

SPRING IS HERE AND FLU IS ONCE AGAIN IN THE AIR EQUINE INFLUENZA

By Dr. Jack Leonard



Spring is here and flu is once again in the air. Equine Influenza is caused by a type A, orthomyxovirus which is a single strand RNA virus. The disease exists over most of the world where there are susceptible populations of equines with the possible exceptions of Australia, New Zealand and Iceland. It is highly contagious and is spread by airborne droplets as well as contact with secretions of infected horses. People can carry it to horses by contamination of their hands or clothing. Contrary to popular belief, humans cannot be infected with Equine Influenza virus.

Clinical signs include fever, nasal discharge and coughing. Affected animals may also experience depression, poor appetite and laboured breathing.

All equines are susceptible but infection is more common and generally more severe in horses under 4 years of age.

The virus has the ability to frustrate the immune system by slightly altering the nature of the protein in its external coat. This results in what is called “minor antigenic shift”. The virus seems to do this frequently but not as often as human influenza virus. Large changes in the protein coat occur more rarely and are known as “major antigenic shifts”. These are responsible for new strains of the virus. Vaccine manufacturers in Europe and the United States constantly monitor these shifts and take them into consideration as they try to produce the most up to date vaccines possible.



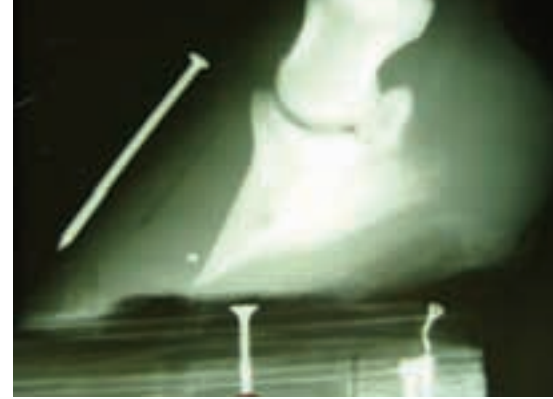
“EQUINE INFLUENZA USUALLY RUNS ITS COURSE IN 7 TO 10 DAYS WITH THE VAST MAJORITY OF ANIMALS MAKING A FULL RECOVERY”

Since there are no specific anti-virals currently available for Equine Influenza, treatment is largely environmental and symptomatic. Affected horses should be isolated if possible. They should be rested in a clean, stress-free and dust-free environment. They should have good nutrition and free choice clean water and be kept in well ventilated areas. They should not be subjected to forced exercise or shipping of any other stressful situations.

Non-steroidal anti-inflammatory drugs such as flunixin meglumine are excellent for pain, inflammation, controlling symptoms and decreasing the overall morbidity of the disease. Immune stimulants such as Eqstim and Transfer Factor may also be helpful.

The use of cortico-steroids is contraindicated in Equine Influenza due to its suppression of the immune system. Equine Influenza usually runs its course in 7 to 10 days with the vast majority of animals making a full recovery. Over-medicating these horses is generally a mistake and can lead to unnecessary complications and prolonging the course of the disease. Inappropriate use of antibiotics can lead to diarrhea, endotoxemia and laminitis. As previously stated, most cases are self-limiting and not life threatening.

There are however some serious complications of Equine Influenza that can occur. Affected horses should have a thorough physical examination by a qualified veterinarian with special attention to auscultation of the lung fields. Secondary bacterial pneumonia is the most common complication of flu. This can be serious and even fatal if not addressed properly. Streptococcus is the most common culprit in these infections and is generally treated by bacteriocidal antibiotics such as cephalosporins. Pleuritis or pleuropneumonia is a grave complication of the flu. This is a bacterial infection in the space between the lungs



and the chest wall. It is usually fatal even with treatment. It is more common in highly stressed or immune compromised individuals or those who received corticosteroids. Even if the horse manages to recover from pleuritis it will often be a permanent respiratory cripple. Prevention is 2 fold, environmental control and vaccination. Good hygiene and isolation of infected animals that may be shedding the virus are important steps. There are several types of vaccines available. It is essential that all vaccines are properly stored under refrigeration at all times. Improper storage can be a reason for vaccine failure.

The intra-nasal vaccine is a modified live virus that is specially attenuated so that it cannot spread the disease. It has some advantages including the production of local secretory antibodies (IgA) and the induction of anti-viral interferon in the nasal passages. This gives more immediate protection to the vaccinated horse.

Annual boosters are required for all horses. More frequent boosters may be advisable for young horses that are exposed often, such as in shows or races. The more horses that are vaccinated in a given area the less likely and the less severe outbreaks seem to be. Vaccinated horses can certainly contract the disease due to antigenic drift. But the cases are usually mild and complications are very rare in these animals.

Outbreaks tend to occur once or twice a year in most places. Worldwide influenza is responsible for fairly large economic losses in the horse industry. This is mostly due the cancellation of events and the disruption of training schedules. This is especially important in the racing industry which is highly dependent on 2 and 3 year olds, the group hardest hit by influenza. Despite its economic blow, Equine Influenza is a disease that we can live with and minimize its impact on our horses. **HT**

