

EPM

Equine Protozoal Myelitis

Robert Tremblay DVM, DVSc,
Dipl ACVIM


EPM


- What is it?
 - EPM is a disease where a single-celled parasite from opossums infects the spinal cord or brain of horses;
 - The parasite (*Sarcocystis neurona*) is passed in the feces of opossums;
 - The horse inadvertently eats contaminated feed or drinks contaminated water.

EPM

- What is it?
 - There is a second parasite (*Neospora hughesi*) that is also seen in a small number of horses with EPM.
 - *N hughesi* is less common but it occurs in more parts of the world – less common but more widespread.

- What does the disease look like?
 - The basic problems in describing the disease are that:
 - the parasite can cause damage to **any part of the spinal cord or brain and;**
 - The **amount of damage can be very different** from horse to horse from very severe to barely noticeable.
 - Because the spinal cord has very limited ability to repair, horses won't go back to being normal again although they can learn to compensate.

- 
- What does the disease look like?
 - When the spinal cord is damaged, the local muscles that are controlled by that part of the spinal cord become weak and paralyzed;
 - The damaged spinal cord may not be able to pass information back and forth from muscles to the brain leading to incoordination.

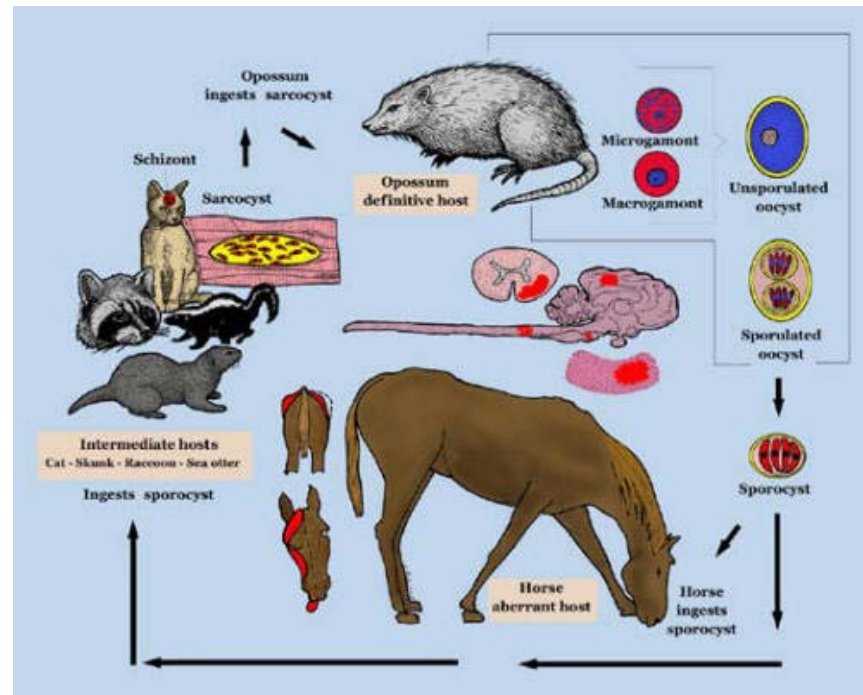
- 
- What does the disease look like?
 - Often has a sudden onset of illness;
 - Abnormalities can be very mild or very severe;
 - Horse may have difficulty using one or more legs;
 - Horses can be incoordinated and have a difficult time standing or walking;
 - If the brain is affected, the horse can have a head tilt and the muscles of the face can be paralyzed.

- What does the disease look like?
 - Muscles that become separated from their nerve supply to shrink




Rood and Riddle

Transmission cycle of EPM



epmhorse.org

- 
- How do you know that a horse has EPM?
 - There are other diseases that can look like EPM.
 - There is a test that uses **both** blood and CSF (the fluid that surrounds the brain and spinal cord):
 - If blood is **positive**, it means the horse has been **exposed** to the parasite but **not that its disease is EPM**.
 - It is recommended to test both blood and CSF so that the amount of antibodies in each fluid can be compared to each other.



- How common is it?

- Blood tests show that many horses have been exposed to the parasite but few horses ever get sick.


- In North America, 35-65% of horses have positive blood tests that prove they have been exposed to the parasite (*Sarcocystis neurona*);
 - It is estimated that only 1 in every 1000 infected horses will get EPM.
 - Fewer than 5% of horses have been exposed to *Neospora hughesi*.



- **Treatment:**

- There are a number of anti-parasite drugs that can be used to treat horses
 - Ponazuril (Marquis™ paste)
- Treatment usually continues for weeks to months
- Treatment success depends on how severely the horse's spinal cord has been damaged.
 - In one trial with ponazuril, 67% of horses improved within 3 months.

- 
- **Treatment:**
 - Horses may relapse for up to two years after treatment.

- 
- How can we protect horses from EPM?
 - There is no vaccine (there was but not now);
 - ‘possum-proofing may help:
 - Horse and pet feed should not be left out because that attracts opossums and rodents;
 - open feed bags and garbage should be kept in closed galvanized metal containers,
 - bird feeders should be eliminated, and fallen fruit should be removed.
 - opossums can be trapped and relocated.

Questions??

Thank you