Equine Influenza A (H3N8)

Equine Influenza Virus (EIV) is a highly contagious respiratory disease of horses, donkeys and mules and other equidae. EIV is a commonly diagnosed respiratory virus in horses with significant financial and trade implication for the industry.

Virology

EIV is an enveloped type A influenza virus which has a segmented RNA genome coated in protein. Type A influenza virus belong to the Orthomyxoviridae family. Haemagglutinin (HA) and neuraminidase (NA) are the two glycoproteins that reside on the surface of the virus and are recognized by the host's immune system. They are involved with the entry and exit of the virus through the host cells and are the differential components that give us the ability to subtype various influenza viruses. The most commonly seen subtype of the EIV today is H3N8.

Clinical Signs

The virus replicates in the epithelial lining of the upper and lower respiratory tract. Symptoms of upper respiratory tract involvement include fever, cough, conjunctivitis and serious then becoming mucopurulent nasal discharge.

Epidemiology of Transmission

EIV spreads very rapidly mainly due to the virus being suspended as an aerosol when coughing. EIV has a short incubation period and shedding occurs within 48 hours of infection and for 6 to 7 days. In addition to the virus being airborne, transmission through fomites including clothing, equipment, tools, and transport vehicles also occurs.

EIV outbreaks more commonly occur when large number of susceptible animals are comingled in closed contact such as racetrack, shows, sales grounds or transportation vehicles. Morbidity can be close to 100 % in susceptible populations

Treatment and Control

Treatment for uncomplicated cased is based on supportive care. When secondary infections developed targeted therapy against the involved pathogen should be instituted. EIV should be part of the

vaccination of horses that are at risk of acquiring the disease and it is an important tool for the control of this disease.

Biosecurity and isolation of new comers should be an important part in disease management in order to prevent EIV and other contagious disease to enter a susceptible population. The virus has the ability to survive in the environment for some time (72 hours on wet environments and 48 hours on dry surfaces), thus the use of a proper disinfectants is very important. By using a disinfectant product according to the label instructions, the risk of contagion is lowered significantly. The virus is easily inactivated by most commonly approved EPA and Health Canada registered disinfectants. Ensuring fomites and environmental surfaces are properly disinfected can help limit the transmission of the virus.

References

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