

Guest Editorial

India's Fight Against Dog-Mediated Rabies

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DOI: <https://doi.org/10.24321/0973.5038.202509>

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How to cite this article:

Goswami A. India's Fight against Dog Mediated Rabies. APCRI J. 2025; 27(2): 3-4.

There has been a very significant improvement in the availability of proper Rabies Post-Exposure Prophylaxis [PEP] in India in the last 25 years. Now World Health Organisation (WHO) approved Rabies PEP is available in almost all major hospitals in cities and towns in India. It is also available in many village PHCs.

About 35 years ago, most animal bite victims had to go to Government approved Anti-Rabies Clinics [ARCs] and a few selected centres in cities, some far away from their place of residence, for proper Anti-Rabies treatment. Only Semple Vaccine [NTV] was used for Post-Exposure Prophylaxis [PEP] in the Government ARCs. Anti-Rabies Serum [ARS] was used at the ARC of CRI Kasauli, and similar places only. Most Government ARCs did not have ARS. Tissue Culture Vaccines [TCVs] were used mostly in private clinics. Rabies Immune Globulins [RIGs] usage was even more scanty. It was done by a few well-trained physicians in the country. The Department of Preventive and Social Medicine (PSM) in Medical Colleges were not interested in running ARCs. Only two TCVs, Merieux Inactivated Rabies Vaccine [HDCV] and RABIPUR [PCEC] were available in very few places. Two brands of HRIGs, Berirab P and Imogam Rabies, were available in still fewer places. Most General Practitioners did not treat the animal bite cases and used to refer them to the Government ARCs, some very far away.

The Rabies Control Measures were of catching and killing suspected rabid Stray Dogs. The Rabies Control Program was not present.

There are now 10 brands of modern tissue culture ARVs [TCVs] of different types available to the clinicians for managing animal bite cases. There are 2 brands of HRIG and 3 brands of ERIG, and 2 types of RMabs available for passive immunisation.

Community Medicine Departments of many Medical Colleges are running ARCs.

Many General Practitioners are treating animal bite cases very confidently and correctly. Some are using HRIG, ERIG and RMabs where applicable.

National Action Plan for Dog-mediated Rabies Elimination (NAPRE) is present.

There was no professional association to help those doctors who worked at the ARCs to update their skills till 1998.

On 17th April, 1998, the Association for Prevention and Control of Rabies in India (APCRI) was formed with the objective of having a Scientific and Professional platform to focus on Rabies and its Control.

The First National Conference of APCRI was held at Kolkata on 25th July, 1999 and was named APCRICON 1999. Thereafter, the National Conference of APCRI was held every year till now.

In the last 27 years, some significant changes have taken place in the Rabies Scenario of India as a result of APCRI's efforts.

The Competence of the Doctors managing Animal Bites has increased many folds, due to APCRI's efforts resulting in ready availability of many brands of high-quality Rabies Vaccines, RIGs and RMabs of different types.

APCRI was mainly instrumental in stopping the use of NTV and the introduction of IDRV in Government Hospitals and ARCs.

Manual on Rabies Immunoglobulin (RIG) administration was published in 2009, and it helped in increasing RIG usage.

APCRI Journal helped in the dissemination of scientific knowledge among its readers.

Besides APCRI, good work in this field has been done by a few more NGOs as well.

Global Alliance for Rabies Control [GARC] was started in 2005. It is the leading international NGO working on the control and eradication of Rabies. It promotes a science-led approach in promoting collaboration between Animal and Human Health components.

World Rabies Day is an International Awareness Campaign started on 8th Sept, 2007, and thereafter observed every year on 28th September. It provides important information to the Public on Rabies.

Mission Rabies was developed in 2013, with an aim of saving both human and canine lives in rabies hotspots all around the world. Their teams have worked tirelessly to vaccinate over 2 million dogs and educate over 5 million children globally.

All of these inputs have helped in increasing Rabies awareness amongst all. As a result of these activities WHO approved proper Rabies PEP is now available very widely throughout the country, right up to the periphery.

Control and eventual elimination of Rabies remain a major public health challenge in India and in many parts of the World. Rabies is a Zoonotic infection that does not fit into the domain of a single agency that can be entrusted with the task of controlling it.

There is a lack of ownership, which is the major issue in the

control of rabies in the country. It is now well understood that Control & eventual Elimination of rabies would involve preventing human deaths due to rabies through timely and proper post-exposure prophylaxis (PEP). A very significant progress has taken place in this sector in the last 27 years, since the formation of APCRI.

In the sector of Control of Canine Rabies through mass vaccination and animal birth control for population control of stray dogs, the progress is not satisfactory. Science tells us that immunisation of dogs against rabies shall result in breaking of the chain of transmission, if at least 70% of the dogs are covered with effective vaccines on a sustained basis. This is a very tough task for a country as vast and varied as India is.

Immunising a limited number of dogs, when possible, with the available resources, will not be able to sustain the level of immunity in them, and will not help in Rabies Control.

Surgical sterilisation of dogs in small numbers and at erratic intervals does not yield any benefits in the reduction of the dog population.

Control of Canine Rabies depends heavily on management of the dog population to sustain its acceptable levels. Many countries in the past have tried to depopulate dogs without any tangible effect in the long run.

It is very important to know the real incidence of Rabies in Humans, Dogs and other animals. Various types of data not tallying with one another, generated by various agencies of the Government and NGOs, are available. It is very confusing.

In 2003, the APCRI/WHO multicentric study to assess the burden of Rabies in India showed the incidence of Rabies in humans to be 20,565 cases. In 2005, the Rabies incidence in humans, as per DGHI, Govt. of India data, was 274 cases. 5726 cases of Rabies were reported to occur in India in 2023 by J.Thangaraj et al in The Lancet. In 2023, the DGHI, Govt. of India figures were 54 cases of Rabies. All figures show a great reduction in the number of Rabies cases in humans.

Preventing human rabies depends on control of the disease in its animal reservoir. It depends on technical, intersectoral, organisational and financial obstacles. Poor implementation of dog rabies control campaigns and poor control of the dog population will hinder the aim of the eradication of dog-mediated Rabies indefinitely.

Although the reservoir is in animals, mortality and morbidity mainly affect human beings. Dog bite is the primary source of human rabies. Dogs can get the infection from other dogs and other animals like cats, wolves, foxes, jackals, mongooses, etc. Control of Rabies in wildlife should also be taken up. Unless all weaknesses are taken care of properly, dog-mediated rabies cannot be eradicated. It can best be controlled.