Research Article

Awareness on rabies and its prevention among anganwadi workers

Huluvadi Shivalingaiah Anwith, Kavya Gopalakrishna Upadhya, Haradanahalli Shankaraiah Ravish, Ramanthan Thenambigai, Mandya Prashanth Ramya, Puttaiah Thejaswini

Department of Community Medicine, Kempegowda Institute of Medical Sciences, Bengaluru, Karnataka, India

Correspondence to: Huluvadi Shivalingaiah Anwith, E-mail: anwith2006@gmail.com

Received: January 19, 2018; **Accepted:** February 03, 2018

ABSTRACT

Background: Anganwadi workers play an important role in primary health care for promoting community health. Since they work in the same community of their residence, the advice provided by them is acceptable to the community. They are supposed to provide awareness on health and motivate them for accessing proper health care, locally available. **Objectives:** The objectives of this study were to assess the awareness on rabies and its prevention among the anganwadi workers. **Materials and Methods:** The study was conducted from July 2017 to November 2017, among the anganwadi workers coming under the rural field practice area of a medical college. The data were collected using a pre-tested, semi-structured pro forma in the local language and analyzed using descriptive statistics. **Results:** The study included 37 anganwadi workers. The overall knowledge on rabies and its prevention was 11.70 + 2.68 out of 20 questions. All the study subjects had heard of rabies, but only 24.32% had correct knowledge on the modes of rabies transmission, and only 10.81% knew the animals transmitting rabies. On the contrary, 94.59% subjects knew the correct first aid following animal bite, and 45.95% subjects knew that anti-rabies vaccine was available both at government and private health facilities. **Conclusion:** The knowledge on prevention of rabies has to be further improved; having a complete knowledge ultimately improves the awareness on prevention of rabies in the community and in turn helps in eliminating rabies.

KEY WORDS: Awareness; Rabies; Prevention; Anganwadi Teachers; Rural Areas

INTRODUCTION

Rabies is a viral disease caused by a single-stranded RNA virus belonging to genus *Lyssavirus* of the family Rhabdoviridae causing acute viral encephalitis, which is almost always fatal. The virus is transmitted to animals/humans through the virus-laden saliva infiltration by the rabid animal bites, scratches, licks on broken skin, and mucous membrane.[1] All carnivorous species including wild animals serve as natural reservoirs of the virus.[2]

Access this article online	
Website: http://www.ijmsph.com	**Quick** Response code
DOI: 10.5455/ijmsph.2018.0102303022018	

A combination of large human and animal interactions has led to more exposures in the World Health Organization's South East Asia Region than in any other part of the world. More than 1.4 billion people in this region are at risk of rabies infection. Therefore, it continues to be a major public health and economic problem throughout the Region.[3]

India is also a rabies endemic country, where animal bites to humans are a major public health problem and an estimated 17.4 million animal bites occur annually which accounts to an incidence of 1.7%. An estimated 20,000 human rabies deaths occur in India every year.[4] Therefore, in rabies, endemic country like India, every animal bite is potentially suspected as a rabid animal bite.[5]

Rabies is a 100% vaccine-preventable disease, timely and correct post-exposure prophylaxis (PEP) consisting of proper wound wash with soap and running water, administration of full course of rabies vaccines, and local infiltration of rabies

immunoglobulin in all Category III exposures is almost invariably effective in preventing rabies, even after high-risk exposure.[3]

The disease mainly affects the people living in the rural areas, as it is best defined as a neglected zoonotic disease. Therefore, prevention of rabies is an important public health measure at the rural areas. The anganwadi workers are the grass root level workers of the health-care delivery in rural areas and form an important component of primary health care in India. These anganwadi workers constitute a primary link between the community and health-care system in India and are pivotal in increasing the awareness of the community with regard to health by regular health education sessions. Since these workers are chosen from the local community where they are working, the advice given by them is accepted by the community. In this regard, it is important that these workers are having adequate and correct knowledge with regard to the prevention of rabies so that right knowledge will be disseminated to the community at large.[6] Hence, improved knowledge on rabies prevention and adopting right practices by the community helps in rabies elimination from the region.

Hence, the present study was conducted to assess the awareness of rabies and its prevention among the anganwadi workers working in the rural field practice area of a medical college.

Objectives

1. To describe the sociodemographic profile of the study subjects.
2. To assess the awareness on rabies and its prevention among the anganwadi workers.

MATERIALS AND METHODS

The present study was done after getting the clearance from the institutional ethical committee. All the anganwadi workers working for a minimum period of 6 months and coming under the rural field practice area were included for the study subjects by continuous sampling after getting their informed consent.

The descriptive study was conducted from July 2017 to November 2017. The data were collected using a pre-tested, semi-structured pro forma containing 20 questions in the local language to assess the awareness on rabies and its prevention from each study subject, which was administered by the trained investigators by ensuring confidentiality. The details included sociodemographic profile and awareness regarding rabies and its prevention. The knowledge was assessed using (0–1) scale, in which every wrong question on knowledge was given a score of zero and a correct knowledge was given a score of one.

The obtained data were entered and analyzed using SPSS version 21.0 and descriptive statistics such as percentage, mean, median, interquartile range, and standard deviation were calculated.

RESULTS

The study included 37 anganwadi workers working at various anganwadi centers coming under the rural field practice area of a medical college in Bengaluru. All the study subjects were working in their respective areas for more than a year and the mean age of them was 37.17 ± 9.04 years. 75.68% of the study subjects had education up to 10th standard and the other 24.32% of the study subjects had an education higher than 10th standard.

The overall knowledge on rabies and its prevention was 11.70 ± 2.68 out of 20 questions. Among them, all the study subjects had heard of rabies, but only 24.32% had right knowledge on the modes of rabies transmission, i.e., by bite, scratch, and lick on the broken skin by an infected rabid animal and 10.81% of the study subjects knew the dogs, cats, and monkeys effectively transmitted rabies. Similarly, only 2.70% of the study subjects knew that there is no treatment for rabies.

On the contrary, 97.30% of them knew that rabies was a preventable disease and all of them opined that allopathic system of medicine is effective in the prevention of rabies. The most important aspect of rabies prevention, i.e., first aid following animal bite as wash the wound with soap and water was known to 94.59% of subjects, which is good as the primary healthcare workers play a key role in advising for first aid measures to be taken by the bite victim. On the contrary, only 45.95% of the study subjects knew that anti-rabies vaccine was available both at government and private health facilities, which is necessary to seek timely care [Table 1].

Among the study subjects, only 27.1% knew about the number of doses for anti-rabies vaccine to be administered for PEP and 56.7% knew about the correct site of administration of anti-rabies vaccine. Similarly, 45.9% knew about the type of wounds requiring rabies immunoglobulin, and only 8.1% of them knew about the site of administration of rabies immunoglobulin. On the contrary, 91.9% of them knew about high-risk groups for dog bites, and 86.5% of them knew about the need for pre-exposure prophylaxis for individuals with risk of animal bites. Similarly, 67.6% knew about the steps to avoid dog bites. The above results show that the awareness on rabies and its prevention is still inadequate among the anganwadi workers.

DISCUSSION

The present study showed that the awareness on rabies and its prevention was not complete among the anganwadi workers with an overall knowledge score of 11.70 ± 2.68

Table 1: Awareness on rabies prevention in anganwadi workers (*n*=37)

Question	Correct response
Disease transmitted by mad dog bite	37 (100.0)
Shape of rabies virus	21 (45.9)
Microorganism causing rabies	17 (56.7)
Burden of rabies in India	12 (32.4)
Modes of transmission of rabies	9 (24.3)
Animals transmitting rabies	4 (10.8)
Treatment availability for rabies	1 (2.7)
Rabies is a preventable disease	36 (97.3)
System of medicine effective in prevention of rabies	36 (97.3)
First aid following animal bite	35 (94.6)
Number of doses of anti-rabies vaccine to be administered for PEP	10 (27.1)
Site of administration of anti-rabies vaccine	21 (56.7)
Administration of anti-rabies vaccine by intradermal route	34 (91.9)
Necessity of anti-rabies vaccine following bite by vaccinated animal.	32 (86.5)
Place of availability of anti-rabies vaccine	17 (45.9)
Type of wounds and rabies immunoglobulin	17 (45.9)
Site of administration of rabies immunoglobulin	3 (8.1)
High-risk group for dog bites	34 (91.9)
Steps to avoid dog bites	25 (67.6)
Need for pre-exposure prophylaxis for individuals with risk of animal bites.	32 (86.5)

Figures in parenthesis indicate percentages

out of 20 questions and 94.59% of the study subjects knew the right first aid practice following animal bite. The responsibilities of anganwadi workers are significant as they provide basic health care and advice, so as to ensure affordable and accessible health care to the local community. Since they live in the same area with the same people, she will be in a better position to motivate the people.

Similarly, another study on awareness of rabies prevention among ASHA workers who also form the part of primary health care revealed that the mean score of knowledge on prophylaxis against rabies was only 12.8 ± 2.5 out of 20 questions which is more similar to the present study.[7] A knowledge, attitude, and practice study on rabies prevention in health workers at Dehradun district also showed that the 73.4% of ANM and 86.9% of multipurpose workers had correct knowledge regarding first aid following animal bite.[8] Another study on assessment of knowledge on rabies prevention among wild animal handlers working in a biological park in Karnataka which formed the high-risk group showed that only 40.5% of the subjects had correct knowledge on rabies prevention this may be attributed to their lower education level.[9]

Rabies continues to pose a significant public health problem in spite of the disease being preventable with proper use of available rabies biologicals. Therefore, in rabies, endemic countries like India, every animal bite case should seek early and correct PEP to prevent rabies; in this regard, the present study was carried out as minimal data exist regarding same. However, it is important to carry out this study in larger population to generalize the results.

All these studies showed that the knowledge is relatively incomplete among all the study subjects, which demands IEC activities. Therefore, health education has to be imparted on the regular basis to increase knowledge, which will result in changing attitudes and seeking timely and correct PEP which is effective in preventing rabies.

CONCLUSION

The knowledge on prevention of rabies among the anganwadi workers needs further improvement; since they play a pivotal role in educating the community for the prevention of rabies. Hence, it is important to provide regular health education to all the anganwadi workers regarding rabies prevention and encourage them to disseminate the same in the community.

REFERENCES

1. Sudarshan MK, Madhusudana SN, Mahendra BJ, Rao NS, Ashwath Narayana DH, Rahaman A, *et al*. Assessing the burden of human rabies in India: Results of a national multi-center epidemiological survey. Int J Infect Dis 2007;11:29-35.
2. National Institute of Communicable Diseases. National Guidelines for Rabies Prophylaxis and Intra-dermal Administration of Cell Culture Rabies Vaccines. New Delhi: National Centre for Disease Control; 2007. p. 7.
3. WHO. WHO Expert Consultation on Rabies. Second Report. Technical Report Series No.982. Geneva: World Health Organization; 2013.
4. WHO. WHO Expert Consultation on Rabies. First Report. Technical Report Series No. 931. Geneva: World Health Organization; 2005.
5. World Health Organization. Rabies Vaccines: WHO Position Paper, Weekly Epidemiological Record, No.32. Vol. 85. Geneva: WHO; 2010. p. 309-20.
6. Park K. Park's Textbook of Preventive and Social Medicine. 24th edition. Jabalpur (India): M/s Banarsidas Bhanot; 2017. p. 936-7.
7. Ravish HS, Sharmila KN, Krishna C, Kumar DP, Iswarya S. Awareness on prophylaxis against rabies among the accredited social health activists. APCRI Journal 2016;18:11-3.

8. Kishore S, Singh R, Ravi SK. Knowledge, attitude and practice assessment in health workers regarding rabies disease and its prevention in district Dehradun of Uttarakhand. Indian J Commun Health 2015;27:381-5.
9. Anwith HS, Narayana DH, Ravish HS, Gangaboraiah, Manjunatha V, Ramya M, *et al*. Knowledge and attitude on prevention of rabies among wild animal handlers working in a biological park. APCRI J 2017;18:22-4.

How to cite this article: Anwith HS, Upadhya KG, Ravish HS, Thenambigai R, Ramya MP, Thejaswini P. Awareness on rabies and its prevention among anganwadi workers. Int J Med Sci Public Health 2018;7:545-548.

Source of Support: Nil,**Conflict of Interest:** None declared.