

SEROLOGICAL EVALUATION OF THE RABIES ANTIBODY TITERS OF
VETERINARIANS IN CAVITE

THESIS

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VETERINARIANS IN CAVITE**

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ABSTRACT

Rabies continue to be a public health problem in the Philippines, it is one of the top 10 countries with rabies problem and is responsible for the deaths of 200 to 300 Filipinos per year. The purposed of the study is to detect, evaluate, and quantify the rabies neutralizing antibody titer through the rapid fluorescent focus inhibition test (RFFIT) using the sera of 63 selected small animal practitioner veterinarians in the province of Cavite who voluntarily participated in the study.

This study is a descriptive type of research, aside from blood collection, a structured questionnaire was provided and filled by each (63) of the respondents to describe the characteristic of the variables under study that may affect the level of serum rabies neutralizing antibody titer from the study population. From the questionnaire survey, majority of the respondents were female (73%) and only 27% were male respondents. Majority are at the age of 31 to 40 years old (47.62%) but there were 51 to 60 years old (3.17%) who participated in the study. Most of the respondents have been a small animal veterinary practitioner for 1 to 3 years (34.92%). Based on the estimated average number of cats and dogs handled per day, majority of them answered that they handled 3 to 6 cats (42.86%) and more than 10 dogs (52.38%) per day.

A two millilitres of blood were collected from the medial cubital vein of the 63 respondents by a registered medical technologist following humane protocol and centrifuged. The sera are then separated into a microtainer with labelled identification number of the respondents. Sample (sera) processing and titration of antibodies were conducted at the Research Institute for Tropical Medicine (RITM). The reference values for rabies neutralizing antibody titers used in the study were based on the World Health Organization or WHO (>0.5 IU/ml).

Based on the reference value (>0.5 IU/ml) of the WHO, the result of the study showed that majority of the respondents with a total number of 62 or 98.41% out of the total

sample size (63) had rabies virus antibody titers greater than or equal to 0.5 IU/ml which is an adequate response to rabies vaccination according to the World Health Organization. Only 1 or 1.59% of the respondent had rabies virus antibody titers lower than 0.5 IU/ml which is an inadequate immune response and a booster dose of rabies vaccine may be recommended.

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INTRODUCTION

Rabies is a zoonotic disease characterized by progressive and incurable viral encephalitis, invariably fatal if untreated and usually transmitted by the bite(s) or scratches of an infected animal (Quiambao *et al.*, 2008). It is an infectious viral disease that is almost always fatal following the onset of clinical symptoms. In up to 99% of cases, domestic dogs are responsible for rabies virus transmission to humans. According to World Health Organization, Rabies is an infectious viral disease that is almost always fatal following the onset of clinical symptoms. In up to 99% of cases, domestic dogs are responsible for rabies virus transmission to humans. Yet, rabies can affect both domestic and wild animals. In humans, the disease can be prevented by pre- and/or post exposure prophylaxis (series of rabies vaccinations with or without rabies immunoglobulins), for dogs and cats, at least here in the Philippines, an annual pre-exposure vaccination is routinely done to prevent animal infection. Various virus neutralizing assays are used to confirm if a protective antibody response after immunization was achieved, wherein the internationally accepted threshold titer is 0.5 IU/ml.