

Changes in Microfilarial Prevalence of *Dirofilaria immitis* Among House Dogs in Nagasaki City

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Abstract About 30% of house dogs had microfilariae of the dog filaria, *Dirofilaria immitis* in Nagasaki City in 1968 and 1977. We have been continuing the surveys of blood examination on house dogs in the same city from 1983 to 1988. It was found that microfilarial prevalence of house dogs decreased to 10-20% in 2 northern areas.

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Key words : House dogs, dog filaria, *Dirofilaria immitis*.

The filaria of *Dirofilaria immitis*, the heartworm of dogs and their wild relatives, is a common parasite, living typically in the chambers and connecting large vessels of the right heart, and this disease is transmitted by mosquitoes. Occasionally, this worm has been found as a human parasite.¹⁾ Suenaga *et al.*³⁾⁵⁾ conducted two surveys on blood examination of house dogs in Nagasaki City in 1968 and 1977, and found that in both years, about 30% of house dogs had generally microfilariae in all areas of the city. In 1983, we conducted a similar survey, and found that the microfilarial prevalence had decreased to 10-20% in several northern areas of Nagasaki City. Since then, we have been continuing such surveys till 1988 in 1 southern area and 3 northern areas of the city to clarify whether the prevalence varies with the year. We found that about 30% of the dogs examined were infected with the worm in 1 southern area and in 1 northern area, but the prevalence was 10 to 20%

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in 2 northern areas. *Culex pipiens pallens* and *Culex pipiens molestus* are considered to be vectors for transmission of the disease.²⁾⁴⁾ Zaitso⁶⁾ recently compared the importance of *Cx. p. molestus* the vector of *D. immitis* with that of *Cx. p. pallens* by examination of experimental and natural infections. He concluded that *Cx. p. molestus* was not as important as *Cx. p. pallens* in the transmission of this disease in Nagasaki City. The reduction of microfilarial prevalence in 2 northern areas is speculated to be caused by factors such as the number of vectors, changes in the breeding pattern of dogs, changes in species and number of dogs, in addition to using preventive drugs in the northern areas.

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長崎市における飼い犬の犬フィラリアの 仔虫保育率の変化

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要 旨 1968年と1977年に長崎市の飼い犬の犬フィラリアの仔虫保有状況が調査された。この調査ではどの地区でも飼い犬の約30%が仔虫を保有していた。その後1983年から1988年にかけて同市の北部と南部の一部で飼い犬の仔虫保有状況を追跡調査したところ北部の2域で仔虫保有率が約10~20%と著しく低下していることがわかった。

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