



Coronavirus: An Emerging Equine Disease In Adult Horses

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History of the disease:

The coronavirus family is comprised of a group of RNA viruses that can cause respiratory and gastrointestinal disease in a number of different species. Historically, Equine Coronavirus has been isolated from the feces of foals, both with and without signs of disease. Given these findings its' significance as a pathogen capable of causing disease in adult horses has remained in question.

Newfound awareness:

Between 2011 and 2012, four separate farms in California, Texas, Wisconsin and Massachusetts suffered disease outbreaks associated with equine coronavirus. The four outbreak farms collaborated data and published collective findings in the Veterinary Microbiology journal in February of 2013. In these outbreak cases all horses, both affected (sick) and unaffected (healthy horses) present on the property at the time of the outbreaks had testing performed for detection of the virus. Equine coronavirus was detected via PCR testing in 86% of sick horses, while 93% of horses without evidence of disease tested negative. The strong correlation between positive testing and clinical signs of disease and the short period of virus shedding associated with the disease outbreak was considered adequate data to attribute signs to the presence of equine coronavirus; thus establishing coronavirus as a recognized cause of disease in adult horses.

Clinical signs of coronavirus

Collectively the outbreaks published identified 59 sick horses infected with the virus. In most cases the disease was self-limiting with the most common signs of disease being lethargy, depression, fever, inappetance, mild colic, and soft-formed feces or diarrhea. However, four horses in this data set were euthanized due to severe deterioration, and two of the four severely affected animals developed signs of neurologic disease.

Increased prevalence or increased awareness

Following publication of these cases, increased recognition of the disease and available commercial testing for the virus has resulted in the identification of numerous other cases. Whether the increased number of recognized cases is simply a newfound awareness of the condition, or a more virulent form of the virus is unclear.

Current diagnosis and treatment of coronavirus:

Coronavirus diagnosis can be performed on a fecal sample. The fecal sample is tested for the viral DNA via a Polymerase Chain Reaction (PCR) assay. Coronavirus treatment involves supportive care, including anti-inflammatories such as banamine and more aggressive supportive care, including IV fluid therapy in more severe cases.

Conclusion:

Equine Coronavirus should be considered a possible cause of gastrointestinal disease, diarrhea, inappetance and/or fevers in adult horses. In rare cases the disease can progress and caused either severe endotoxemia or neurologic disease necessitating euthanasia, however more commonly the disease is self-limiting and horses recover over a period of 7-10 days with supportive care. Diagnosis can be made via PCR testing for viral DNA isolated from a fecal sample.

Contact Brandon Equine Medical Center at 813-643-7177 or email info@brandonequine.com with any questions regarding this topic.

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