ABSTRACT

Background

Rabies is zoonotic 100% fatal viral encephalitis, but preventable by prompt application of post exposure prophylaxis. However due to the high cost of vaccines and long duration of vaccine regimens, a variety of affordable and practical empirical schedules, vaccine doses and routes of vaccination have been recommended over time. Theses schedules have been based on immunogenicity studies, clinical experience and epidemiology as modern biologicals have improved and scientific knowledge has grown dramatically during the last few decades. Historically the total number of rabies vaccine doses administered for human prophylaxis has decreased and this not only reduces the number of clinic visits but also increase patient compliance.

Objectives

To study the immunogenicity of WHO approved reduced dose (4 doses) 2-2-2-0-2 on D0, D3, D7, and D30 intradermal (ID) vaccination for anti-rabies post exposure therapy (PET) in healthy Sri Lankan adults following exposure to suspected rabid animals.

Evaluate the degree of protective antibody levels in patients following anti-rabies post exposure vaccination on day 14 and day 90.

Methodology

This cross sectional prospective study was carried out from October 2011 to April 2012. Eighty healthy adults presented to the ARU (Anti Rabies Unit) at NCTH (North Colombo Teaching Hospital) Ragama with minor exposures to suspected rabid animals were recruited in the study after informed written consent. 3 ml of blood from each subject was drawn on days 0, 14 and 90. Antirabies neutralizing antibodies were assessed by RFFIT (Rapid Fluorescent Focus Inhibition Test). The titer of virus suspension was calculated

using the method of Reed & Muench. Ethical clearance was obtained from scientific and ethical review committee, Medical Research Institute, Colombo.

Results

All subjects had NAT (Neutralizing antibody titres) above 0.5IU/ml, WHO approved minimum protective titres on day 14 (11.44 IU/ml) and day 90 (5.375 IU/ml). Five who had initial antibody titres, developed very high NATs due to anamnestic reaction.

Conclusion

The new modified 4 dose ID antirabies post exposure therapy recommended by WHO is effective and produces adequate neutralizing antibody levels against rabies virus infection.