



Tikrit University
College of Veterinary Medicine

Bovine Viral Diarrhea/mucosal disease

Subject name: infectious diseases

Subject year: 4th stage

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SCAN ME

Lecturers link

Bovine Viral Diarrhea/mucosal disease

BVDV

The Organism

Family : Flaviviridae

Genus : pestiviruses

similar to the viruses causing

- ✓ Border disease in sheep
- ✓ swine fever in pigs
- ❖ can cross the placenta and damage the fetus. can cross the placenta and damage the fetus
- ❖ There are two distinct biological forms of the virus called biotypes, distinguishable in tissue culture, cytopathic and non-cytopathic.

Epidemiology

Infection with BVD virus is generally a mild or even subclinical event except on two occasions

- infection of the pregnant animal
- in mixed infections, e.g. with other respiratory viruses
- ✓ such as respiratory syncytial virus (RSV)
- ✓ infectious bovine rhinotracheitis virus (IBR)
- ✓ parainfluenza virus (PI3)

Clinical Signs

- Anorexia, salivation, pyrexia
- reddening and erosions
- ✓ around the dental pad
- ✓ along the gingival border
- ✓ under the tongue
- ✓ around the muzzle
- ✓ coronary band
- ✓ interdigital space
- Diarrhoea, lameness
- Weight loss, agalactia, death

Post Mortem Lesions

- Oval erosions
- shallow ulceration in the
- ✓ buccal cavity
- ✓ Oesophagus
- ✓ Abomasum
- ✓ the small intestine
- ✓ beneath the Peyer's patches in the colon
- Oedema and erythema
- ✓ intestinal epithelium

Differential Diagnosis

- Erosions, diarrhoea, death
- ✓ Foot-and-mouth disease
- ✓ Malignant Catarrh
- ✓ Rinderpest
- ✓ Salmonella
- ✓ Poisoning

Clinical Diagnosis

- Animal at
six to 18 months old
- clinical signs.
- ✓ Pyrexia
- ✓ Diarrhoea
- ✓ Erosions in the
mouth and on the muzzle
- ✓ weight loss

Laboratory Diagnosis

- laboratory tests
- ✓ virus isolation
- ✓ PCR
- ✓ ELISA

Sample Collection

- ❖ submitted to the laboratory within 24 hours for virus isolation and for BVDV antibodies
- clotted and EDTA blood samples
- nasopharyngeal swab
- fresh spleen
- mediastinal lymph node
- thymus
- small intestinal tissue (particularly with Peyer's patch tissue).
- Bulk milk

Treatment

- There is no effective treatment
- Effective control measures may be instituted.

Prevention and Control

- vaccines prepared from attenuated cytopathic virus are available
- ✓ Cows vaccination prior to pregnancy
- ✓ calves for respiratory disease control