Ontario Animal Health Network – Equine

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A Disease Bulletin from the Equine Network

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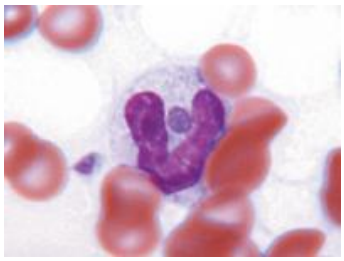
A horse from Eastern Ontario has been diagnosed with Equine Anaplasmosis. This is the first report in Ontario of a horse becoming infected with the gram-negative, intracellular bacterium *Anaplasma phagocytophilum.* This disease is **not** immediately notifiable nor reportable but is an emerging disease.

The 17 year old mare initially received veterinary attention for signs of colic and treated empirically. Four days later she was evaluated for lethargy, inappetence and limb edema. Upon examination the mare was febrile (40.5^{o}C), tachycardic, jaundiced and the limb edema was significant, involving three legs to above the carpus and tarsi . Blood was submitted for CBC and biochemistry. Morulae within neutrophils were visible on blood smear which is considered pathognomonic for *Anaplasma phagocytophilum* infection. A PCR test was also performed and was positive for *A. phagocytophilum* DNA. The mare was treated and is doing well. Further details will be presented in an upcoming AHL newsletter.

Equine anaplasmosis can have a variable presentation ranging from mild fever in young horses to severe systemic signs including ataxia. The more characteristic signs are fever, limb edema, jaundice and petechiation secondary to vasculitis and thrombocytopenia. Body effusions and myopathies have occasionally been reported.

Inclusion bodies (morulae) within the neutrophils can be seen 3-5 days post infection so performing a blood smear with microscopic evaluation is recommended. The *A.phagocytophilum* PCR is useful in the first days of fever as the morulae are too small to be seen by microscopy.

Oxytetracycline is the treatment of choice for equine anaplasmosis at 6.6mg/kg/day IV for 7-10 days with improvement seen within 24 hours. Prognosis for recovery is excellent.



Morula inside a neutrophil
http://thehorsedoctor.blogspot.ca/2012/12/equine-anaplasmosis.html

This parasite would most likely be transmitted in Ontario by the deer tick, *Ixodes scapularis,* which is also the tick that transmits *Borrelia burgdorferi*, the causative agent of Lyme disease. *Dermacentor variabilis*, the American dog tick, is also a potential vector but its involvement in this disease is uncertain. The mare in question was pastured in a "tick infested" area.

Ixodes scapularis
http://www.pbase.com/image/50915544

Recovered horses are immune from subsequent infection from *A.phagocytophilum* for approximately two years and are not believed to be carriers.

Prevention involves tick control measures as no vaccine is available at this time. Off label use of Frontline may be effective but can cause mild skin irritation .Good biosecurity practices such as not reusing needles/syringes would be prudent.

***A. phagocytophilum* also causes "tick-borne fever" in cattle and sheep as well as human granulocytic anaplasmosis (HGA) . People show nonspecific flu-like signs, high fever, severe headache, malaise and generalized myalgias. As with Lyme disease, people may be infected via tick bites and should consult their physician if concerned. Although the strain that causes disease in horses also causes disease in people (but not cows or sheep) , there are no reports of transmission from horses to people or to other horses.**