SHORT COMMUNICATION

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Rabies Deaths: The Kerala Story

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INTRODUCTION

Rabies is a viral Disease caused by lyssaviridea virus and is caused by the bites or licks of animals,[1] .Dogs are the most common animals involved the incubation period of rabies varies 4 days to even a few years but is commonly between one to 3 months. Initially the symptoms are non specific and include fever and headache it later progress to insomnia, hallucination, agitation and fear of water or hydrophobia. Death usually occurs within 10 days of the symptoms.

Rabies continues to kill a number of people particularly those from Africa and Asia, fortunately though post exposure prophylaxis can prevent the onset of rabies.[2] The first primary care following a bite or scratch is washing the wound with soap and water. This is followed by vaccination with who approved vaccine,[3] In the past it was the administration of modern cell culture vaccine by the intramuscular route This involved injecting 1 ml of the vaccine intramuscularly on day 0, day 3, day 7, day 14 and day 28. Along with that human rabies immunoglobin HRIG or equine immunoglobin ERIG had to be given in the case of transdermal bites or multiple bite. Half of this immunoglobin was given intramuscularly and half was infiltrated on the day of the bite. Both HRIG and ERIGg are costly with HRIG g being costler but without serious side effects as compared to ERIG which requires a test dose.

Subsequently it was found that the vaccine for rabies was also in short supply and was costly. It was also found that .1 ml of the same vaccine given intradermally led to the same immune response as 1 ml of the vaccine given intramuscular vaccine.[4] This meant that a lot of precious vaccine could be saved. A new regime called the Thai Red Cross 2 site regime that involves injecting .1 ml of vaccine at 2 different sites intradermally on day 0, 3, 7 followed by a single injection on day 28 and 90. So here the total vaccine that is actually is just .8 ml compared to a total of 6 ml in the intramuscular regimen this obviously has been proven to be cost effective and is currently being followed all over the world.[5]

In Kerala three children died of rabies in the past one month.

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All of them did take the first aid and also took the course of injections and immunoglobin as prescribed. The latest case involved was that of a 7 year old girl from Kollam who we refer to as N who passed away on May 5th after getting bitten on April 8. The previous case involved another girl we refer to as B aged 12 years hailing from Pathinamthatta who passed away on April 9th nearly 6 months after getting bitten. The third case Z hailing from Malap Puram passed away on April 28th after getting bitten on march 29th in all the cases the patients had taken prompt treatment. So what could have possibly gone wrong.

T the first thing was obviously whether the vaccines were potent or not. the vaccines blonging to the batch number of the vaccine were tested and found to be potent similarly the temperature it was stored. was found appropriate. The next major issue was the immune response that developed after giving .01 ml intradermally as compared to 1 ml intramuscularly. here there are several studies to substantiate the use of intradermal anti rabies vaccine. Use of Intradermal Vaccine is no doubt Cost effective but is it Cost beneficial.

Another aspect that needs investigation is who administered the Iintradermal vaccine and where. All of them were given vaccines at government centres, and by government staff. The question here is how many of them were trained to give it intradermally and in how many of these cases the injection was given subcutaneously rather than intradermally. These are questions that need to be answered by the Government of Kerala and experts. Another aspect is that these conditions exist in other states also but these deaths occur only in Kerala. The reason for This also needs to be studied in depth.

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