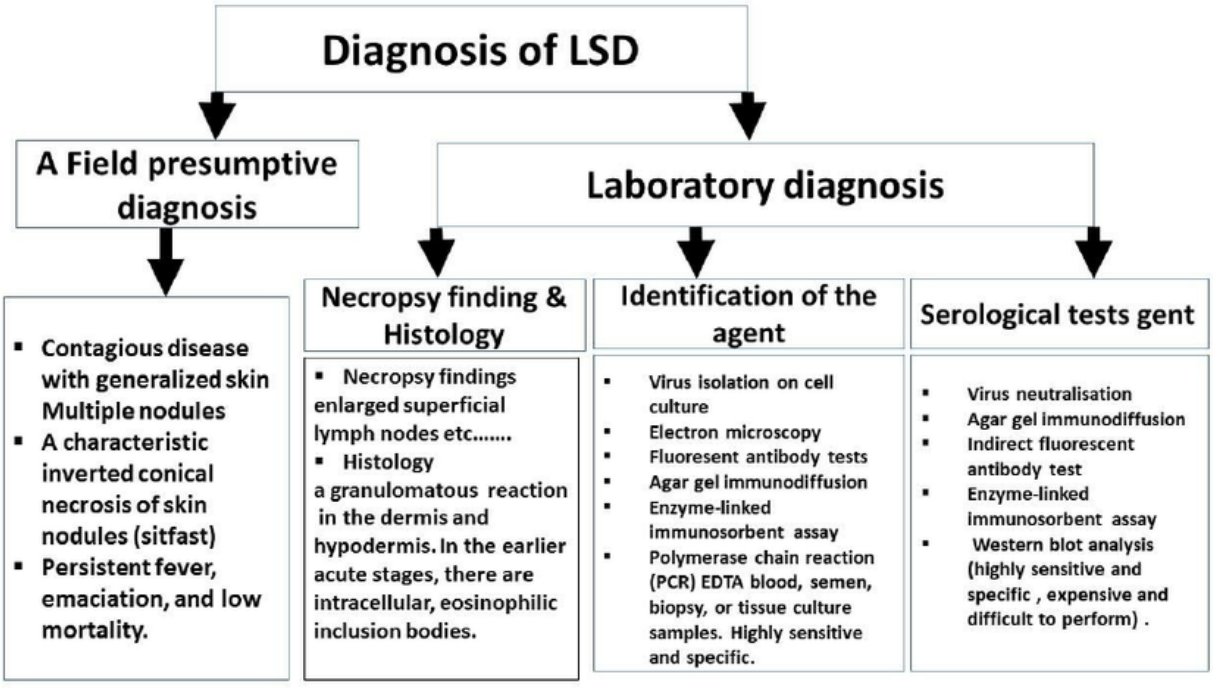
Clinical signs and symptoms:

-The following are noticeable and reported sign and symptoms of LSD in infected cattle:- the lump like nodules appear on the external surface of the skin mucus membrane upto 5 cm in diameter, The incubation period of LSD is 4-14 days after infection, Heigh fever, salivation, low milk production, lack of energy, blood diarrhea ,mouth ulcer.



Diagnostic test for LSD :-

Pathology treatment and prevention of LSD:- Although there is no specific antiviral drugs available to cure the lumpy virus but s a supportive care on the basis of symptoms the following drugs are used :- 1) Herbal drugs - for oral administration – ingredients : betel leaf – 10, black pepper – 10 g



,salt – 10 g preparation : blend to form a past and mix with jagery . feed the dose in small portion orally. Feed one dose every three hours for day

first. Feed three dose daily from the second day onwards for two weeks.for external application- ingredients : acalypha indica leave- 1 handful , garlic- 10 pearls , neem leaves – 1 handful , coconut or sesame oil – 500 ml , turmeric powder – 20 g, mehendi leaves – 1handful , Tulsi leaves – 1 handful. Preparation: blend all the ingredients thoroughly . mix with 500 ml of coconut or sesame oil and boil and bring to cool . Application – clean the wounds and apply directly. 2) allopathic drugs- Unfortunately, lumpy cow skin disease has no direct antiviral treatment. Instead, the infected animals receive supportive care, which involves the use of antibiotics, painkillers, and wound care sprays to treat symptoms. As there's no treatment, vaccines are used to control disease transmission.

Conclusion:-

Lumpy skin disease which is a viral disease of domestic cattle.clinically and pathologically the diseases is characterized by lump like nodules on external surface of skin , tissue of affected animal involves different parts such as alimentary, respiratory tract nd conjuctiva . It involves economic losses due to low milk production, infertility, abortion and death. For the prevention of LSD following recommendation is to follow:- accurate time diagnosis is needed for control LSD . annual vaccination of domestic cattle for prevention of LSD. Bulls used for breeding need to be diagnosed for LSD. Should avoid transport and import ofLSD infected animals.

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