

Rabies in Asian Countries: Where we are stand?

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ABSTRACT

Rabies is one of the neglected zoonotic disease in Asian and African countries. This article highlights the rabies death rate in Asian countries during 2010-2014. High death rate was reported in China, Philippine and Vietnam. The overall death rate has dropped since 2010 to 2014 but still the disease is prevalent in some Asian countries. Reinforcement of the rabies surveillance is needed to strengthened national, regional and global reporting system to control and eliminate the disease by 2030.

Key words: Asian countries, Death rate, Rabies

INTRODUCTION

Dear Sir

Rabies is one of the neglected zoonotic and fully vaccine preventable viral disease with an approaching (100%) case fatality rate¹. The disease mainly transmitted by the bite of rabies infected dog accounts for (99%) cases. Globally, each year approximately 59,000 individuals died from dog-mediated rabies. In Asia, due to dog-mediated rabies an estimated 35,172 human deaths (59.6% of global deaths) occurred per year, while in Africa, an estimated 21,476 human rabies deaths (36.4% of global deaths) reported per year. In Asia, India is the leading county accounts for the most human rabies deaths (59.9%) and globally (35%)². After India, China is another country that experience most serious impact from rabies, among the list of 39 notifiable infectious diseases in the country, deaths due to rabies ranked third³.

However, after a huge economic investment rabies is still a significant major health problem in Asian and African countries. Some of the published studies reported that about the adequate prophylactic steps following dog bites rabies cases surprisingly the physicians have insufficient knowledge^{4,5}. In many parts of the world, rabies human deaths are significantly unreported².

This study was conducted to explore the total number of deaths per year from dog-transmitted rabies in Asian countries for the period 2010 to 2014. The data extracted from the World Health Organization (WHO) website. For many Asian countries, the data are not available or incomplete data on the WHO website so therefore excluded from the analysis. The

number of deaths cases was calculated in clinically diagnosed and laboratory confirmed cases as per the country reporting system⁶.

Table 1 showed the reported human rabies deaths. Maximum number of rabies deaths were reported from China, Philippines and Vietnam. However, the overall rabies deaths have dropped since 2010 to 2014. As per our findings the deaths rate is decreased but it was only among the clinically diagnosed or laboratory confirmed cases. However, many deaths from rabies remain unreported especially occurred in the community. Anyhow, it is forward moving towards rabies control and elimination by 2030.

Another fact, that for some of the large Asian countries (*i.e.* India, Pakistan and Bangladesh) the data are not available. So therefore, it is hard to say either in community set up the rabies death rate decreases or not? Therefore, further studies are recommended to report the exact epidemiological data of rabies in community set up. Still many developing countries faces challenges during the identification, diagnosis and reporting of rabies cases due to lack of public awareness, poor surveillance, laboratory facilities, shortage of skilled health-care workers, absence of proper coordination among all the sector involved. Effective rabies control programmes, better surveillance, strengthened national, regional and global reporting system especially in the Asian and African countries are necessary. Many Pacific island nation and Australia are dog-mediated rabies free regions but still report the imported cases of rabies, which is one of the best example for the rabies prevalent countries.

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Table 1: Reported number of human rabies deaths by selected Asian countries from 2010-2014

S. No.	Country/Year	2010	2011	2012	2013	2014
1	China	2014	1879	1361	1128	854
2	Georgia	1	1	2	4	2
3	Iran	4	8	6	5	4
4	Kyrgyzstan	3	4	0	1	d
5	Philippines	299	229	213	205	236
6	Sri Lanka	49	41	38	28	19
7	Syria	1	2	5	7	0
8	Thailand	15	8	5	5	5
9	Turkey	0	2	1	2	d
10	Vietnam	87	110	98	105	67
11	Total	2473	2284	1729	1490	1187

Note. d= data not available.

1 This article highlights the rabies
 death rate in Asian countries.
 2 This article may convey an
 important message to reinforce
 the rabies surveillance,
 preventive measurements and
 vaccination campaign in those
 countries where the rabies is
 prevalent.

Highlights

CONFLICT OF INTEREST

The author(s) declared no conflicts of interest.

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AUTHORS CONTRIBUTION

Idea and study designed: TA
 Acquisition of data: TA, THA

Analysis and interpretation of data: TA, THA
 Drafting of manuscript: TA
 Study supervised: HJ

REFERENCES

1. Baghi HB, Bazmani A, Aghazadeh M. The fight against rabies: the Middle East needs to step up its game. *Lancet*. 2016;388:1880. Available from: [Doi:10.1016/s0140-6736\(16\)31729-9](https://doi.org/10.1016/s0140-6736(16)31729-9).
2. WHO. WHO expert consultation on rabies: third report; 2018. null. Available from: <http://apps.who.int/iris>.
3. Qi L, Su K, Shen T, Tang W, Xiao B, Long J. Epidemiological characteristics and post-exposure prophylaxis of human rabies in Chongqing, China, 2007-2016. *BMC Infectious Diseases*. 2018;18:6. Available from: [DOI:10.1186/s12879-017-2830-x](https://doi.org/10.1186/s12879-017-2830-x).
4. Chowdhury R, Mukherjee A, Naskar S, Lahiri SK. A study on knowledge of animal bite management and rabies immunization among interns of a government medical college in Kolkata. *International Journal of Medicine and Public Health*. 2013;3:17-20. Available from: [Doi:10.4103/2230-8598.109313](https://doi.org/10.4103/2230-8598.109313).
5. Vashishtha VM, Choudhury P, Kalra A, Bose A, Thacker N, Yewale VN, et al. Indian Academy of Pediatrics (IAP) recommended immunization schedule for children aged 0 through 18 years—India, 2014 and updates on immunization. *Indian Pediatrics*. 2014;51:785-800. Available from: [DOI:10.1007/s13312-014-0504-y](https://doi.org/10.1007/s13312-014-0504-y).
6. WHO. Global Health Observatory visualizations, Reported number of human rabies deaths Data by country; 2016. Available from: node.main.NTDRABIESHUMANDEATHS.

