

Blue Tongue

Etiology :

Arthropod-borne Orbivirus

Family Reo viridea .

Epidemiology

- 1- BT transmitted by culicoid , the epidemic of infection in the summer and fall every few years associated with movement of infected vector.
- 2- Naturally infection occur in sheep, and cattle and it recover in elk .antelope, camel and other wild ruminant, infection rarely occur naturally in goat .
- 3- Morbidity rate 50-75% and mortality rate 20-50% .
- 4- The infection transmitted experimentally by inoculation of infective blood in to susceptible sheep ,BT virus transmitted biologically by certain species of culicoide ,and virus found in the semen of infected bull during viremic period.

Pathogenesis :

Infection ,viremia,localization of the virus in vascular endothelium ,then destruction of the vessels walls leads to ischemic lesion in the epithelium and the characteristic lesion of blue tongue .

Clinical finding :

Incubation period of less than a week (2-4) DAYS Experimentally

- 1- Sever febrile reaction ,nasal discharge and frothy salivation ,with reddening of buccal and nasal mucosa .
- 2- Mucopurulent nasal discharge and blood stained
- 3- Swelling and edema of the lips ,gums,dental pad and tongue
- 4- Lenticular necrotic ulcers develop,particularly on the lateral aspects of the tongue .
- 5- Hyperemia and ulceration also are common at the papillae ,commissures of the lips ,on the buccal papillae and around anus and vulva

6- Diarrhea and dysentery

Laminitis and coronitis, lameness and recumbency – the appearance of dark red to purple band in the skin just above the coronet, due to coronitis, is important diagnostic signs.

In sheep : in enzootic area the disease there is an abortive form in which febrile reaction is not followed by local lesion.

In the sub acute type, the local lesions are minimal, but emaciation, weakness – In cattle, most infections are inapparent there is fever, stiffness and laminitis in all four limbs, excessive salivation, edema of the lips, inappetence, nasal discharge
- ulcerative lesion on the tongue, lips, dental pad, and muzzle, severe coronitis, with sloughing of the hoof.

Clinical pathology :

- Isolation of the virus
- Detection of specific antibodies in serum
- Serological test

Necropsy Finding :

- Mucosal and skin lesion
- generalized edema, hyperemia and hemorrhage, necrosis of skeletal and cardiac muscle
- hyperemia and edema of the abomasal mucosa some time accompanied by ecchymoses and ulceration.
- hemorrhage and hyaline degeneration of muscle.

Differential Diagnosis :

1-FMD.

2-Contagious Ecthyma

3-Ulcerative dermatitis

4-Sheep pox.

Treatment :

- Local irrigation with mild disinfectant solution

Control:

- In enzootic area any measure which prevent exposure to night flying insect vectors ,will reduce spread
- Vaccination is only satisfactory control procedure
 - egg attenuated living virus is in current use ,the vaccine polyvalent contain number of strain of virus
 - annual revaccination 1 month before the expected occurrence of the disease .

