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.
- **Antihelmintic resistance has complicated treatment**

**Prognosis:**
- Guarded
- **Recumbency = bad prognostic sign**
**Parelaphostrongylus tenuis**

Extended Version

**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


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**Snail-intermediate host of P. tenuis.**

Photo courtesy of Wikimedia Commons, Alfried

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**My Notes:**