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Equine Piroplasmosis

This is a disease that has gotten a lot of attention lately. This attention is based on the fact that until 2008, it had been considered eradicated from the United States since 1988. These notes will be a quick overview on what you as a horse owner should know about Equine Piroplasmosis (EP).

The disease is caused by two different protozoal organisms: *Babesia caballi* or *Babesia equi* (which has also been called *Theileria equi*). These protozoa are spread by ticks – but it has to be just the right kind of tick. Luckily in the U.S., there seems to be only a small pocket in Texas that has ticks capable of transmitting the organism. However, further research into which ticks can transmit the disease is ongoing. The disease can also be spread by blood contamination of an infected horse's blood to a naïve horse. Unfortunately, this has been how many of the documented recent cases have been transmitted. Practices such as “blood doping” and sharing needles or syringes between horses have led to infection. The good news is that EP cannot be spread via regular horse to horse contact. It is a disease that has much more impact on the equine economy via horse transport, sale, and government regulation than on your individual horse becoming ill.

The clinical signs of the disease include fever, anemia, jaundice, anorexia, colic, and diarrhea. Weight loss and kidney disease can also occur. In countries where the disease is endemic, horses are protected from clinical illness (but not infection) by receiving antibodies from the dam – a process called premunition. However, most horses infected with *Babesia* sp become non-symptomatic carriers. Therefore, diagnosis of the disease relies on blood tests. People involved with import and export of horses have been familiar with this testing. Horses must be Piroplasmosis negative to enter this country or any other country that is declared EP-free. Until August 22, 2005, the test required was a Complement Fixation test (CFT). Horses from endemic countries were sometimes partially treated for the disease and could be CFT negative yet still carry the organism. The newer tests are a Competitive Inhibition Enzyme-linked Immunoabsorbant Assay (cELISA) and Indirect Immunofluorescent Antibody test (IFA). All of these tests look for antibodies to the organism, but the cELISA is most sensitive at detecting chronically infected horses. Due to this change in

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tests, some horses that were successfully imported to this country using a CFT may now come up positive if they are tested using the cELISA test. **EP is a reportable Foreign Animal Disease and requires notification of the State or Federal Animal Health Official when a horse has a positive test.** The testing is overseen by the National Veterinary Services Laboratories (NVSL) and testing is now being required to enter many racetracks, sales, and other equine sport events. Some states have enacted testing requirements to enter their state. The government has approved additional diagnostic laboratories but the process has been slow and turnaround time for the test at worst is 3-4 weeks at best 1 week. **Because test requirements change rapidly, consultation with the event organizer, sales company, racetrack, or state animal health office is recommended prior to travel to ensure proper compliance.**

What happens if a horse tests positive? The state and federal officials begin an investigation and regulatory response. Other horses on the same grounds will be tested to see if an outbreak is occurring. Ticks are collected if possible from the environment and the horses and tested for piroplasmiasis. The options at this time for positive horses are: lifetime quarantine, exportation to an endemic country, euthanasia, or possible enrollment in a treatment trial.

Sources:

Traub-Dargatz JL, Short MA, Pelzel AM, et al. Equine Piroplasmiasis. AAEP Proceedings 2010;56:1-7.

Websites with additional information:

USDA:APHIS:VS. Veterinary services infosheet: protecting your horses against equine piroplasmiasis. http://www.aphis.usda.gov/animal_health/animal_diseases/piroplasmiasis/downloads/ep_protect_your_horses_en_sp.pdf

The Florida Department of Agriculture and Consumer Services. The Division of Animal Industry. Equine Piroplasmiasis. http://www.doacs.state.fl.us/ai/main/ep_main.shtml

- September 2008 - The yearling sales
- August 2008 - Eastern Equine Encephalitis—have you vaccinated
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- April 2008 - Current parasite control recommendations
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