



MISCONCEPTION TOWARDS A FATAL DISEASE- RABIES AND ITS PROPHYLAXIS

Community Medicine

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ABSTRACT

Introduction: Rabies is an entirely preventable disease killing thousands of people in India. Information about knowledge and practices of people about animal bite can be useful for planning IEC activities.

Methods: An observational study was conducted at Anti-rabies clinic of a tertiary center, from July 2014 to Jan 2015. Total 270 animal bite cases were interviewed using semi-structured questionnaire.

Results: More than half respondents knew that rabies is absolutely fatal. Majority (96.6%) knew that dogs are main culprit and two third knew the importance of wound washing with soap and water. More than half (55.5%) respondents knew about availability of effective vaccine. Fifty percent washed wound with soap and water and 37.7% applied substances like chili, turmeric, mustard oil and chuna powder.

Conclusion: Targeted IEC activities are needed to improve knowledge about rabies, immediate and proper wound washing, no application of irritants and control of stray dog population.

KEYWORDS

Knowledge, Practice, Rabies, Vaccination, Animal-bite

INTRODUCTION:

Rabies is a viral zoonotic disease, and human usually get infected by trans-dermal bite or scratch from an infected animal. Most of (98%) the human rabies cases are seen in developing world due to their huge dog population, most of which are stray. Globally, human mortality from endemic canine rabies was estimated to be 55,000 deaths per year and 56% of the estimated deaths occur in Asia and 44% in Africa.^[1] More than one third of the annual global rabies deaths occur in India.^[2] In India a person is bitten every two seconds, and someone dies from rabies every half hour.^[3] Government authorities in India report annual mortality more than 30,000, but this may not be the complete picture as India continues to report the same every year since 1985.^[4] Nearly 1.1 to 1.5 million animal bite cases are being given post exposure prophylactic treatment each year. An estimated 2 million bites occur annually in India, and dog bites are responsible for more than 95% of these cases.^[5] Such magnitude of cases and mortality attributed to rabies in India indicates that it has been neglected as a public health problem. One of the reasons Rabies has been neglected could be because the deaths are scattered in relation to time and place and never reach to magnitude of a crisis and many deaths go unnoticed, that get other infectious and non-infectious disease epidemics the top priority.^[6] Even though specific preventive measures are available in our country, there are many myths, false beliefs and inappropriate practices associated with wound management after a dog bite. These include application of oils, herbs, and red chilies on the wounds inflicted by rabid animals.

Rationale:

In India there are number of methods for prevention of rabies but the main hurdle is lack of awareness in local people that is more in rural areas.^[2] One of the most important problem in control of rabies is lack of awareness about the fatal disease.^[1] Very few past studies have been done to assess people's awareness regarding rabies. Understanding public perception of cause, route of entry, manifestations, and available preventive measures of rabies could be initial important step towards strategies planning for Rabies control and provide base line data for assessing success of these strategies in the future. This study was undertaken to add to the existing limited information on knowledge, attitude, and practices regarding rabies.

MATERIAL AND METHODS:

A hospital-based cross-sectional study was conducted at the Anti-Rabies Clinic (ARC) of Tertiary care hospital of Rajasthan, from July

2014 to Jan 2015. The target population was person with animal bite or an adult accompanying the person to ARC. A total of 270 subjects were interviewed as study subjects. variables, at 95% confidence interval, relative allowable error of 10% and assuming 66% proportion of awareness about immediate wound washing.^[1] Systemic random sampling method was adopted. Every 5th new case of animal bite attending ARC was taken for study. Patient or his/her accompanying adult was interviewed. Data was collected using semi-structured Performa. The questions covered various domains of knowledge and practices related to rabies. Ethical clearance and approval was obtained from Institutes Ethical committee. Each participant was informed about the purpose of the study and informed consent was obtained from each respondent prior to data collection.

Statistical analysis:

Data was entered in MS Excel spread sheet. Qualitative data was expressed as percentage and Chi-square test was used for analysis. A p value <0.05 was considered statistically significant. All analysis was done using Epi info version 7.2.1.0.

RESULTS:

A total of 270 respondents were interviewed to assess their knowledge and practice regarding animal bite management. Out of 270, 210 (77.78%) respondents were males. Most cases presenting to ARC were due to dog bite followed by monkey and jackals (Figure 1). Only 67% of respondents had heard about Rabies. About 76.66% of respondents knew dog bite as cause of Rabies and knowledge about other animals was limited (Figure 2). Approximately 57% of subjects had knowledge of animal bite or scratch as route of entry for virus, and knowledge about other route was poor (Table 1). Only about half of the subjects knew about 100% fatality of Rabies (Figure 3).

There was significant knowledge and practice gap regarding initial management of animal bite wounds (Table 2). Less than two third of subjects knew about immediate washing of the wound with soap and water and only half of the subjects actually practiced it (P<0.001). More than one third (37.7%) respondents applied substances like chili, mustard oil, turmeric, Lime powder, mostly without washing but 14.9% applied these substance even after washing the wound. More than half (55.5%) respondents knew about the availability of an effective vaccine, 27.6% wrongly believed that a single dose vaccine is also available, and 17% wrongly knew that if a person is again bitten by wild animal nothing needs to be done.

Most common source of information about rabies was other cases of animal bite and health professional were source of information for only one third of cases (Table 3). Nearly two third (65.6%) of respondents had contacted other health facility before coming to ARC and the most common reason for referral to ARC from these facilities was lack of anti- Rabies immunoglobulin.

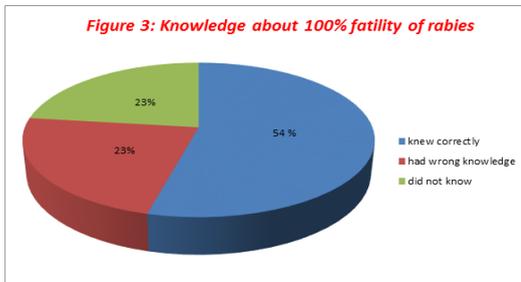
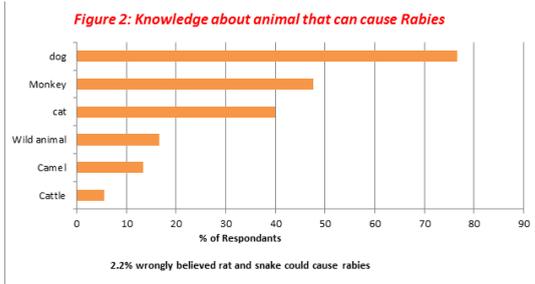
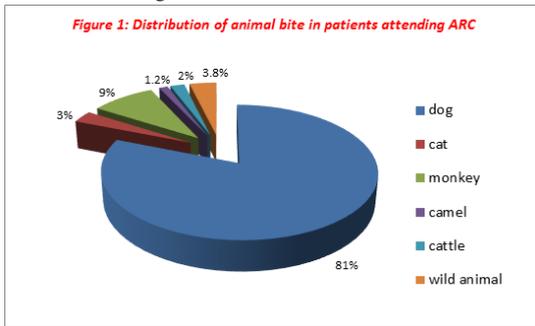


Table 1: Knowledge about route of entry of rabies virus

Route	Percent of respondents
Bite/ scratch without oozing blood	119 (44%)
Bite/scratch with oozing blood	154 (57%)
Licking on intact skin	51 (19%)
Licking on broken skin	84 (31%)
Touching/ feeding the sick animal	35 (13%)
Drinking raw milk of sick animal	46 (17%)

Table 2: Knowledge and practice of the respondents

Questions	Knowledge	Practice	P value
Wash wound with soap and running water	171 (63.3%)	135 (50%)	0.002
Substance like chilli and chuna powder not to be applied	144 (53.3%)	129(43%)	0.023
Seek medical care as early as possible	183 (68%)	87 (32.2%)	<0.001
*Pet animal should be vaccinated (N=57)	45 (78.9%)	27 (47.4%) #	<0.001

* This question was asked to 57 persons who had pet dog
27 subjects had given at least one dose of vaccine to their pet, but only 7 (21%) had their pet completely vaccinated

Table 3: Source of information of respondents and first point of contact with health facility

Source of information	Number of respondents
Electronic media	33 (12%)
Print media	97 (36%)
Health personnel- doctor / staff	97 (36%)
From other person who had animal bite	143 (53%)
Health campaign	12 (4.4%)

First Contact Point	Number of respondents
PHC	108 (40%)
Private clinic	45 (16.7%)
Traditional practitioner	6 (2.2%)
ANM/GNM/ASHA/other nursing staff	18 (6.7%)
Came directly to ARC	93 (34.4%)

DISCUSSION:

In this study, most animal bite victims were male, which can be explained by the fact that men are more likely to go out of their home for work and have more fearless and risk taking nature in comparison to females. Concordant to finding of present study, Khokhar et al [7], Behera et al [8] and Hanspal et al [9] also reported that animal bites were more in males.

Two third of respondents in present study had heard about Rabies. Similar proportion (68.7%) was found in a study done by Ichhpujani RL [10] et al. The proportion of respondents who believe that rabies is caused by dog bite was 76.7% whereas a slightly less (60.7%) number was seen in study done by Ichhpujani RL [10] et al, the difference may be due to temporal or regional differences. In present study 54% of the subjects knew about 100% fatality of Rabies, same (54.9%) was found by Sanjeev Kumar [11] of Rewa M.P whereas the proportion was just 16% in the study done by Mohammad Wasay [12] in Pakistan, the difference may be due to the difference in literacy level and level of health care delivery between the two countries. Application of other products (chili, turmeric, mustard oil and chuna powder) was seen in 37.7% of participants in present study as was similarly reported in study done by Ichhpujani RL et al. where 30.3% subjects had applied these substances. This wrong practice of application of indigenous substances on animal bite wound could be difficult to change and requires proper health education.

Limitation of study: Being a hospital based study; findings cannot be generalized because the patients coming to hospital may be more likely to have better health knowledge and practices.

CONCLUSION:

It is evident that there is significant lack of knowledge and a large gap in people's knowledge and practices about rabies and its prevention. Awareness about rabies needs to be increased by undertaking IEC activities by various methods like print and electronic media and by undertaking targeted awareness campaigns by government and non-government organizations. Anti-Rabies Immunoglobulin should be made available at primary health centers so that no time is wasted in its application when needed. Pet vaccination need to be ensured, by legislation if necessary. Improvement in knowledge can bring significant reduction in number of deaths due to rabies by early and proper care of animal bite cases.

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