R09-000916

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1.5 year old NM Terrier cross was presented to the referring veterinarian in January 2009 for a nonpainful, nonpuritic, 2 cm diameter nodule in the subcutaneous tissue on the left thorax

Excisional biopsy is included in the slide set
Haired skin
Subcutaneous nodule
Granulation tissue
Fibrous connective tissue
2 mm diameter parasite
Minimal inflammatory infiltrates
Cuticle
Pseudocoelom
Digestive tract
Coelomyarian musculature
Flat lateral cords
Large uterus
Larvae:
20 μm diameter
Striated cuticle
Developing embryos

Contractile and cytoplasmic portions of muscle

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Spirurid

*Dracunculus insignis*

Etiologic Diagnosis: Cutaneous dracunculosis
Differential: *Dirofilaria immitis*

Size

Lateral cords

Larva (microfilaria)
Differential: *Dracunculus medinensis*
Guineaworm of Africa and Asia
Conserved Ribosomal RNA sequences differ
Dracunculus insignis

Raccoons are the definitive host
Other *Dracunculus* spp. have other mammalian carnivores or reptiles as definitive hosts.
Ferrets can be infected with *D. insignis* and are a model for dracunculosis
Experimental infection of dogs has not been successful but cases of natural infection have been reported
Dracunculus insignis

Requires crustacean intermediate host
Crustacean (copepod) consumes first stage larvae
Third stage larvae are infective
Carnivore consumes copepod or paratenic host
Larvae migrate to subcutaneous tissue, mature, and breed
Gravid females migrate to the extremities as larvae develop
Dracunculus insignis

When first stage larvae are mature the female releases a toxin that causes a cutaneous vesicle to form. At this point, there is necrosis of the dermis and subcutaneous tissue with eosinophilic and granulomatous inflammation. With immersion of the vesicle in water, the female emerges and releases first stage larvae. When all larvae are released, the female herself departs the host and dies. Re-infection can occur.
Tooley continues to do well and no additional lesions consistent with cutaneous dracunculosis have arisen.

Other dogs in the household did not have similar lesions.
References


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