

Editorial

What is the Real Burden of Rabies in India?

Twenty first century witnessed major advances in field of information and technology. In this 21st Century, elimination of rabies, a disease of antiquity, remains a major public health challenge not only in India but in most parts of South East Asia and Africa. Around 59,000 people die from rabies every year, according to a 2015 study published in PLOS Neglected Tropical Diseases. The overwhelming majority are in Asia and Africa. India alone accounts for 20,847 deaths, more than one-third of the world's total, giving it the highest incidence of rabies globally.

Many experts on Rabies feel that "India won't be able to control the disease without monitoring rabies rates in animals as well as humans". The noted Rabies Expert Late Dr S N Madhusudana, who once headed the WHO Collaborating Centre on Rabies, at the Dept. of Neurology of the National Institute of Mental Health and Neurosciences, in Bangalore, had said when he was alive, a year ago, that "Rabies will always be in India". This is due to the circumstances in different sectors prevailing in the country and many of these cannot be removed easily.

India has the highest rate of human rabies in the world primarily due to its large population of stray dogs. The primary reasons for this high incidence of Rabies are four in number. First is a decline in the number of vultures due to acute poisoning by the anti-inflammatory drug diclofenac. Animal carcasses, some of Rabid Dogs and other animals dying of Rabies that would have been consumed by vultures instead become available for consumption by feral dogs, resulting in a cycle of these feral dogs developing Rabies in future. The growth of the dog population will result in a larger pool of carriers for the rabies virus. The second reason is resulting in a great increase in the number of stray dogs. It is that in 2001 a law was made that forbade the killing of dogs. The third

reason is a growing trend among "Dog Lovers" to feed stray dogs in large numbers and prevent them from being caught by municipal "Dog Catching Squads". The fourth reason is the depositing of garbage in many street corners, causing many stray dogs to congregate in large numbers and biting passers by due to provocation or on apprehension.

In order to control this problem of "A large number of Rabies Cases", it becomes very essential to know about the "Real Burden of Rabies in India". While trying to find out that piece of information we come across very confusing and contradictory data.

About 30 years ago the Govt. of India Reported the Mortality from Rabies to be 25000. This figure finds its place in the Training Manual on Rabies from the National Institute of Communicable Diseases, Delhi, of 1987. This figure remained the same for many years; at least we were taught it to be so in the various training courses I attended as a doctor running a very busy Anti- Rabies Clinic at Kolkata.

One fine morning at Wuhun in China at the 3rd International Symposium on Control of Rabies in Asia, in 1996 the official delegate from India mentioned that the figure was 30000, in his presentation. So the figure changed from 25000 to 30000, by exactly 5000, in 9 years time.

In 2003 the WHO-APCRI national multicentric survey to assess the burden of rabies in India was carried out. The report of this survey was published in 2004. The mortality from Rabies in India was reported to be 20565. This is the last and only methodical work on this issue till now.

In 2012, we got to see Newspaper reports of human rabies deaths in India as 223 in 2011 quoted by the then Hon Minister of Health and Family Welfare Shri Ghulam Nabi Azad in the Lok Sabha.

The magic figure came by adding the figures reported to the Central Govt. by different states. The break up was West Bengal 73, Andhra Pradesh 45, Orissa 24, Tamil Nadu 21, Karnataka 18, Delhi 17, Gujarat 16 and Rest of India 9. That means there are many Rabies Free areas in India, besides the Andaman & Nicobar and the Laccadive & Minicoy group of islands. This is very far from the truth.

There is speculation about the estimated data on rabies in India. Many reports shows conflict in the number of Rabies Cases reported by Government of India and the earlier accepted figures. The older reported figure of 25,000-30,000 appears to have been based on review of cases in various Infectious Diseases Hospitals (ID hospitals) followed by using statistical methodology to apply to the whole country. The Central Bureau of Health Intelligence (CBHI) of the Govt. of India, has shown the average figure of rabies as 288 Indians per year during the past ten years, within a range of 104 to 361, which is thought to be very much on the lower side. From 2005 through 2014, the Central Bureau of Health Intelligence found, India had 274, 361, 221, 244, 260, 162, 223, 161, 132 and 104 verified human rabies deaths, respectively. The actual number of rabies deaths in the country may be far higher than we know from this data of CBHI because of unreported or untreated cases. More research is required into human rabies fatalities in India before we can accept this information as accurate. This shows that we still do not know how many people die from rabies each year in India.

The CBHI figures are based on the reported figures from the participating Government hospitals, which may not reflect the true incidence of rabies in the country. Patients reporting to private hospitals are not accounted for in the figures. In the

absence of a proper reporting based on surveillance from both public and private hospitals and others health care providers, the true figure of rabies cases cannot be derived at, with accuracy. Absence of such a reliable data does not help in planning and implementing efficient Rabies Control Measures. Under such circumstances, it is imperative to document rabies cases. This is possible if a system of recording rabies is established by way of having dedicated rabies clinics with proper documentation about the cases in terms of socio-economic demographic characteristics, nature of animal bite, circumstances of bite, and management in the form of 'Rabies registry' in all the government and private hospitals and mandatory periodic reporting to the health authorities.

A study, published in *Acta Tropica* by GARC and partners, collated publically available data from online International health and rabies surveillance databases and the published literature. Two main approaches have been used – regular passive surveillance that relies on reporting of cases as they occur and much more intensive active surveillance that involves community-based searches for cases. The difference is profound, and active surveillance can reveal up to 100-times higher numbers of cases compared to passive surveillance. However, the intensive nature of active surveillance studies makes them very rare.

It would be very nice if a Second Study on Assessing the Burden of Rabies in India is carried out under WHO and APCRI partnership once again, very soon. APCRI members have the technical competence, touch, skill and experience to carry out such a large study scientifically and efficiently. APCRI is committed to Reassess the Burden of Rabies in India, again.