

CLIENT EDUCATION HANDOUT

OPTIONAL
LOGO

Customer Name, Street Address, City, State, Zip code

Phone number, Alt. phone number, Fax number, e-mail address, web site

Parelaphostrongylus Tenius (Meningeal Worm)

Overview

- Camelids are an aberrant, dead end host for the parasite *Parelaphostrongylus tenuis* (meningeal worm)
- Camelids are exposed in regions where the definitive host, the White Tailed Deer, exists, particularly in the Eastern USA
- Camelids are infected by ingesting vegetation contaminated by infective third stage larvae contained in the slime trail from intermediate slug and snail hosts.
- These larvae migrate from the stomach to the spinal cord and brain of infected camelids, causing inflammation, damage and neurologic signs.

Species and Animal Groups Affected

- Alpacas, llamas, vicunas, and guanacos
- No breed or sex predilection

Signs

- Lameness, incoordination, weakness, inability to rise, circling or drifting gait, head tilt, depression, and/or blindness.
- Signs are often asymmetric.

Causes and Risk Factors

- Exposure to pasture in regions in which White Tailed Deer and *P. tenuis* overlap in range

Diagnosis

- Definitive diagnosis requires a spinal tap to identify abnormal cells in spinal fluid

Treatment

- Early, aggressive treatment will optimize the chance of successful recovery
- Treatment usually includes a combination of ivermectin (which can be repeated at two day intervals for a total of three doses) and fenbendazole (which is given for five consecutive days).
- Supportive treatment with drugs such as flunixin meglumine (Banamine®) is also indicated
- Recumbent animals should have ready access to feed and water, deep bedding, and protection from the elements

Expected Course and Prognosis

- Clinical signs are expected to improve within five days of treatment
- Severely affected, recumbent animals may not improve adequately and euthanasia may be required.

Client Education Handout

Blackwell's 5-Minute Veterinary Consult: Ruminant 2nd Ed.

Prevention

- In geographic regions with *P. tenuis*, prevention can be achieved via the administration of injectable ivermectin once each month during snail and slug season (April to January in the northeastern USA)
- However, this approach can contribute to drug resistance issues and can be detrimental to soil living organisms; therefore the necessity of this approach should be carefully considered
- Exposure to *P. tenuis* may be reduced by constructing deer proof fencing and gravel paths around camelid enclosures

Notes

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