

Infectivity of Gnathostoma hispidum Larvae from Cyclops and of
Advanced Third-stage Larvae from Cold Blooded Animals for Primates

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OBJECTIVE: To determine whether or not infection in primates with Gnathostoma hispidum fully developed larvae from cyclops is possible, and whether or not the advanced third-stage larvae obtained from cold blooded animals will infect primates.

DESCRIPTION: An adult monkey (Macaca irus) was fed 500 fully developed G. hispidum 12-day-old larvae, another adult monkey (Macaca irus), and one adult gibbon (Hylobates lar), were each fed 53 and 50 G. hispidum advanced third-stage larvae respectively. These larvae were obtained from experimentally infected fresh water fish Ophicephalus striatus (snake-headed fish) Trichopsis vittatus (small fighting fish) and toads (Bufo melanostictus). The feeding was done via a polyethylene tube. The primates were subsequently killed and examined after 2-3 months for larvae with the use of an illuminated examination box.

PROGRESS: An autopsy of the monkey 64 days after being fed with 500 fully developed larvae in cyclops was negative for gnathostome larvae. The gibbon, when necropsied 98 days after being fed with the advanced third-stage larvae obtained from the cold blooded animals, was also negative. However the monkey fed with the advanced third-stage larvae obtained from the cold blooded animals was found infected on necropsy 98 days after the first feeding and 57 days after the last, with 1 encysted living G. hispidum advanced third-stage larva, with a thin fibrous cyst wall in the back muscles. This larva, after being removed from the cyst wall, was seen actively moving and its size and morphology were still that of the advanced third-stage larva.

SUMMARY: This study demonstrated that monkeys were not infected by feeding them with G. hispidum larvae in cyclops, but G. hispidum advanced third-stage larvae obtained from cold blooded animals would infect Macaca irus.

REFERENCES:

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