

SPECIFIC DISEASES OF HORSES

Diseases caused by viruses.

Equine infectious anaemia

Equine infectious anaemia is an acute, subacute, chronic and latent disease of solipeds caused by a virus. It is manifested with intermittent fever, depression, weakness, edema, anaemia and icterus.

Transmission : Close continued contact with susceptible animals and biting insects mainly Tabanidae and mosquitoes. Contaminated surgical instruments, needles, contaminated feed, bedding and intrauterine infection. Horse may die of anaemia during early viraemia or may recover and have recurrent episodes of viraemia.

Antemortem findings :

Acute form

1. Fever up to 41°C; it may rise and fall rapidly
2. Sudden onset of disease lasting from 3 days to 3 weeks
3. Depression and weakness
4. Jaundice
5. Edema of the ventral abdomen, legs and prepuce
6. Serosanguineous nasal discharge
7. Abortion in pregnant mares
8. Rapid dehydration
9. Droopy ears and half closed eyes
10. Dyspnea at terminal stages

Subacute form

11. An acute onset of disease and subsequent recovery
12. Swollen icteric conjunctivae
13. Exertion may cause an increase in temperature and pulse, sweating and incoordination.
14. Death caused by exhaustion

Chronic form

15. Anaemia, weakness
16. Icteric conjunctivae and mucous membranes
17. Diarrhoea
18. Recurrence of disease in a one to three month period

Latent form

19. No symptoms observed although the animal is infected
20. May become active. An acute attack may be caused by hard work, poor diet and parasitic infections.

Postmortem findings :

Acute case

1. Subcutaneous edema
2. Jaundice
3. Subserosal haemorrhage

Chronic case

4. Emaciation and anaemia
5. Hydrothorax and ascites
6. Enlarged spleen and liver (Fig. 182) with swelling of the edges
7. Superficial haemorrhages in the organs
8. Enlarged, edematous and haemorrhagic lymph nodes
9. Replacement of bone marrow fat with dark red hemopoietic tissue (Fig. 183)

Judgement : Carcass of an animal affected with the clinical disease of EIA is *condemned*. Reactor animals may have the carcass approved for limited distribution if no systemic lesions are noted on postmortem examination.

Differential diagnosis : Emaciation, other acute septicemias, anthrax, piroplasmiasis, glanders, tuberculosis, virus encephalomyelitis, purpura haemorrhagica, babesiosis,

leptospirosis, parasitic infections (strongylosis and fascioliasis) and purulent infections causing anaemia

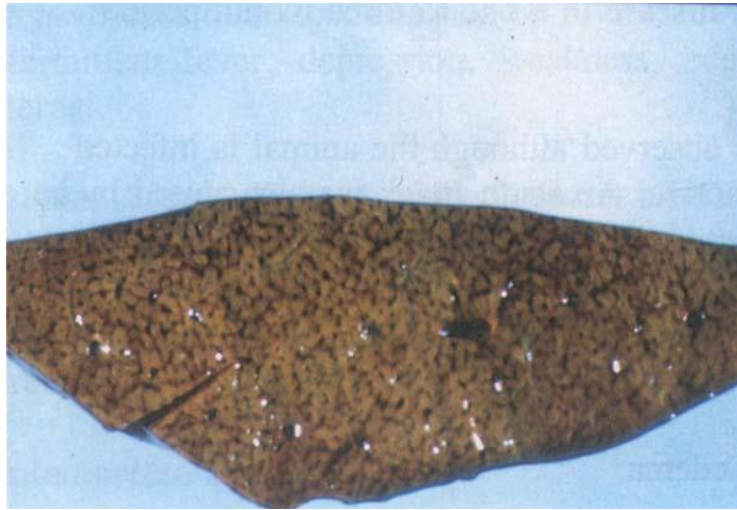


Fig. 182: Equine infectious anaemia. Enlarged grey red liver showing lobular pattern and haemorrhage under the capsule.



Fig. 183: Equine infectious anaemia. Replacement of bone marrow fat with dark red hemopoietic tissue (erythroid hyperplasia).

Diseases caused by bacteria

Glanders

Glanders is a bacterial disease of horses and other solipeds characterized by lesions in lymph glands, lymph vessels, respiratory tract and skin. It is caused by *Actinobacillus (Malleomyces) mallei*.

Transmission : Ingestion of food and drinking of water contaminated with secretions and excretions of sick animals. Wound infection and the respiratory route in acute glanders, contaminated needles, grooming equipment, urine, nasal discharges, purulent skin lesions are also associated with the transmission of this disease.

Antemortem findings:

Acute form

1. High fever
2. Breathing difficulties and coughing
3. Snoring sound if lesions are in the larynx
4. Ulcers in the nasal mucosa. Star shaped scars upon healing of ulcers
5. Nodules on the skin, abdomen and lower limbs
6. Death due to septicemia

Chronic form

7. Low mortality and high rate of recovered animals
8. Intermittent fever and coughing
9. Unthriftiness and loss of weight
10. Unilateral rhinitis and yellowish-green or bloody nasal discharge
11. Heavy exudate on the skin surface
12. Enlarged submaxillary lymph nodes, abscess formation and abscess rupture.
13. Granulomatous nodules along the lymphatics under the skin, especially on the legs.
14. Swollen pipe like lymphatics (Farcy)
15. Enlarged rear legs

Postmortem findings :

1. Inflammation of the lymph nodes. The nodes are enlarged, fibrotic and abscessed
2. Ulcers in the nasal mucosa, larynx and trachea.

3. Nodules in lungs scattered throughout the lung tissue. These nodules have greyish centres.
4. Nodules on the skin and in the subcutis
5. Necrosis in the internal organs and testicles

Judgement : Carcass of an animal affected with glanders is *condemned*. The animal should not be admitted to the abattoir.

Differential diagnosis : Epizootic lymphangitis, ulcerative lymphangitis, strangles, dourine and melioidosis

Strangles (Distemper)

Strangles is a contagious disease of equines characterized by inflammation of the upper respiratory tract and purulent lesions in the regional lymph nodes. It occurs in stressed young horses 1 – 5 years old. It is caused by *Streptococcus equi*.

Transmission : Source of infection is nasal discharge from infected animals and contaminated food and water. Infection is spread by ingestion or via respiratory route by inhalation of droplets. It may spread for at least 4 weeks after the initial attack due to organism developing resistance to diverse environmental conditions. The spread of infection is also caused by parasites and infected animals during copulation. Infection of the udder of the mare may occur from an infected foal.

Antemortem findings :

1. Incubation 4 – 8 days
2. Temperature 39.5°C – 40.5°C
3. A soft, moist and constant cough
4. Severe pharyngitis and laryngitis
5. “Hot” painful abscesses in submaxillary, pharyngeal and parotid lymph nodes and lymph vessels (Fig. 186)
6. Necrosis of skin and eruption of abscesses
7. Edema of lower limbs (swollen limbs are 3 – 4 normal size)
8. Empyema of the guttural pouch complications
9. Spread of lesions to lungs causing acute pneumonia

10. Purulent inflammation of the brain followed by excitement, neck rigidity and terminal paralysis
11. Pericarditis
12. Lameness and difficult breathing

Atypical form of strangles is manifested by subclinical infection and mild disease.

Postmortem findings :

1. Abscesses in the internal organs including the liver, spleen, lungs etc.
2. Abscesses on the pleura and peritoneum
3. Abscesses in the mesenteric lymph nodes

“Bastard strangles” denotes multiple abscessation in the vital organs and generalized systemic infection.



Fig. 186: Strangles (Distemper). Hot painful abscesses of the lymph nodes of the throat.

Judgement : Carcass of an animal affected with strangles is *condemned* if the animal shows signs of acute infectious disease accompanied with fever and systemic generalized lesions. Atypical, mild form of the disease has a *favourable judgement*.

Differential diagnosis : Epizootic lymphangitis, ulcerative lymphangitis, dourine, melioidosis, equine viral rhinopneumonitis, equine influenza and equine viral enteritis