

Title: AN ANALYSIS OF RECORDS OF PATIENTS REPORTING AT ANTI RABIES CLINIC, GWALIOR (MP)

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Keywords Dog bite, Rabies, Anti rabies clinic

Abstract Rabies is a viral enzoonotic life threatening disease, invariably fatal once the symptom has occurred. Through rabies vaccine is freely available in the open market in urban and district level, but the patient dependency is on public hospital for free supply of vaccine.

Original Article

An analysis of records of patients reporting at Anti-Rabies Clinic, Gwalior. (MP)

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Abstract

Introduction:

Rabies is a viral, zoonotic, life threatening disease, invariably fatal once the symptom has occurred. Through rabies vaccine is freely available in the open market in urban and district level, but the patient dependency is on public hospital for free supply of vaccine.

Objectives:

- To study the epidemiological character of animal bite.
- To study the compliance of patients to prescribed post exposure vaccination schedule.

Material and Method:

The study is an observational study conducted over a period of one year. Case report of the patients were analyzed and study variable included were the animal bite, age, sex, time trend of disease, time of reporting to ARV clinic, category of exposure, status of dog, site of bite and treatment compliance to post exposure schedule.

Result:

A total of 3001 patients reported during the study period of one year. Majority of the cases were of dog bite. Lower limb (58) was the most common site involved followed by the upper limb. Only 48% of cases reported on time. Majority of the patients reported after the traditional management of wound or sometime after the death of dog.

Conclusion:

Sufficient availability of Anti Rabies Vaccine in Public Sector and at an affordable cost in open market is the major strategy for its control. Recent introduction of Intra Dermal schedule can also overcome this problem.

Key Word: Dog Bite, Rabies, Anti rabies clinic

Introduction

Rabies is a viral, zoonotic, life threatening disease, invariably fatal once the symptom has occurred. It is an endemic disease in India. India alone is responsible for 20000 deaths annually estimated to be two per 1000¹. Death due to rabies are grossly under reported. Majority of the rabies patients are LAMA (Lost against medical advice) or made LAMA from the hospital admission knowing that death is inevitable. Rabies is a vaccine preventable disease. Prevention in humans after animal bite depends on a combination of interventions including post exposure prophylaxis and according to WHO post exposure prophylaxis is estimated to prevent 90% deaths in Asia and Africa¹.

Through rabies vaccine is freely available in the open market in urban and district level, but the patient dependency is on public hospital for free supply of vaccine. Numbers of patients are steadily increasing day by day in public hospital because of increase in community awareness, unaffordable cost of vaccine and fear of death.

So the present study was under taken with objectives of.

- To study the epidemiological character of animal bite.
- To study the compliance of patients to prescribed post exposure vaccination schedule.

Material and methods

The present study is an observational study conducted at ARC (Anti Rabies Centre) under Department of Community Medicine, G. R Medical College, Gwalior (MP) over a period of one year from 1 Jan to 31 Dec 2008. During this period all the patients registered in OPD were taken as the study population. Case report of the patients were analyzed and study variable included were the animal bite, age, sex, time trend of disease, time of reporting to ARV clinic, category of exposure, status of dog, site of bite and treatment compliance to post exposure schedule.

Data were statistically analyzed using suitable statistical test in the department.

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Table I:
Showing the distribution of cases according to the type of animal bite

Animal Bite	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Dog	304	309	305	292	259	228	231	200	199	181	168	244	2854
Cat	1			1		2					1	1	7
Cow								1					1
Buffalow	3												3
Pig								2					2
Donkey			1					1					2
Horse			2			1			1			1	5
Fox										2			2
Monkey	2	3	8	2	3	5	1	5			4	1	34
Mongoose			1			1	2	1					5
Gonndwa					1			3	1				5
Beer											1		1
Leopard											6		6
Rat		1		1			1		3				6
Bird (Crow)								1					1
Squirrels					1								1
Lizarards					1					1			2
Human	1												1
Other wild animal bite	1				3	2	1	3	1	3	3		17
Milk Consumption		4	5	2		4	2	6	1	6			30
Exposure to Rabid pt.	2		3				1					9	15
Total	314	317	325	298	268	243	239	223	140	193	183	258	3001
%	10.4	10.5	10.8	9.9	8.9	8	7.9	7.4	4.7	6.4	6	8.5	

Result

A total of 3001 patients reported during the study period of one year. Of this majority of the cases were of dog bite. Animal bite cases reported highest in the months of Jan- March and then showing declining trend, less number of cases are reported in the month of September, followed by an increase in the subsequent months. (Table I).

Dog bite cases contribute 95.3% to over all bite cases. Monkey Bite contributes 1.13% in wild animal bites. Though dogs are the major contributors but monkey are also the common animal associated with animal bite cases. (Table II).

Out of the total bite cases 83.28% were male and 16.71% were female. Maximum cases were contributed by working adult group (47.7%) followed by the school going child (22.6). (Table III).

Lower limb (58) was the most common site involved followed by the upper limb (17.86). Upper limb, head, scalp & face are the common site of bite among children. (Figure 1)

Treatment for the prevention of rabies in human exposed to suspected rabid dog should begin within 24 hours. Patients presenting after 24 hours or later are prone to developing the risk of rabies. Only 48% of cases reported on time. Majority of the patients reported after the traditional management of wound or sometime after the death of dog. (Table IV)

Dog was alive only in 64.6% cases and killed in 6.2% cases. In 20.4% of cases the dog is untraceable.

Majority of the cases (79.4%) were having category II exposure followed by Category III and Category I. (Table V).

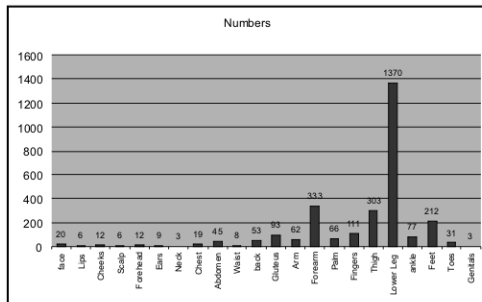


Fig. 1 : Showing the site of animal bite.

Table II
Showing the distribution according to the category of animal bite

S.No	Animal bite	No. of cases	Percentage
1	Domestic	2861	95.3
2	Peridomestic (Cow, Buffalo, pig, donkey, horse)	13	0.4
3	Wild Animal (Monkey, Fox, Bear, Leopard & other wild animal bite)	71	2.4
4	Milk consumption of a rabid animal	30	1
5	History of contact with rabid patients	15	0.5
6	Other bites not reported to cause rabies (squirrel, lizard and human bite)	11	0.3

Table III
Showing the distribution of cases according to the age and sex.

Age	Male	Female	Total	Percentage (%)
0-1	1	0	1	0.03
1-4	123	29	152	5.3
5-10	456	89	545	19
11-17	564	83	647	22.6
18-60	1120	242	1362	47.7
>60	113	34	147	5.2
Total	2377	477	2854	

Table IV
Showing the distribution of cases according to the reporting time

Sl.No.	Reporting Time	No. of cases	Percentage (%)
1	Withing 24 Hrs.	1379	48.31
2	2- 6 days	859	30.09
3	7 - 10 days	349	12.22
7	10 days after	267	9.35

Table V
Showing the distribution according to the category of bite

Type of Bite	No. of cases	Percentage (%)
Category I	140	4.90
Category II	2266	79.40
Category III	448	15.69

The cases in Category II were prescribed Anti Rabies Vaccine only. In Category III the patients were prescribed Anti Rabies Vaccine and rabies immunoglobulin [RIG].

71.8% of the patients under category II and 97.4% of Category III patients the completed course of Anti Rabies Vaccine.

Discussion

Animal bites are still a major public health problem in developing countries like India. Both children and adult are prone to it. In the present study, it was noted the present study that 47.7% of all the patients reported to Anti rabies Clinic were in the age group of 18-60 years. This is the most productive age group. As a result of this they have to move frequently from one place to another for their work making them more prone to the bite by animals. This is similar to the finding of our pervious study published in this journal² and that of other researchers³⁻⁸.

Majority of the animal bites are due to Domestic animals like dog or cat. However bite from wild animal like monkey can also be a major contributor. Children and adult tend to play with Domestic animal, whether pet or street, irrespective of knowing their mood and behavior. Sometime people collide or put their feet on them and thus get bitten accidentally as a mechanism of defense. Other researcher have also quoted similar finding in their study^{2,4,5}. Similarly, the most common site of bite among patients is lower limb followed by arm.

It was noted in the present study that nearly half (48.3%) of the patients reported to out Anti Rabies Clinic within 24 hours of animal bite. This is of a significant importance as the treatment of animal bite should be started within 24 hours of animal bite. However, the remaining 52% of the patients reported after 24 hour of bite making them more prone to rabies. Misconceptions about rabies, traditional medication and cost of treatment in the markets are the major hurdles in starting early management of animal bite. Agrawal N and Reddaiah VP³ also noted similar reasons for delay in the management of animal bite among their study group in Ballabgarh.

It was noted in the present study that majority of the animal bites belong to category II (79.4%) followed by

category III (15.69%) and was caused by dog bite who were alive (64.6%). Other researchers have also noted similar proportion in their study^{2,4,6-8}.

It was observed in the present study that majority of the patients were in Category II. They were prescribed Anti Rabies Vaccine. For Category III bites, all the patients were given Anti rabies Vaccine and RIG. Recent introduction of Intra Dermal Injection of Anti rabies Vaccine can solve this problem of limited supply of TCVs, to a large extent. However it needs to be universalized and sufficient training has to be given to make it a successful strategy.

It was also observed in the present study that 71.8% of Category II patients and 97.4% of Category III patients received the complete course of Anti Rabies Vaccine. However of this 26.9% of Category II and 24.4% of Category III patients showed some delay in receiving schedule doses by 2-6 days. Remaining 28% of Category II and 2.5% of Category III did not receive the complete course of Anti rabies vaccine. This could be due to unawareness about the importance of receiving the complete course of Anti Rabies Vaccine in an animal bite case. These patients are prone to the development of rabies as incomplete immunization does not lead to the development of sufficient immunity against rabies. Studies carried out by Agrawal N and Reddaiah VP³ had also shown similar result in their study.

Conclusion

Animal bites are the major issue of public health importance. Animal Control has not been a successful

strategy in India especially for stray dogs. Thus rabies control primarily rests on post exposure prophylaxis. Sufficient availability of Anti Rabies Vaccine in Public Sector and at an affordable cost in open market is thus the major strategy for its control. Recent introduction of Intra Dermal schedule can also overcome this problem.

Proper patient counseling about the complete course can help in increasing the compliance of patients. IEC activities addressing the misconceptions about the Rabies should be undertaken simultaneously.

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Announcement

The APCRI Newsletter is published every six monthly, in October and in April. APCRI members and the members of the Scientific Community are requested to contribute News Clippings, Photographs and Reports on Scientific activity on Rabies and Related matter for publication in the Newsletter.

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