



CLINICO-SOCIAL PROFILE OF ANIMAL BITE CASES IN THE PATIENTS ATTENDING ANTI RABIES OPD AT TERTIARY CARE HOSPITAL

Community Medicine

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ABSTRACT

Background: Rabies is a viral zoonotic disease responsible for an estimated 59,000 human deaths and over 3.7 million disability-adjusted life years (DALYs) lost every year. Rabies is almost invariably fatal once clinical signs occur, as a result of acute progressive encephalitis. Rabies occurs mainly in underserved populations, both rural and urban.

Objectives: 1. To study the clinico- social profile of animal bite cases. 2. To suggest recommendation based on study finding.

Methods: Study type and Design: Study design: Record based hospital study.

Sample size: All animal bite (3140) cases attending, Anti – Rabies Vaccination clinic at tertiary care hospital, in the period of 6 months.

Result: Total patients attended ARV opd were 3140. Out of total patients, 38.28% of cases belonged to category II bites. Maximum no. of patients (51.34%) initiate their treatment on 2nd or 3rd day. Out of total 3140 patients, 56.21% patients belong to category III, out of which 68% of category III patients received ARS.

Conclusions: Of all animal bites most of cases were category-II, which can effectively treated by the means of OPD measures e.g. ARV and TT injections, even category III patients were not taking inj. ARS mainly due to financial strain, hence continues supply of ARS free of cost to all cat III should be there.

KEYWORDS

Anti rabies vaccine, rabies, clinico-social

BACKGROUND:

An estimated forty five percent of all deaths from rabies occur in that part of the world. The situation is especially pronounced in India, which reports about 18 000 to 20 000 cases of rabies a year and about thirty six percent of the world's deaths from the disease. Rabies incidence in India has been constant for a decade, without any obvious declining trend, and reported incidence is probably an underestimation of true incidence because in India rabies is still not a notifiable disease. According to one study, only 70% of the people in India have ever heard of rabies, only 30% know to wash the wounds after animal bites and, of those who get bitten, only 60% receive a modern cell-culture-derived vaccine.¹

Rabies is a viral zoonotic disease responsible for an estimated 59,000 human deaths and over 3.7 million disability-adjusted life years (DALYs) lost every year. Rabies is almost invariably fatal once clinical signs occur, as a result of acute progressive encephalitis.² Rabies occurs in more than 150 countries and territories. In India alone, 20,000 death are occur annually. Rabies occurs mainly in underserved populations, both rural and urban.³ This situation is rooted in a general population because of lack of awareness of preventive measures, which translates into insufficient dog vaccination, an uncontrolled canine population, poor knowledge of proper post-exposure prophylaxis on the part of many medical professionals and an irregular supply of anti-rabies vaccine and immunoglobulin, particularly in primary-health-care facilities.⁴ This study is aims to study the clinico-social profile of animal bite cases and to suggest recommendation based on study finding.

METHODS

Study type and Design: The study was record based hospital study.

Period : The period of study was from November 2015 to April 2016.

Sampling frame: consisted of all patients and their records attending anti rabies vaccination clinic, of the Department of Community Medicine.

Sample size: All animal bite (3140) cases attending, Anti – Rabies Vaccination clinic at tertiary care hospital, in the period of 6 months.

Place of study : Anti – Rabies Vaccination clinic at tertiary care hospital. Then Results were analyzed at the end of data collection.

Data analysis: Inferential analysis of data was carried out using qualitative and quantitative methods with hypothesis testing by appropriate test of significance.⁵

RESULTS:

Total patients attended ARV opd were 3140. Out of total patients male predominance is there (68.87%). Around 1/4th cases were >60 years age group (23.50%) followed by below 15 years age group (22.58%). Association of age to gender is highly significant. (p < 0.001) [Table -1]

Out of which most of them were from urban area (74.96%). [Fig -1]

Majority of bites (93%) were from dogs. [Fig -2]

Out of total 3140 patients, 56.21% patients belong to category III, out of which 68% of category III patients received ARS. Which is highly significant. [Table -2]

Out of total patients, 38.28% of cases belonged to category II bites. Maximum no. of patients (51.34%) initiate their treatment on 2nd or 3rd day. [Table -3]

Out of total patients, lower limb (66.53%) is most affected. [Table -4]

In present study 68.44% patients taken ARS. [Fig -3]

In above study, many patients were below poverty line (35%). [Fig -4]

Table 1 : Age and Gender wise distribution of animal bite patients -

AGE GROUPS(YRS)	GENDER		TOTAL (%)
	MALE	FEMALE	
0-15	659	50	709(22.58%)
16-30	392	120	512(16.30%)
30-45	426	197	623 (19.84%)
46-60	369	189	558(17.78%)
>60	285	453	738(23.50%)
Total	2131(68.87%)	1009 (32.13%)	3140

$\chi^2 = 1788$, p < 0.001, Highly significant.

Fig-1: Area wise distribution of animal bite cases –

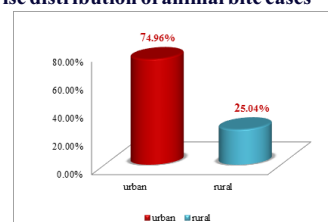


Fig 2: Distribution of patients according to type of animal bite –

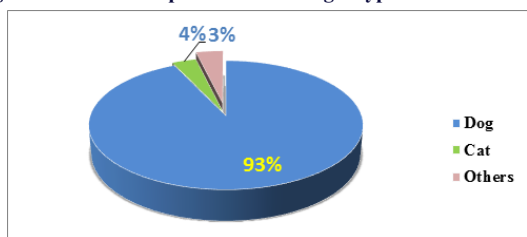


Table 2: Category wise distribution of patients –

Age in yrs /category	Cat I	Cat II	Cat III	Total
0-15	16 (2.26%)	404 (57%)	289(40.8%)	709(22.58%)
16-30	75(14.64%)	306(59.76%)	131(25.58%)	512(16.30%)
31-45	78 (12.52%)	63 (10.11%)	482 (77.36%)	623 (19.84%)
46-60	01 (0.02%)	221 (39.60%)	336 (60.21%)	558(17.78%)
>61	03 (0.40%)	208 (28.18%)	527 (71.40%)	738(23.50%)
Total	173(5.51%)	1202(38.28%)	1765(56.21%)	3140

X²=682, D.F. = 8, P<0.05, significant

Table 3 : Distribution of patients according to Initiation of treatment –

Initiation of treatment	No. of patients (%)
With in 1 day	1061(33.79%)
2 to 3 days	1612 (51.34%)
4 day to 10 days	367(11.69%)
>10 days	100 (3.18%)
Total	3140(100%)

X² Goodness of fit= 1788, p<0.001, Highly significant.

Fig-3: ARS status among class III patients.

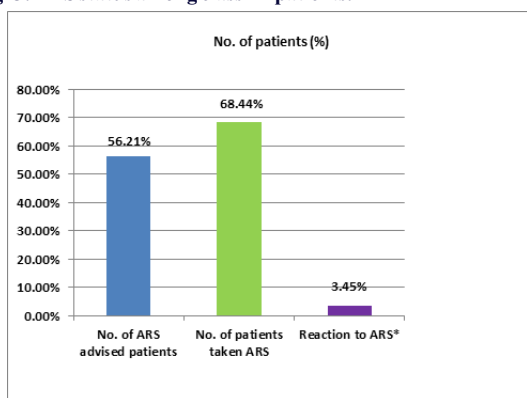


Fig no.4 Distribution of patient according to socioeconomic class :

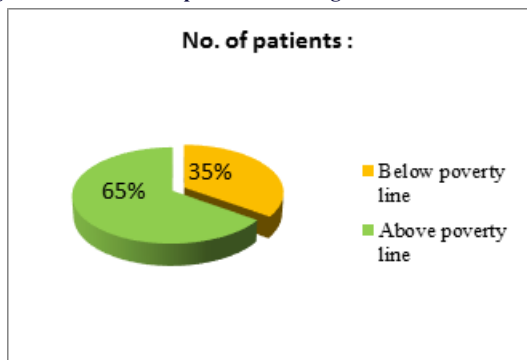


Table 4: site of bite in different age groups –

Age/ site of bite	Upper limb	Lower limb	Trunk	Head,face& neck
0-15	83	591	116	10
16-30	147	434	96	08
31-45	239	689	46	13

46-60	98	395	54	19
>61	124	407	210	03
Total	691	2516	522	53
	(18.27%)	(66.53%)	(13.80%)	(1.40%)

DISCUSSION:

In present study, affected age group is above 60 yrs but in other study done by Seenivasan P⁶ et al affected age group is between 15-45 age group, while in study done by Sangita shelake et al⁷ age group is below 15 years. All the study done were done in urban area. In present study site of bite is leg (66%) same finding is seen in study done by Seenivasan P⁶ et al i.e 58.60%. Among all the category bites, class III category bite 56% is seen in our study. In study done by Seenivasan P⁶ et al Cat II bites were seen, similar to present study class III bites (86%) were seen. In study done Seenivasan P⁶ and Sangita Shelake,⁷ more than 50% patients started taking treatment on next day, opposite to this finding in present study patients started taking treatment after 2-3 days. Whole schedule of vaccination was completed only by 6% of patients in study done by Seenivasan P⁶ et all.

CONCLUSION :

1. Age group 0-15 years, old age persons are more vulnerable for animal bite.
2. Around 93% animal bites were related to dogs, which indicate that control of stray dogs and immunization of pet dogs will largely reduce the risk of rabies.
3. Of all animal bites 38.28% cases were category-II, which can effectively treated by the means of OPD measures e.g. ARV and TT.
4. In this study even category III patients were more 31.55% of category III patients not taken inj. ARS mainly due to financial strain, hence continues supply of ARS free of cost to all category III should be there.
5. General population need more awareness about animal bite and rabies because only 32% patients visited ARV OPD with in one day and Category III bite cases also increasing day by day.

RECOMMENDATIONS :

1. To prevent rabies: Capturing and sterilization of stray dogs, licensing and immunization of pet dogs.
2. General population need more awareness about animal bite. Free of cost and easy availability of anti rabies serum and anti rabies vaccine should be done by the government.
3. Anti rabies clinics should be provided and run at every level of prevention like government hospital, municipal corporation hospitals and primary health centers.

ACKNOWLEDGEMENTS :

Authors would like to thank college authorities for co-operating toward health appraisal. We would like to acknowledge all the staff and post-graduates in the Department of Community Medicine for conducting in study.

DECLARATIONS

Funding: No
Conflict of interest: No
Ethical approval: yes

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