

Survey on the Incidence of *Angiostrongylus* sp.
in Wild Rodents

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OBJECTIVE : To determine the incidence of *Angiostrongylus* sp. in wild rodents in the area of Pakchong, Thailand.

BACKGROUND : *Angiostrongylus* sp., the rat lung-worm, has been shown to cause eosinophilic meningitis in man (1, 2, 3). Numerous cases of eosinophilic meningitis caused by *Angiostrongylus* sp. have been reported from Thailand (4). One case of human ocular angiostrongyliasis has also been reported from Thailand (5).

The investigators joined the Scrub Typhus Rodent Trapping Team from the Department of Medical Entomology and used the specimens trapped by this team in conducting this survey. Once the Scrub Typhus Team had extracted their samples from the wild trapped rodents, the rodents were turned over to the investigators for examination for the presence of *Angiostrongylus* sp.

METHODS : A complete gross necropsy was performed on each rodent in the field. Particular attention was given to the gross examination of the lungs, mesenteric vessels, heart and liver of each specimen. Tissue from all organs was harvested and placed in 10% buffered formalin for histopathologic examination in the laboratory.

All nematodes found at necropsy were placed in alcohol-formol-acetic fixative for preservation and transport to the laboratory where definitive identification was carried out (6). Tissues were processed in the routine manner and examined microscopically for the presence of nematode parasites. Gross nematode parasites were given to Dr. Manoon, Faculty of Tropical Medicine, Mahidol University for identification.

RESULTS : The number and anatomic location of adult and/or larvae helminths found at gross necropsy is given in Table 1. A total of 32 animals were found to be infested with internal parasites. Of these specimens collected and submitted for identification, only 2 were positively identified as *Angiostrongylus cantonesis*. Both *A. cantonesis* were found in *Rattus rattus*. One was located in the right atrium and the other was present in the pulmonary vein.

A variety of other gross liver lesions were noted during necropsy of the rodents. These lesions ranged from cysts of various sizes caused by the larval

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tapeworm *Cysticercus fasciolaris* which occurred in 33 animals to white spots in the liver which were probably old migratory tracts caused by other parasites. A few other unremarkable incidental lesions were seen grossly.

The results of this rodent survey indicated an incidence of infection of *Angiostrongylus cantonesis* of 1.37% in wild rodents. This infectivity rate is slightly lower but compares favorably with the infectivity rate reported from this section of Thailand by others (1). This survey is complete and this report is the final one.

Table 1

Anatomic Location of Helminth Parasite	Number of Animals
GI tract	14
Respiratory tract	5
Peritoneal cavity	7
Heart	1
Liver	1
Subcutaneous tissue	2
Muscle	1
Lymph node	1

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