**World Journal of Pharmaceutical Sciences**
ISSN (Print): 2321-3310; ISSN (Online): 2321-3086
Published by Atom and Cell Publishers 
Available online at: http://www.wjpsonline.org/
**Review Article**

# Demography of Rabies in India

Kirti Rani

Amity Institute of Biotechnology, Amity University Uttar Pradesh, Noida, Sec-125, Noida-201313 (UP), India.

***Received: 16-12-2016 / Revised: 23-01-2017 / Accepted: 27-01-2017 / Published: 27-01-2017***

## ABSTRACT

Rabies is reported endemic worldwide. Approximately 30 000 deaths in India were reported due to rabies especially, 1 between 30% and 50% of these deaths occurred in children in 1998. Rabies has been a disease of antiquity that continues to be a major public health problem in India as per the available resources. The factors which are attributed to rabies for its reported high mortality and morbidity are only due to animal bites as well as including other factors such as lack of community educations about post-exposure rabies prophylaxis and adherence to traditional beliefs lead to likely increase the risk of rabies infection after exposure in patients or affected individuals. So, the timely immunization and clinical awareness of human population can be prevented rabies at expected extent along with the effective mass-immunization of stray dog or animals populations.

**Keywords:** Rabies; Neurotropic virus; Rhabdoviruses

## INTRODUCTION

Rabies is known for its acute viral infection transmitted through infected saliva i.e. bites, scratches, licks on broken skin and mucous membrane which causes fatal encephalomyelitis in virtually all the warm blooded animals including man and eventually leads to death. Reported high mortality and morbidity are due to only animal bites that lead to increase the risk of rabies infection in affected population. This virus is found to attack the central nervous system which causes two types of rabies called, 1) Furious Rabies in which death occurs by cardio-respiratory arrest and 2) Paralytic Rabies in which hydrophobia leads to death followed paralysis and coma with common neuropsychiatric symptoms such as altered behaviour, Psychosis/delirium/confusion, Restlessness, Barking/cough and Dysphagia [1]. India has been reported for more deaths due to rabies than any other country due to its large population of stray dogs, cats, or wild animals bites along with the lack of their effective infection control strategies [2,3].

As per the earlier reported data, estimated mortality due to rabies was 1.3 per total 1000 deaths in India in early 1990s followed by 12,700 symptomatically identifiable furious rabies deaths in 2005[3,4]. An estimated 20,000 people were die every year from rabies in India which is reported more than a third of the world [4,5]. Reported data of 2015 was coined that China had the second-highest number of cases followed by the Democratic Republic of the Congo [6].

As well as, in 2002, the World Health Organization (WHO) has been estimated that rabies attributed 30,000 human deaths per year in India which accounted for approximately 60% of the estimated global total of deaths due to rabies infection [4,7,8]. In 2007, the annual incidence of human rabies was found to estimate that the majority of deaths due to rabies were occurred in rural areas as compared to other health care facilities and most of deaths were accounted for males and in children below the age of 15 years [4,8].

One third of approximately national rabies deaths were reported in Uttar Pradesh followed by Chhattisgarh, Odisha, Andhra Pradesh, Bihar, Assam and Madhya Pradesh [7-9]. Minimum deaths due to rabies infection in human population were accounted in following states of India named, Kerala, Jammu & Kashmir, Jharkhand, Manipur, Meghalaya, Nagaland, Sikkim, Mizoram, Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Dadra & Nagar Haveli and Daman & Diu as per the available reported data [10,11]. Hence, all of these reported data, can be effective to depict the

***Corresponding Author Address:** Dr. Kirti Rani, Assistant Professor (III), Amity Institute of Biotechnology, Amity University, Uttar Pradesh, Noida, Sec-125, Gautam Buddha Nagar, Noida-201313 (UP), India. Email ID: krsharma@amity.edu, Kirtisharma2k@rediffmail.com*

prevalence of this disease and its distribution across nation which are required to built public awareness that further give direction to control various clinical programs along with to established successful measures to reduce rabies transmission or attributed deaths in affected population.

## CONCLUSION

So, this mini review article can be very useful for depicting the demographic approach of rabies in India for carrying out the clinical management along with population awareness to hinder their associated ill-effects and to reduce occurrence of deaths due to rabies infection in disease prone human and animal population.

## ACKNOWLEDGMENT

I would like to express my cordially appreciation to Amity University Uttar Pradesh, Noida (INDIA).

## REFERENCES

1. Chomel BB. The modern epidemiological aspects of rabies in the world. Comp Immunol Microbiol Inefect Dis 1993; 16(1): 11-20
2. Fishbein D, Robinson L. Rabies. New Engl J Med 1993; 329: 1632-1638
3. World Health Organisation Department of Communicable Disease, Surveillance and Response. World survey of rabies, no 33, for the year 1997. Geneva: WHO 1999
4. Ichhpujani RL et al. Epidemiology of animal bites and rabies cases in India. A multicentric study. J Commun Dis 2008; 40(1): 27-36
5. Satyanarayana ML et al. Molecular Epidemiology of Rabies Virus Isolates in India. J Clin Microbiol 2006; 44 (9): 3218-3224
6. Sudarshan MK et al. Gangaboraiah. Assessing the burden of human rabies in India: results of a national multi-center epidemiological survey. Int J Infec Dis 2007; 11(1): 29-35
7. Sudarshan MK et al. An epidemiological study of animal bites in India: results of a WHO sponsored national multi-centric rabies survey. J Commun Dis 2006; 38(1): 32-9
8. Singh J et al. Epidemiological characteristics of rabies in Delhi and surrounding areas. J Indian Pediatr 2001; 38(12): 1354-60
9. Sahu KK et al. Epidemiological Characteristics of Patients Attending for Rabies Post-Exposure Prophylaxis at the Infectious Diseases Hospital of Lucknow, India. J Glob Infect Dis 2015; 7(1): 30-32
10. Tarantola A et al. Caring for patients with rabies in developing countries - the neglected importance of palliative care. Trop Med Int Health 2016; 21(4): 564-7
11. Sharma S et al. Prevalence of Dog Bites in Rural and Urban Slums of Delhi: A Community-based Study. Ann Med Health Sci Res 2016; 6(2): 115-9