

# **GNATHOSTOMA AND GNATHOSTOMIASIS IN THREE PROVINCES OF LAO PDR**

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**M.Sc. (TROPICAL MEDICINE)**

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## **ABSTRACT**

While human gnathostomiasis cases have been reported in Lao PDR since 1975, little is known about this disease in this country. We aimed to investigate human gnathostomiasis and gnathostome species in Lao PDR. One village each in Bokeo in the north, Vientiane in the central, and Champasack in the south of Lao PDR were selected as study sites. Using immunoblot technique, 420 randomly selected and 172 volunteer participants' sera were examined. Overall, 125 (29.8%) out of 420 sera of the randomly selected participants and 25 (14.5%) of 172 sera of volunteers were found to be seropositive having anti-*Gnathostoma* IgG antibody against 24 kDa fraction. Sero-prevalence of each province were quite variable with high positive rates of 47.1% in Naxon, Vientiane and 38.6% in Nongtearnoy, Champasack Provinces and a low positive rate of 3.6% in Phibounthong, Bokeo Province. When *Gnathostoma* infection-related risk factors were assessed using a questionnaire with closed questions by the interview for the 420 randomly selected participants, raw/undercooked fish consumption was closely related to seropositive cases in Naxon and Nongtearnoy. Several fish, swamp eels and frogs collected from these two villages were infected with larvae of *Gnathostoma spinigerum*. Gnathostome eggs were found in dogs' feces collected from Nongtearnoy.

**KEY WORDS: SEROPREVALENCE / GNATHOSTOMIASIS /  
GNATHOSTOMA SPINIGERUM / FOOD-BORNE NEMATODE /  
/IMMUNOBLLOT / LAO PDR**

**118 pages**