

Parelaphostrongylus tenuis

Extended Version

Classic case: Llama with ataxia and pelvic limb weakness

Presentation:

- Aberrant hosts include camelids, sheep, goats, horses, some cervids, caribou, moose, antelope.
 - Rare in cattle
- **Lumbar weakness, ataxia**, lameness
- Stiffness, circling
- Abnormal position of head, scoliosis (concavity opposite side of lesion)
- Paralysis
- Cerebral symptoms are very rare
- **Temporary remissions are typical**

DDX:

Listeriosis, neoplasia, cervical fracture, diskospondylitis, vertebral malformation, intervertebral disc extrusion/protrusion, caprine arthritis encephalitis, enzootic ataxia, organophosphate toxicity, equine protozoal myeloencephalitis, other migrant nematodes

Test(s) of choice:

- **No conclusive ante-mortem test**
- **Cerebrospinal fluid analysis**
 - Pleocytosis
 - ± Eosinophils
 - Elevated protein
 - ± Xanthochromia
- **Necropsy**

Rx of choice:

- No definitive treatment regimen is established
- Fenbendazole or ivermectin often used.
 - Ivermectin is effective against stages PRIOR to entering the spinal cord
 - Some clinicians Rx with ivermectin even when neuro Sx are evident
 - Speculation larvae entering meninges open way for ivermectin to penetrate blood-brain barrier.
- **Anthelmintic resistance has complicated treatment**

Prognosis:

- **Guarded**
- **Recumbency = bad prognostic sign**



Llama.

Photo courtesy of Johann Jaritz

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Prevention:

- Avoid exposure to feces of white tail deer – deer-proof fencing
- Decrease exposure to snails and slugs with molluscicide
- **Anthelmintics every 30-45 days from spring to fall**

Pearls:

- Usually asymptomatic in **white-tailed deer** in eastern North America
- Eggs and 1st stage larvae pass out bronchial tree and feces of deer
- Deer eat infective larva from intermediate host (**snails** and **slugs**) or their slime secretions as they graze
- Long, threadlike adult *P. tenuis* found in subdural space and venous sinus of white-tailed deer
- Also known as **meningeal worm** of white-tailed deer



Snail-intermediate host of P. tenuis.

Photo courtesy of Wikimedia Commons, Alfried

Refs: Fowler, Med and Surg of Camelids, 2nd ed., pp. 263-4, Large Animal Neurology, Mayhew, 2nd ed. p128, 268-269; Veterinary Neuroanatomy and Clinical Neurology, de Lahunta and Glass, 3rd ed. p305-308; Merck Manual, 10th ed (online): Nematodes causing CNS disease

My Notes: