



## Knowledge about animal bite among animal bite victims attending an anti-rabies clinic in Srinagar, Kashmir

Authors

Syed Najmul Ain<sup>1</sup>, Inaamul Haq<sup>2</sup>, S. Mohammad Salim Khan<sup>3</sup>, Mahk Nelofar<sup>4</sup>,  
Mohamad Azhar<sup>5</sup>

<sup>1,4</sup>Post graduate student, Dept of Social and Preventive Medicine, Government Medical College Srinagar

<sup>2</sup>Assistant Professor, Dept of Social and Preventive Medicine, Government Medical College Srinagar

<sup>3</sup>Professor and Head, Dept of Social and Preventive Medicine, Government Medical College Srinagar

<sup>5</sup>Government Medical College Srinagar

Corresponding Author

**Syed Najmul Ain**

Post graduate student, Dept of Social and Preventive Medicine, Government Medical College Srinagar

### Abstract

**Background:** Rabies is a 100% fatal disease. Man acquires the disease once he gets bitten by a rabid animal or even on contact with its saliva on mucous membrane or broken skin. Although fatal but it's a 100% preventable disease as the incubation period gives us the chance to intervene before the disease could develop. To reduce the number of deaths due to rabies correct measures must be taken after an exposure.

**Objectives:** To assess the knowledge regarding animal bite among animal bite victims

**Methods:** This study is a cross-sectional hospital based study carried out for a period of one month in the anti-rabies clinic of SMHS hospital, Srinagar. Information was obtained from animal bite victims by applying a semi-structured questionnaire.

**Results:** Only 27 % of the participants knew that animal bite can lead to rabies. Only 27% of the cases had heard the term rabies. 56% knew that animal bite can be fatal. About 93% of the participants knew that vaccine is necessary after animal bite. 70% knew nothing about the wound care.

**Conclusion:** There is a need to create awareness among the masses and among healthcare providers like ASHA workers as well so that awareness can be created at a large scale. Awareness about rabies must be spread among school children and even college going students. In addition measures must be taken to reduce dog population, pets should be vaccinated and indiscriminate throwing of the waste should be banned.

### Introduction

Rabies is a 100% fatal disease. Man acquires the disease once he gets bitten by a rabid animal or even on contact with its saliva on mucous membrane or broken skin. The incubation period varies depending on various factors like the site and severity of bite <sup>(1)</sup>.

Every year rabies is known to cause 20800 deaths in India and 59000 deaths worldwide<sup>(2)</sup> while Kashmir witnessed 26923 dog bite cases in 2017 <sup>(3)</sup>. Although fatal but it's a 100% preventable disease as the incubation period gives us the chance to intervene before the disease could develop. To reduce the number of deaths due to

rabies correct measures must be taken after an exposure. But for a desired practice, knowledge forms the basis and one cannot practice what he doesn't know. It's the knowledge of a person which translates into practice. A lot of myths are prevailing in Indian society regarding the animal bites especially dog bite. Ignorance regarding the consequences of animal bite and the management of the wound makes the situation worse. Small and superficial wounds or abrasions are often neglected. In a study conducted in Gujrat (2015), only 11% of the patients had cleaned the wound site with soap and water, and 12% had cleaned it with plain water <sup>(4)</sup>. Lack of awareness regarding the correct measures to be taken after the bite and the myths prevalent in the Indian society can hamper the prompt and adequate treatment of the animal bites which can increase the chances of acquiring rabies.

The most important step after having an exposure in any form is the local wound management. It's been found that immediately washing the wound thoroughly with soap and water for at least 15 minutes can reduce the chance of acquiring rabies by about 80% <sup>(1)</sup>. In addition, vaccination in all types of exposures and immunoglobulin (in category III exposures) is required.

### Objective

To assess the knowledge regarding animal bite among animal bite victims

### Materials and Methods

This cross-sectional hospital based study was carried out in the anti-rabies clinic run by the department of community medicine Government medical college Srinagar for a period of one month from 9<sup>th</sup> June 2017 till 8<sup>th</sup> July 2017. Socio-demographic details are routinely recorded at the anti-rabies clinic. The rest of the information regarding knowledge about animal bites and their management was obtained by using a semi-structured questionnaire after obtaining an informed consent from the victims. Data was analyzed by SPSS Statistics version 23.

### Results

The participants of this study are a sub-group of another study conducted in the anti-rabies clinic of SMHS hospital in which 145 victims had participated <sup>(5)</sup>.

In the present study a total of 103 victims agreed to take part. The socio-demographic details of those victims are given in table 1.

**Table 1**

SOCIO DEMOGRAPHIC PROFILE		Number (%)
Sex	Male	81(78.6%)
	Female	22(21.4%)
Age in years	11 to 20	11(10.7%)
	21 to 30	23(22.3%)
	31 to 40	29(28.2%)
	41 to 50	18(17.5%)
	51 to 60	12(11.7%)
	>= 61	10(9.7%)
Region	Urban	86(83.5%)
	Rural	17(16.5%)
Socioeconomic status (6)	Upper	4(3.9%)
	Upper middle	25(24.3%)
	Lower middle	22(21.4%)
	Upper lower	45(43.7%)
	Lower	7(6.8%)
<b>Total</b>		<b>103(100%)</b>

78.6% of the victims were male and maximum belonged to the age-group of 31-40 years. 86 %

belonged to urban areas and about 44% were from the upper lower class.

The responses about the knowledge regarding the animal bite are given in table 2.

**Table 2**

<b>KNOWLEDGE ABOUT THE ANIMAL BITE</b>		
	Number	Percentage
<b>1.What can animal bite lead to?</b>		
Can cause rabies	28	27.2%
A person can die	30	29.1%
Puppies develop inside the victim	2	1.9%
A person gets mad	3	2.9%
Causes infection	1	1.0%
A person barks	3	2.9%
Nothing happens	2	1.9%
Don't know	34	33.0%
Total	103	100.0%
<b>2.Have you heard the term “rabies”?</b>		
Yes	28	27.2%
No	75	72.8%
<b>3.Can animal bite lead to fatal disease?</b>		
Yes	58	56.3%
No	3	2.9%
Don't know	42	40.8%
<b>4.Did you know vaccination is given for animal bite?</b>		
Yes	96	93.2%
No	7	6.8%
<b>4'.Bites from which animals require vaccination?</b>		
Dogs only	64	66.7%
Dogs + cats	16	16.7%
Dogs, cats, others	16	16.7%
Total	96	100.0%
<b>5.What should be our immediate response to the wound?</b>		
Don't know	72	69.9%
Wash with water only	3	2.9%
Wash with water and soap	21	20.4%
Wash with water and soap for at least 15 minutes	1	1.0%
Apply antiseptics	1	1.0%
Apply surma (Antimony)	1	1.0%
Apply mirchi (chilli powder)	2	1.9%
Consult faith-healer/ magician	2	1.9%
Total	103	100.0%

The responses to what animal bite can lead to varied. Only 27 % of the participants knew that animal bite can lead to rabies.

Only 27% of the cases had heard the term rabies.

56% of the respondents knew that animal bite can be fatal including those who knew about rabies.

About 93% of the participants knew that vaccine is necessary after animal bite while the rest did not have any knowledge about vaccination.

Out of those who knew about vaccination, 67% said that it's required only after a dog bite.

70% knew nothing about the wound care. About 20.4% said that it should be washed with soap and water. Only 1 person said that the wound should

be washed with soap and water for 15 minutes or more. Other responses like applying surma(1%), applying mirchi (2%) and consulting a faith-healer (2%) were also received.

### Discussion

The participants of our study are a subgroup of another study that we conducted in the anti-rabies clinic of SMHS hospital. The socio-demographic characters of these participants is almost similar to those of the previous study as maximum (103/145=71%) number of the participants took part in this study as well.

From table 1, we find that maximum participants were male because of their routine of working outdoors. Maximum were in the age-group of 31-40 years as this group is the most active group of the population. Most of the victims belonged to urban area possibly because the anti-rabies clinic is itself located in Srinagar which is the summer capital of the state. Most of the victims belonged to upper lower class probably because these people work mostly as labourers in open areas where dog population is high.

We tried to assess the basic knowledge among the victims regarding animal bite, for example, asking if the victim knew that vaccination is required after animal bite. Vaccination is life-saving after animal bite. So our questionnaire consisted of very basic questions which a person must have knowledge of so that he can take appropriate measures in case he becomes a victim to animal bite.

Only 27% of the victims knew that animal bite could lead to rabies which shows that majority are unaware of the deadly disease animal bite can lead to. 33% knew nothing about the consequences of animal bite which is a matter of concern since people who do not know are unlikely to worry about and seek the appropriate treatment. There were other misconceptions like development of puppies inside the victim, barking of man after animal bite although the responses were in less percentage.

Although maximum people had not heard the term rabies but 56% of the people knew that animal bite can lead to fatal disease including those who knew about rabies. We asked the victims if they knew that animal bite could lead to fatal disease which does not mean the death due to immediate effects of animal assault due to injuries. About 41% did not know if the disease is fatal or not.

Fortunately 93% of the patients knew that vaccination is required after animal bite which implies that such people will go for vaccination sooner or later. Out of these, all the participants replied in affirmative for the vaccine requirement for dog bites at least. Only 16.7% said that it's

required for cats as well and an additional 16.7% said it's required for other types of animal bites in addition to dog bites and cat bites. So the total who knew about requirement of vaccine for cat bites is 33.4%. All 93% of the victims who knew about vaccination also knew that dog bite requires vaccination. This observation is a positive sign regarding prevention of rabies since maximum number of times dog is the biting animal<sup>(7)</sup>. Those patients who believed that vaccine is not required for animal bite had come for some other reason to the anti-rabies clinic like management of the wound.

70% knew nothing about the wound care. Wound care that is immediately washing the wound with soap and water thoroughly for 15 minutes is of utmost importance as it reduces the chance of getting rabies by about 80%<sup>(1)</sup>. Only 1 person said that the wound should be washed with soap and water for 15 minutes or more. Other responses like applying surma(1%), applying mirchi (2%) and consulting a faith-healer (2%) were also received. These responses though in low percentage imply that there are still some misconceptions in some pockets of the society which need to be cleared.

### Conclusion

Rabies is a fatal disease and therefore there's absolutely no room for carelessness regarding the appropriate wound management. Since man works according to his knowledge, the lack of awareness about the nature of disease animal bite can cause, the wound management and the vaccination can cost him a heavy price. We as healthcare providers need to create awareness among the masses and among other healthcare providers like ASHA workers as well so that awareness can be created at a large scale. Awareness about rabies must be spread among school children and even college going students.. In addition measures must be taken to reduce dog population, pets should be vaccinated and indiscriminate throwing of the waste should be banned.

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