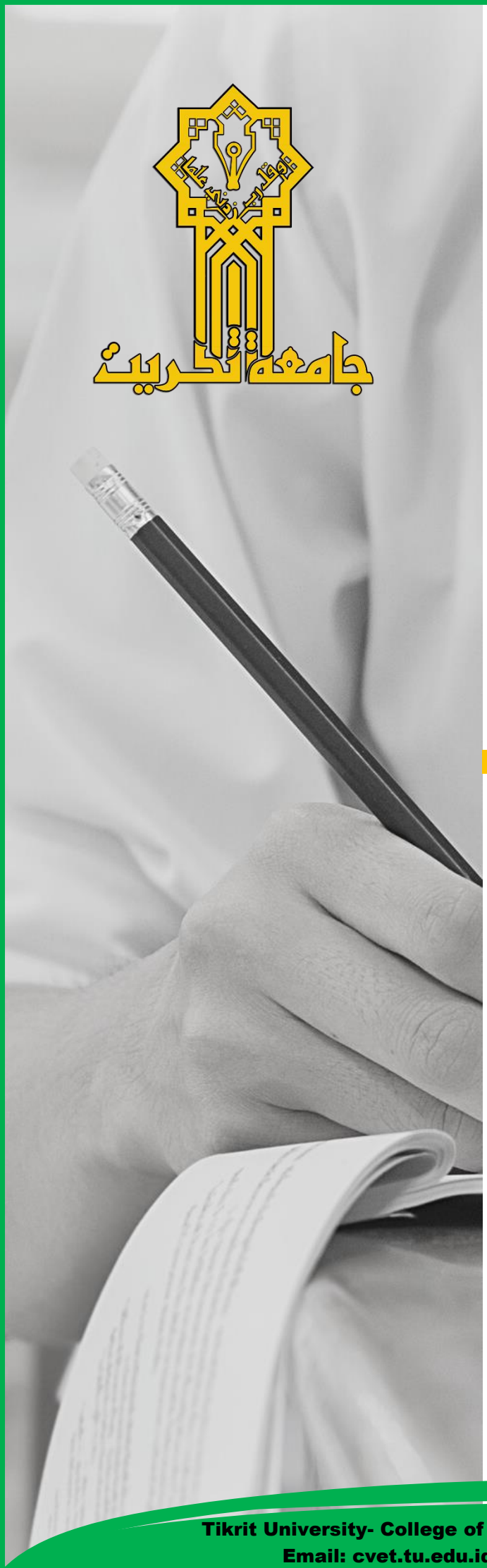

Tikrit University
College of Veterinary Medicine

Infectious bovine rhinotracheitis (IBR)

Subject name: infectious diseases

Subject year: 4th stage

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SCAN ME
Lecturers link

Infectious bovine rhinotracheitis (IBR)

The Organism

- Family *family Herpesviridae*
- Genus bovine herpes virus 1 (BHV 1)
  - several strains

Epidemiology

Species Affected

- Principally cattle
- deer, goats and pigs seroconvert but do not develop or transmit disease

Morbidity and Mortality

- Young animals most affected
  - Ages 6 months to 2 years
- Varies by strain , immunity, age
- High Morbidity rates
- Mortality rates
  - 10% in 6 months to 2 years calve
  - 1% usually

Transmission

- Direct contact, inhalation, venereally
- Virus shed in nasal and ocular secretions vaginal or preputial discharges, semen, or the fluids and tissues of the fetus
- *Latent infection virus* may remain in the animal for the rest of its life without it showing any signs

Clinical Signs

- Incubation period very variable
- ✓ usually takes 3 to 7 days.
- ✓ beef cattle 10–20 days
- ✓ Longer incubation periods do occur
- Disease may appeared after moving or calving, or becomes ill or Corticosteroid administration

Forms of disease according to the severity

- Mild disease(mild strain, low infection or resistant animal)
- Subacute disease(adult animal)
- Acute disease(6 months to 2 years animal)
- Peracute disease

Forms of disease according to the site of lesion

- *Respiratory form*
- *Reproductive form*
- *Generalized/alimentary form*
- *Central nervous system/encephalitic form*
- *Other infections*: udder & intestinal tract

Clinical sign of Respiratory form

- Conjunctivitis
- Reddened of the lining of the eyes & nose(nose may show grey areas)
- ✓ Discharge from eyes and nose
- ✓ watery clear to profuse, yellow, thick and purulent
- Breathing is rapid and shallow with short, expressive cough

Clinical sign of reproductive form

- Vulvovaginitis: Reddened with discharge of pus from vulva & vagina
- Balanoposthitis: Reddened with purulent discharge from the prepuce
- Endometritis: uterus discharge
- Abortion: six to eight months of pregnancy & placenta is retained

Post Mortem Lesions

- Inflammation of muzzle & nasal cavities congestion and petechiation with exudate, with necrosis of the nasal mucous membranes
- The submandibular and retropharyngeal lymph nodes tend to be swollen and oedematous
- infiltrated with neutrophils, lymphocytes, plasma cells and macrophages.

Clinical Diagnosis

- history is that a new animal or group has entered the herd
- conjunctivitis with copious, initially serous, ocular discharge
- There may be necrosis of the nasal mucosa but this is absent in the mouth

Laboratory Diagnosis

- (ELISA)
- serum neutralization test
- indirect haemagglutination test
- complement fixation test
- virus neutralization test
- Bulk milk testing will indicate the status of a dairy herd

Treatment

- Several compounds active against herpes viruses but many are toxic
- ✓ acyclovir has been shown to be safe and may in the future be tried in animals.
- Drugs to control bacterial and parasitic complications
  - May decrease mortality
- Supportive care

Prevention and Control

- Any new animal entering a known uninfected herd should be blood tested prior to entry
- If the test is negative the animal should be isolated for a month and then retested
- The use of corticosteroids may allow detection of virus in swabs of carrier animals

Vaccination

- Type of vaccine
  - ✓ inactivated multicomponent vaccine
  - ✓ live IBR vaccines
  - ✓ gene-depleted live vaccine
- vaccines provide effective immunity but they do allow the replication and re-excretion of the IBR virus, which can thus spread infection to non-vaccinated animals