



STUDY TO ASSESS AWARENESS OF DOG BITE MANAGEMENT AMONG RURAL POPULATION IN SIDDIPET DISTRICT, TELANGANA- A CROSS SECTIONAL STUDY

*¹Dr. Aruna. Tubachi, ²Dr. Vidya G. S., ³Swapnil Paunikar

¹Associate Professor, Department of Community Medicine RVMIMS & RC, Laxmakkapally, Telangana.

²Associate Professor, Rajarajeshwari Medical College, Bangalore.

³Statistician Department of Community Medicine RVMIMS & RC, Laxmakkapally, Telangana.

***Corresponding Author: Dr. Aruna Tubachi**

Associate Professor, Department of Community Medicine RVMIMS & RC, Laxmakkapally, Telangana.

Mobile: 8106630164 or 9620110327

Article Received on 02/11/2021

Article Revised on 24/11/2021

Article Accepted on 14/12/2021

ABSTRACT

Background: Animal bites are major public health issues not only for the risk of acquiring secondary infection but also for the possibility of contracting rabies. Rabies is an important but preventable cause of death in India. The knowledge regarding management of dog bite is a important step in preventing the rabies, hence this study is intended to assess the knowledge regarding the dog bite management. **Materials & Methods:** **Objective:** To assess the knowledge and practice regarding the dog bite management. **Study design and area:** a community based cross sectional study done at rural field practice area of RVM Institute of Medical Sciences and Research Center, Laxmakkapally, Siddipet, Telangana. Totally 5 villages were covered i.e Mulugu, banda Nasrampally, Aliabad, Advi masjid, Kotyala in Mulugu Mandal. **Sampling method:** Multistage random sampling was done. Mulugu Mandal covers population of 44,076. It has 25 villages. 5 villages were taken from different zones randomly. In each village first house was selected by using random number table and then every 5th house was selected. **Study period:** October 2017 to January 2018. **Results:** Knowledge that dog bite causes rabies is high. Total of 37(12.7%) of population had dog bite in the past. 156(53.8%) of the study population thinks rabies as a serious disease and 134(46.2%) ignores its seriousness. 161(55.5%) of the study population are aware about the treatment whereas 129(44.5%) of the study population did not know the treatment. Only 114(39.3%) of the population believes that treatment is given at government hospitals. 21.4% of the study population has superstitions regarding dog bite and its management. 224(83.4%) of the study population believes that washing of wound with water is necessary. Usage of soap for washing the wound is not commonly used.

KEYWORDS: dog bite, rabies, management.

INTRODUCTIONS

Animal bites are major public health issues not only for the risk of acquiring secondary infection but also for the possibility of contracting rabies. Rabies is an important but preventable cause of death in India. Rabies in India has been a disease of low public health priority in the medical sector.^[1] This is very unfortunate as almost 65000 people across the globe and 20000 people in India die of rabies every year, making it the country with the highest rabies fatalities in Asia and the second largest in the world.^[2] Most of the death in rural are due to ignorance and lack of access to affordable services.^[3]

It is estimated that number of deaths due to rabies may be ten times more than that reported.^[4] Unfortunately there is no comprehensive treatment possible after clinical occurrence of rabies, which can result in mortality. After any animal bite, post-exposure rabies prophylaxis is the only way to prevent rabies disease.^[5] India spends about 15 billion rupees for rabies vaccine

alone exerting a sizeable economic burden on the government.^[6]

Rabies is a fatal viral infection caused by single stranded RNA virus belonging to genus lyssavirus of the family Rhabdoviridae.^[6] It is a zoonotic disease and nearly 95% of the human rabies deaths are caused due to bite from rabid dog.

There are many myth and false beliefs associated with wound management. This includes application of oil, herbs, and red chillies on the wound inflicted by rabied animal. And not washing the wound properly.^[7]

Factors like ignorance, lack of access to health care and high cost of treatment in one hand and unavailability of early and appropriate treatment in the other hand, are to be considered to cut down the mortality due to rabies.^[8]

In view of the poor awareness about dog bite management the present study is done to assess the knowledge, attitude and practices about the management of the dog bite among rural population in Mulugu Mandal.

MATERIALS AND METHODS

Objective: To assess the knowledge and practice regarding the dog bite management.

Study design and area: a community based cross sectional study done at rural field practice area of RVM Institute of Medical Sciences and Research Center, Laxmakkapally, Siddipet, Telangana. Totally 5 villages were covered i.e Mulugu, banda Nasrampally, Aliabad, Advi masjid, Kotyala in Mulugu Mandal.

Sampling method: Multistage random sampling was done. Mulugu Mandal covers population of 44,076. It has 25 villages. 5 villages were taken from different zones randomly. In each village first house was selected by using random number table and then every 5th house was selected.

RESULT

Table 1: Socio demographic distribution of the study population.

	FREQUENCY	PERCENTAGE
GENDER		
MALE	147	50.7
FEMALE	143	49.3
RELIGION		
HINDU	189	65.2
MUSLIM	57	19.7
CHRISTIAN	20	6.9
OTHERS	24	8.3
EDUCATION		
ILLETRATE	70	24.1
PRIMARY SCHOOL	101	34.8
SECONDARY SCHOOL	86	29.6
HSC	28	9.8
GRAD & POST GRAD	5	1.7
OCCUPATION		
FARMERS	138	47.6
MERCHANTS & PVT SERVICE	45	15.5
GOVERNMENT SERVICE	21	7.2
HOUSEWIFE	86	29.7

Total 290 houses were studied among the five villages of Mulugu Mandal in Siddipet district.

Majority of the population belongs to Hindu religion which covers 65.20 % of the entire population covered among studies where as 19.7 % of the population belongs to Muslim religion and 6.9% population follows Christianity.

Study period: October 2017 to January 2018.

Statistical analysis: The collected data was entered in Microsoft excel. Coding of the variable was done. SPSS version 16.1 and SAS 9.2 dummy software were used for analysis. The result obtained were recorded and were presented as table and appropriate diagram. Interpretation of data was done using percentages and proportions.

Study Methodology

Prior to the study ethical clearance was taken from the college ethical committee. Permission was sought from village heads to do the study. Written, informed consent was taken from the informant before start of the study. In every house adult above age of 18 years were selected for the study. Total of 290 households were included in the study. Pre tested, closed ended questionnaire was used for the study. In case house was locked then consecutive house was taken and 5th house thereafter. Information regarding the incidents of dog bite in the past, there knowledge, attitude regarding management of dog bite was collected.

Table 2: Distribution of study population according to animal that can spread rabies. (N=290)

ANIMAL CAN SPREAD RABIES		
	FREQUENCY	PERCENTAGE
DOG	282	97.2
CAT	90	31
MONKEY	144	49.7
BAT	34	11.7
RAT	32	11
COW	23	7.9

Above table shows awareness among the population about the spread of rabies. Knowledge that dog bite causes rabies is high.

Table 3: Distribution of the study population according to knowledge about the treatment.

	FREQUENCY	PERCENTAGE
History of dog bite		
NO	253	87.3
YES	37	12.7
SERIOUSNESS ABOUT RABIES		
YES	156	53.8
NO	134	46.2
KNOWLEDGE ABOUT THE TREATMENT		
YES	161	55.5
NO	129	44.5
SEEKING FOR TREATMENT AT		
NO TREATMENT	66	22.8
GOVERNMENT_HOSPITAL	114	39.3
PRIVATE HOSPITAL	90	31
OTHERS	20	6.9
TREATMENT SUGGESTED BY		
NO ONE	123	42.4
KNOWN PERSON	52	17.9
HEALTH CENTER	34	11.7
VILLAGERS	26	9
SELF AWARENESS	55	19

Total of 37(12.7%) of population had dog bite in the past. 156(53.8%) of the study population thinks rabies as a serious disease and 134(46.2%) ignores its seriousness. 161(55.5%) of the study population are aware about the treatment whereas 129(44.5%) of the study population did not know the treatment. Only 114(39.3%) of the population believes that treatment is given at government hospitals.

Table 4: Distribution of the study population based on existence of superstitions.

Superstition		
	Frequency	Percentage
No Superstition	228	78.6
Superstition	62	21.4

21.4% of the study population has superstitions regarding dog bite and its management. They believed that going to temple will cure the dog bite and few believed that it was necessary to restriction of diet was necessary.

Table 5: Distribution of the study population according to practice regarding management of animal bite (N=290).

WASHING WOUNDS		
	FREQUENCY	PERCENTAGE
WATER	224	83.4
SOAP	113	26.2
ANTISEPTIC	76	73.8

224(83.4%) of the study population believes that washing of wound with water is necessary. Usage of soap for washing the wound is not commonly used.

DISCUSSION

We studied the awareness about management of dog bite among rural population of Mulugu Mandal of Telangana State.

In the present study 50.7% of study population were male and 49.3% were females. Age ranged from 18 to 60 years.

It was observed from the present study that 12.7% of the respondent reported a history of dog bite in the family. In the present study knowledge about rabies vaccination and treatment is about 55.5% which is similar to the study conducted by Chandan N et al 67% of the study participants had heard that there is some vaccination for animal bite.^[9] in our study 97.2% knew that rabies spread by dog. Similar findings were obtained in a study by Singh et al where all knew about Rabies and 98.6 % knew about the transmission of rabies by dog bite⁷. In a study conducted by summon gosh et al. in Bangladesh The majorities (77%) of respondents have heard about rabies and there was a high (86%) level of awareness that dog bite is the main cause of rabies.^[14]

In the present study 39.3% of the subjects said that they seek treatment in government health centres which are similar to study conducted by U. S. Singh, S.K. Choudhary 49.7% of people want to use the facility of

PHC and majority of them knowing availability of vaccination with the govt sector.^[8]

In the present study 83.4% people in favor of washing wound with water and go for treatment to doctors. Similar findings were also obtained by Chandan et al where majority said they would wash the wound with soap and water if bitten by animal.^[9] However, Ichhpujani et al in their study observed that less than 50 % people were in favor of wound toileting.^[10]

Recommendations

Rabies is 100% fatal but 100% preventable disease. The lack of knowledge and awareness of rural population might translate to higher morbidity and mortality related to rabies in their respective work areas. There is need for sensitization of rural population so that their knowledge can be enhanced and their positive attitude further can be translated into proper practices for prevention and control of rabies.

Awareness about first aid & importance of washing the wound site with water and soap is the most important message. Health education through anti-rabies campaigns must be provided especially to children for protecting themselves from rabies. Community people also need to be motivated to bring about positive attitude and awareness about the importance of consulting a qualified medical practitioner and vaccination to prevent rabies in case of an animal bite.

REFERENCES

1. Meslin FX. Appraisal on implementation of intradermal rabies Vaccination in India – The Kerala experience. Department of Control of Neglected Tropical Diseases (NTD), Geneva, Switzerland: World Health Organization; 2009. Available from: <http://www.rabiesinasia.org/keralareport.pdf> [Last accessed on 2012 June 15].
2. World Health Organization. Assessing burden of rabies in India. Association for Prevention and Control of Rabies in India (APCRI); 2011. Available from: <http://rabies.org.in/rabies/wpcontent/uploads/2011/whosurvey.pdf> [Last accessed on 2012 June 16].
3. India has highest rabies deaths in world. The Times of India. Mar 19, 2010. Available from: http://articles.timesofindia.indiatimes.com/2010-03-19/mysore/28142580_1_rabies-deathsapcri-vaccine [Last accessed on 2012 June 15].
4. Park K. Epidemiology of communicable diseases. Park's Textbook of Preventive and Social Medicine. 18th ed. Jabalpur: M/S Banarsidas Bhanot Publishers, 2005; 146.
5. Bassin SL, Rupprecht CE, Bleck TP. Rhabdoviruses. In: Mandell GL, Bennett JE, Dolin R, editors. Principles and Practice of Infectious Diseases. 7th ed. New York: Churchill Livingstone, 2010; 2249-58.
6. Park K. Epidemiology of communicable diseases. Park's Textbook of Preventive and Social Medicine. 18th ed. Jabalpur: M/S Banarsidas Bhanot Publishers, 2005; 276.
7. Sekhon AS, Singh A, Kaur P, Gupta S. Micro conceptions and myths in the management of animal bite case. Indian J Community Med, 2002; 27: 9-1.
8. Singh US, Choudhary SK. Knowledge, attitude, behaviour and practice study on dog bite and its management in the context of prevention of rabies in a rural community of Gujarat. In J Community Med, 2005; 30(3): 81-3.
9. Chandan N, Kotrabasappa K. Awareness of animal bite and rabies among agricultural workers in rural Dharwad, Karnataka, India. Int J Community Med Public Health, 2016; 3(7): 1851-5.
10. Ichhpujani RL, Chhabra M, Mittal V, Bhattacharya D, Singh J, Lal S. Knowledge, attitude and practices about animal bites and rabies in general community--a multi-centric study. J Commun Dis, 2006; 38(4): 355-61.
11. Matibag GC, Kamigaki T, Kumarasiri PVR, et al. Knowledge, attitudes and practices survey of rabies in a community in Sri Lanka. Environ Health Prev Med, 2007; 12: 84-9. doi : 10.1007/BF02898154.
12. P. Lai, Rawat A, Sagar A, Tiwari K N. Prevalence of Dog-Bites in Delhi: Knowledge and Practices of residents regarding prevention and control of rabies. Health & Population Perspectives and Issues, 2005; 28(2): 50-57.
13. Sudarshan M.K et al. Assessing burden of rabies in India. WHO Sponsored National Multi-Centric Rabies Survey Report; 2003. Available from <http://rabies.org.in/rabies/wpcontent/uploads/2011/whosurvey.pdf> (Last accessed on 2016, Jan1).
14. Sumon Ghosh*, Sukanta Chowdhury†, Najmul Haideri. Awareness of rabies and response to dog bites in a Bangladesh community. 2016 The Authors. Veterinary Medicine and Science Published by John Wiley & Sons Ltd. Veterinary Medicine and Science (2016), 2, pp. 161–169 162 S. DOI: 10.1002/vms3.30
15. U. S. Singh, S.K. Choudhary, Knowledge, Attitude, Behavior and Practice Study on Dog-Bites and Its Management in the Context of Prevention of Rabies in a Rural Community of Gujarat. Indian Journal of Community Medicine Vol. 30, No. 3, July-September, 2005.