Giant Kidney Worm (Dioctophyme renale)

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Do you believe a worm over a yard long can live in the kidney of a dog or cat? Well, believe it. The giant kidney worm, *Dioctophyma renale*, most commonly lives in mink. Rarely dogs, cats, fox, and other carnivores may be infected. There are rare reports of *D. renale* infecting humans. *D. renale* is found throughout the United States. It is not of significant importance for pet owners, but can be an important problem for mink ranchers.

How does the kidney worm get to the kidney and get that big?

The eggs of *D. renale* are passed in the urine of the mammal. They must develop in water, and go through several intermediate hosts – parasitic worms on crayfish, fish, or frogs. A dog may become infected by either eating the worm, fish, or frog.

> The entire life cycle of *D. renale*, from egg to adult, can take as long as 2 years.

When the worm or other intermediate host is digested in the dog's stomach, the larva is liberated, enters the stomach muscle and stays there about 2 weeks. After this R & R, the larva goes to the liver where it feeds on the liver tissue for about a month. Then it enters the abdominal cavity where it may remain, or it migrates to the kidney where it grows into an adult.

Something that big must do a lot of damage, right?

The adult kidney worm causes severe damage, sometimes virtually destroying the entire kidney. If the kidney is destroyed slowly, the other kidney can generally compensate, and no signs of disease may be seen. Adult worms that remain in the abdominal cavity can cause a severe inflammation (peritonitis).

How is this condition diagnosed?

A *D. renale* infection is most commonly found on a post mortem examination. Occasionally, the worm may be found during abdominal surgery for some other condition. Imagine the look on the veterinarian's face upon finding a 3-foot long worm during a 'routine' spay!

> *D. renale* is quite selective. It is almost always found in the <u>right</u> kidney.

Rarely, the infection can be diagnosed by finding the eggs in the urine. On very rare occasions, it may be found in urine-contaminated feces.

How is such an infestation treated?

The only known treatment is surgical removal of the worm or the infected kidney.

What can be done to prevent infestation?

To prevent a pet from becoming infected, prevent the pet from eating raw fish and frogs, or drinking water containing crayfish. Yeah, right. Tell that to a Yellow Lab. Really, infection with *D. renale* is so rare, precautionary measures are generally not taken.

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