

Render Pest :

Etiology : **Mobilli virus** ; Family: paramyxoviridea

Epidemiology:

- 1- All ruminants and pig are susceptible to infection with RP.virus
- 2- Natural infection occure commonly only in cattle and buffalo but in some outbreak sheep and goat become infected
- 3- Wild life are oftenaffectedduring outbreaks and the infection usually spreads to them from infected cattle .
- 4- Morbidity and case fatality rate are high and larg number of incontact animals may have to be destroyed if eradication is undertaken ,in outbreak morbidity rate 100% and fatality 50% .
- 5- Transmission by close contact between infected and non-infected animals ,virus dose not survive for long outside the host.
- 6- The V. excreted by infected animals in their urine ,feces,nasal discharges.
- 7- Transmission occurs through ingestion by contaminated feed or by inhalation of aerosol.
- 8- V. presnt in the blood,tissue,secretion and excretion of infected animals.
- 9- The V.reach its peak of concentration at about the highof the temperature reaction and subsiding gradually to disappear about aweekafter the temperature returns to normal.

Pathogenesis:

- V. inhaled in infected droplets -----z penetrates through the epithelium of the upper respiratory track and multiplies in the tonsils and regional lymph node .

It inters the blood in mononuclear cells which disseminateit to other lymphoid organ ,lung and epithelial cells of mucous membranes .

-the V. of RP. Has ahigh degree of affinity for lymphoid tissue and alimentary mucosa . the focal necrotic stomatitisand enteritis which are characteristic of the disease are the direct resultof viral infection.

Clinical Signs:

-there is variation in syndromes due to the virulence of the strain of V., susceptibility of host and presence of other disease.

1- Per acute form is not common except after experimental administration of V. its characterized by high fever, congested mucus mammeran ,respiratory disress and death 1-3days later.

2- acute form : are more common in cattle in area that are previously disease free .

3- incubation period 6-9 days .

4- high fever, anorexia fall in milk production ,lacremation, harsh staring coat accompanied the fever .this followed by mucosal phase ,thischaracterized by inflammation and congested of buccl mucosa, nasal and conjunctival mucosa .hypermia of the vaginal mucosa and swelling of the vulva.

5- lacremation become more perfuse and then purulent, and this accompanied by blepherospasm,

6-bubbly salivation of blood stained saliva ,followed by purulent saliva as mouth lesion developed .

7-serus nasal discharge become purulent ,discrete necrotic lesion 1-5diameter Developed in the first instance on the inside of the lower lip, and the adjacent gum,on the cheek mucosa on the commissural ,on the lower surface of the tongue ,later the become general in the mouth .

8-simillar lesion are commen on the nasal, vulvae and vaginal mucosa .

Lesion are grayish in colour,slightly raise and necrotic

9- Necrotic material slough ,leveling row red area ,with sharp adages and these may coalse to form shallow ulcer.

10- Sever diarrhea and some time dysentery .

- 11- Skin lesion affect perineum ,secrotum,flank inner aspect of the thigh and neck..in some cases skin lesion become moist and reddened and latter covered with scales.
- 12- After 3-5 days there is sudden fall in temperature accompiend by exacerbation of mucosal lesion ,dyspnea ,cough diarrhea,sever dehydration and some time abdominal pain ,death occur after 6-12 days .
- 13- Pregnant cattle may abort at this stage .
- 14- In enzootic areas where resistance to the infectionis high both sub acute formand skine form occur with lower morbidity and mortality.
- 15- Subacute form : temperature is mild ,anorexia ,the inflammation of mucosa is catarrhal only ulcer may developin the abomasums without causing clinicalsigns and lesion similar tothose which occurin cattle develop in sheep and goatsbut the diseae does not appeare to spread readily from thes species to cattles.

Clinical Pathology Diagnosis :

- 1- Marked leucopenia
- 2- Case history of outbreak
- 3- Post mortem finding.
- 4- Serological diagnosis.
- 5- Tissue culture .

Necropsy Finding :

- 1- The carcasses is dehydrated ,emaciated soiled with fetid feces.**
- 2- Small discrete ,necrotic area on oral mucosa and sepaation of necrotic material leaves sharply walled deep erosions with a red floor which coalesce to form large ulcer ,thes lesion extend to the pharynx,first third of esophagus and nasal cavities.**
- 3- Similar lesion present on mucosa of abomasum.**
- 4- Zone of hemorrhage and erythema running transversely across the colonic mucosa produce a characteristic striped appearance so called "Zebra Stripes".**

Differential diagnosis:

- 1-Foot and mouth disease.
- 2-hemorrhagic septicemia .
- 3-bovine malignant catarrhal fever .
- 4-bovine viral diarrhoea ,mucosal disease .

Treatment:

Is ineffective and should be undertaken.

Control :

- 1- Control of animals movement .
- 2- Control of wild life .
- 3- Prevention of introduction of ruminant and pigs from known infected area .
- 4- Infected premises should be disinfected .
 - In enzootic area control depends upon the use of an efficient vaccination and disease surveillance
 - 1- an inactivated virus vaccine has been used but produces immunity for short period .
 - 2- Attenuated virus vaccine .

The following attenuated viruses are in general use :

- 1- Goat-adapted virus ,produce life long immunity .
- 2- Lapinized virus vaccine ,rabbit-adaptation, immunity for 2 years
- 3- Chicken embryo-adapted virus ,immunity16 months
- 4- Cell culture vaccine (calf kidney),immunity upto 10 years .
- 5- Colostrums fed calves from from immune cow ,passively immune for period of 4-8 months .