

Investigation of protective level of rabies antibodies in vaccinated dogs in Chennai, India.

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Background: Rabies is still endemic in India causing an estimated 5000 human deaths a year. Free roaming dogs and unvaccinated owned dogs play a major role in the maintenance of the disease. Dog vaccination is the most crucial aspect of rabies prevention and control strategies; therefore vaccine immunogenicity and longevity are important determinants of the efficiency of rabies control efforts.

Methods: In this study at Madras Veterinary College, India, a total of 297 serum samples were collected from owned dogs that were vaccinated against rabies. Data regarding age, gender, breed, neuter status and last date of vaccination were collected at the time of blood collection. The level of rabies virus neutralising antibodies in the sera of these dogs was measured through rapid focus fluorescence inhibition test. The factors associated with protective level of rabies antibodies in vaccinated dogs were investigated through multivariable regression analysis.

ACADEMIC P.E.A.R.L.S

Pediatric Evidence And Research Learning Snippet



Should we give complete post exposure prophylaxis after an immunized pet dog bite?

Results: This cross-sectional investigation shows that only 40% (119/297) of the all the dogs in the study showed presence of protective level of anti-rabies antibodies, and 40% (72/180) of the dogs vaccinated within the last year showed presence of protective levels of antibodies causing concern about rabies vaccine quality and its impact on rabies control. The study also shows that older and neutered dogs are more likely to have protective titer among vaccinated dogs, while non-descript breed dogs are less likely to have a protective titer compared to pure breeds.

Conclusion: In this study 60% (108/180) of young prima dogs and adult dogs did not show protective levels of antibodies within the year of last rabies vaccination, although they had previous vaccination history. This high percentage of apparent non-responders is a cause of concern of administration, distribution, storage, potency and quality management of vaccines in India.

EXPERT COMMENT

" This study confirms the premise that a complete post exposure prophylaxis, as per the category of animal bite (ie. if category 3 then include Rabies immunoglobulin/ monoclonal antibody), should be given to patients bitten or scratched by even completely immunized pet dogs."



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With warm regards,

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Reference

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