

Title: PROFILE STUDY OF PATIENTS ATTENDING PREVENTIVE CLINIC FOR ANIMAL BITES AT GOVERNMENT MEDICAL COLLEGE, THIRUVANANTHAPURAM

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Keywords Animal bites, anti rabies vaccine, wound toilet

Abstract To study the profile of patients attending preventive clinic for animal bite at Govt. Medical College, Thiruvananthapuram. To study the interval between time of bite and initiation of treatment. To study the proportion of people who have done proper wound toileting before attending the clinic.

Original Article

Profile Study of Patients attending preventive clinic for animal bites at Government Medical College Thiruvananthapuram

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ABSTRACT

- Objective :**
1. To study the profile of patients attending preventive clinic for animal bites at Govt Medical college Thiruvananthapuram
 2. To study the interval between time of bite and initiation of treatment
 3. To study the proportion of people who have done proper wound toileting before attending the clinic

Study Design : Hospital based cross Sectional study

Study Setting : Preventive clinic of Govt Medical college Thiruvananthapuram

Study Subjects : All patients attending preventive clinic from Aug 2010 to Aug 2011

Statistical Analysis : simple proportions and percentages

Results : 3042 cases of animal bite were reported during the period August 2010 to August 2011. We found that 64.2% of the bites were caused by domestic animals, 29.5% due to stray animals and 6.3% by wild animals. It was seen that 50.1% of the bites were in the lower limbs, 58.8% of the patients reported on the same day, 39.6% within 10 days of bite, 1.6% after 10 days. Proper wound toilet was not done among 7.3% cases.

Key Words : animal bites, anti rabies vaccine, wound toilet

Introduction

Rabies, a viral zoonotic disease of world wide importance. It accounts for more than 35,000 to 40,000 deaths each year in countries of SE Asian Region. Children under the age of 15 years account for nearly 30-60% of reported rabies¹. In the absence of post-exposure prophylaxis it is estimated that about 327,000 persons would die each year from rabies in Asia and Africa². The annual estimated economic burden of the disease in Asia and Africa is approximately US \$ 583.5 million³.

Rabies accounts for nearly 20,000 human deaths a year in India which is nearly 50% of the annual global mortality⁴. In India 94% of cases are due to dog bites. In India, 60% of the dogs are considered to be 'neighbourhood dogs' which are either partially or wholly dependent on people for food and shelter and unrestricted in their movements. These neighbourhood dogs account for about 60% of reported dog-bite injuries⁵. The estimated dog

population in India is around 25 million, the majority of which is not protected against rabies.

Objectives

1. To study the profile of patients attending preventive clinic for animal bites at Govt Medical college Thiruvananthapuram
2. To study the interval between time of bite and initiation of treatment
3. To study the proportion of people with proper wound toileting before attending the clinic

Methodology

This study is a hospital based cross sectional study conducted at preventive clinic under the Department of community Medicine, Government Medical College Thiruvananthapuram over a period of one year from August 2010 to August 2011. All patients registered in the clinic during this time period were taken as the study population. The study variables included were age, sex, type of animal bites, status of

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biting animal, site of bite, category of exposure, wound toilet, time of reporting for treatment. Data was statistically analysed using proportions and percentages.

Results and Discussion

A total of 3042 cases reported with animal bites during the study period of one year at the preventive clinic. In the study population, 57.7% were males and 42.3% were females. Among the cases 62.6% were less than 40 yrs of which 32.1% was less than 20 yrs (Table 1). In a study conducted by T R Behera, D M Satapathy et al⁶, it was seen that (69.6%) were males and maximum number of cases were in the ages upto 45 yrs with 38.9% being less than 15 yrs. A similar finding was also seen in a study by Khokhar and et al⁹.

Table-1
Distribution of cases according to age

Age group	No. of Patients	Percentage
Below 20 years	976	32.1
Between 20 and 40 years	929	30.5
Between 40 and 60 years	845	27.8
Above 60 years	292	9.6
Total	3042	100

In the study population 74.1% were dog bites, 17.4% were cat bites, 4% were rat bites and 4.5% were by others. (Table 2). A Study by Renu Bedi and et al in Ajmer found that dog bites contributed to 90.7% of animal bites⁷. A similar finding of 84.5% was obtained by T R Behera and et al⁶.

Table-2
Distribution of cases according to type of animal bite

Animal	No. of Cases	Percentage
Dog	2253	74.1
Cat	530	17.4
Rats	122	4.0
Others	137	4.5
Total	3042	100

Of the total cases 64.2% of the bites were caused by domestic animals, 29.5% by stray animals and 6.3% by wild animals. (Table 3). Of the animals 65.4% were alive while reporting, 18.9% were missing, 15.7% were dead. (Table 4).

Maximum number of cases had bites on lower limb (50.1%). (Table 5). A similar finding of 66.7%

Table-3
Distribution of cases according to status of animals

Type	No. of Cases	Percentage
Domestic	1953	64.2
Stray	897	29.5
Wild	192	6.3
Total	3042	100

Table-4
Distribution of cases according to traceability status of animals

Status	No. of Cases	Percentage
Alive	1989	65.4
Dead	479	15.7
Missing	574	18.9
Total	3042	100

Table-5
Distribution of cases according to site of bite

Site of Bite	No. of Cases	Percentage
Head	211	6.9
Trunk	87	2.9
Upper Limb	1102	36.2
Lower Limb	1525	50.1
Contact	117	3.8
Total	3042	100

was obtained by T R Behera, D M Satapathy et al⁶. Other studies by Renu Bedi et al⁷, Jairaj Singh Hanspal et al⁸ and Khokhar et al⁹ also found lower extremities as the most common site of bite.

Table-6
Distribution of cases according to category of exposure

Category of Exposure	No. of Cases	Percentage
I	163	5.4
II	1142	37.5
III	1737	57.1
Total	3042	100

Table-7
Distribution of cases according to wound toilet

Wound Toilet	No. of Cases	Percentage
Done	2820	92.7
Not Done	222	7.3
Total	3042	100

Table-8
Distribution of cases according to reporting time

Reporting Time	No. of Cases	Percentage
Within 24 hrs	1788	58.8
Within 10 days	1206	39.6
After 10 days	48	1.6
Total	3042	100

Majority of cases (57.1%) were of category III, followed by category II (37.5%) and category I. (Table 6). Similar observation was also obtained by Khokhar & et al⁹.

In the study population, 92.7% have done wound toilet and while 7.3% did not. (Table 7).

Only 58.8% patients reported on the same day, 39.6% reported within 10 days and 1.6% reported after 10 days. (Table 8). In a study by T R Behera and et al⁶ 61.2% reported to the Anti-rabies clinic between 24 hrs. to 48 hrs.

Conclusion

From this study, it was seen that most of the victims of animal bites were below 40 years of age of which 32.1% was less than 20 yrs and males were bitten more than females. Most of the bites are inflicted upon by dogs (74.1%), of which majority was by domestic dogs (64.2%) and most bites are suffered on the lower limb. As domestic dog bites outnumber those by stray dogs licensing of domestic dogs need to be made compulsory to reduce the rabies virus circulation. Animal birth control- anti rabies vaccination (ABC-AR) in stray dogs has to be implemented effectively for control of rabies. ABC-AR is a standard humane strategy for control of animal population based on

ecological principles of reducing and eventually eliminating stray dog populations by systematically controlling reproduction of these animals. Category III bites ranks the most. Majority of the patients reported on the same day as being bitten and performance of wound toilet was good with only a few having not done proper wound toilet. Communities should be made aware on their role in immediate reporting of dog bites, importance of proper wound care, necessity of taking anti-rabies vaccination, registration and licensing of all domestic dogs, importance of ABC-AR programme and co-operating with the authorities in its implementation.

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