



## Profile of Animal Bite Cases at Anti-Rabies Clinic of Tertiary Care Hospital: A Record Based Study

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### Abstract

*Rabies is a fatal disease caused by Lysa virus. Human cases occur due to dog bites in 99% of cases. Data on animal bite cases are very useful for planning for prevention of rabies for the authorities. This record based study was undertaken to study the profile of animal bite cases attending anti rabies clinic of tertiary hospital in one year. A total of 6399 cases were registered in one year with 68.32% male, 63.45% category III, 71.71% belong to urban areas. Animal bite cases are on rise in Kashmir and need to be taken seriously in order to prevent rabies and death associated with it.*

**Keywords:** Animal bite, Kashmir, Rabies, Profile.

### Introduction

Rabies is a fatal encephalitis which occurs throughout the world<sup>(1)</sup>. The disease is a zoonotic caused by Lysa virus with fatality of 100%<sup>(1)(2)(3)</sup>. It is transmitted to mammals by bite of rabid animals<sup>(4)</sup>. The virus circulates in the community in two epidemiological patterns urban and sylvatic, transmitted by dogs and wild animals respectively<sup>(5)</sup>. Human cases are caused in 99% cases by dog bites<sup>(6)</sup>. About 40% of cases occur in children less than 15 years of age<sup>(1)(7)</sup>. Rabies is still a global health problem resulting in about 60000 deaths annually, with India contributing to 36% of deaths due to rabies<sup>(7)(8)</sup>. Moreover, animal bite cases in Kashmir have increased in past decade to a level of serious undermined public health problem<sup>(9)</sup>. The data on animal bites is a

very useful for proper planning for prevention of rabies as it will help in estimating the burden of rabies and also need for vaccines and logistics for rabies prevention and as such this study was undertaken.

### Methodology

The present descriptive cross-sectional study was done to study the animal bite cases from 1<sup>st</sup> April 2018 to 31<sup>st</sup> March 2019, registered at the anti-rabies clinic of tertiary hospital (SMHS) of Kashmir valley. All cases registered in the new-case register of clinic in the specified time period were included in the study. At center all cases receive treatment as per standard protocol which includes meticulous wound wash, immunization as per post-exposure prophylaxis intradermal

schedule, immunoglobulins and wound closure whenever needed. The data collected in the register includes name, age, sex, residence, site and time of bite, treatment received and category of bite. The data regarding epidemiological characteristics such as age, sex, area of residence and about animal bite characteristics such as site of bite, biting animal and time of bite were recorded. The data was entered in the Microsoft Excel and expressed as proportions as per age, sex, area and category of bite and site of injury.

**Results**

The anti-rabies clinic registered 6399 cases of animal bites in one year. Majorities (24.05%) of cases were in the age-group of 21-30 years, 68.32% were male, 63.45% were category III cases and 71.71% cases belonged to urban area. Majority of cases were due to bite of dogs and about 52% were bitten on lower limbs. During the time period 3 deaths due to animal bites were reported at clinic. All of these were referred cases with no record of immunization against rabies. Maximum animal bite cases were recorded in the month of march, followed by month of July, June and May respectively.

**Table 1:** Distribution of cases as per Age

Age – group (years)	Number	Percentage (%)
<10	1043	16.30
11-20	739	11.55
21-30	1539	24.05
31-40	998	15.60
41-50	885	13.83
>50	1195	18.67
Total	6399	100.00

**Table 2:** Distribution of cases as per Gender

Gender	Number	Percentage (%)
Male	4372	68.32
Female	2027	31.68

**Table 3:** Distribution of cases as per Category of animal bite

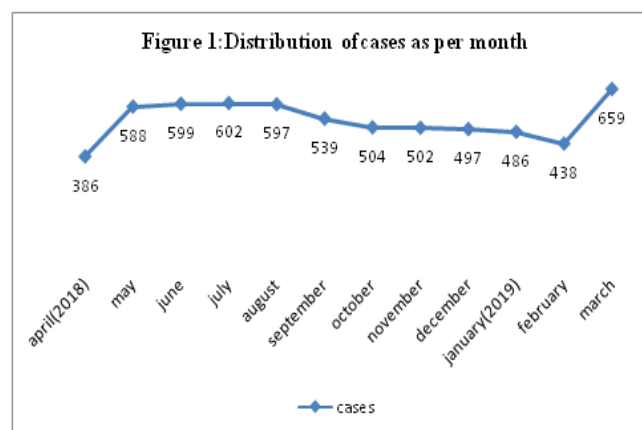
Category	Number	Percentage (%)
Category II	2329	36.40
Category III	4060	63.45
Total	6399	100

**Table 4:** Distribution of cases as per Site of animal bite

Site of bite	Number	Percentage(%)
Head & Neck	397	6.20
Trunk	512	8.00
Upper Limbs including hands	2166	33.85
Lower Limbs Including Feet	3324	51.95
Total	6399	100.00

**Table 5:** Distribution of cases as per the Residence (District)

Area	Number	Percentage(%)
Srinagar	4589	71.71
Budgam	264	4.13
Baramullah	331	5.17
Kupwara	126	1.97
Bandipora	308	4.81
Ganderbal	219	3.42
Pulwama	265	4.14
Shopian	72	1.13
Kulgam	73	1.14
Anantnag	93	1.45
Others	59	0.92
Total	6399	100



**Discussion**

Animal bites are of grave public health concern as it can lead to rabies if not treated on time. The present study reveals that about 6399 cases of animal bite were registered in the anti-rabies clinic. Although animal bite cases were reported across all age-groups however, majority of the cases belonged to young adults i.e. 20-30 years. These findings correlate with the findings of studies done in Hamedan, Tehran and Maharashtra while as are different from the findings of study done by Sreenivas et al in Bengaluru and Ngugi et al in Kenya where

maximum cases of animal bites were reported in age-group less than 15 years<sup>(5)(6)(10)(11)(12)</sup>.

The majority of cases in our study were males, the ratio being 2.1:1. These findings are consistent with other studies where male cases dominated the female ones. Our study found that majority of animal bite cases belonged to category III as was reported by studies done in Ahmedabad, Rajasthan, Bhuj, Bengaluru and Pune. However a study done in Bikaner reported that majority of animal bite cases belonged to category II<sup>(11)(13)(14)(15)(16)(17)</sup>. Similarly, the results of our study regarding site of bite and area of residence correlate with other studies where majority of cases were from urban area and were bitten on lower extremity vis-a-vis studies in Bhuj, West Iran, Hamedan and Tehran where maximum cases were reported from rural area and site of bite was upper extremity respectively<sup>(5)(10)(15)(18)</sup>.

### Conclusion

Animal bite cases are on rise in Kashmir and need to be addressed promptly. Large number of animal bite attacks has taken place over past 10 years and it not only causes physical injury but has psychological impact on the victim and thus affects quality of life of affected families directly or indirectly. As animal bylaws prevent killing of dogs the main strategy of the hour should focus ensuring preventive measures of vaccination and health education at grass root level along with dog population control.

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