



KNOWLEDGE, ATTITUDE AND BEHAVIOUR ABOUT ANIMAL BITE AND ITS MANAGEMENT TO PREVENT RABIES : A CROSS-SECTIONAL DESCRIPTIVE STUDY IN A RURAL COMMUNITY OF WEST BENGAL

Community Medicine

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ABSTRACT

Background : Rabies is transmitted mostly (98.6%) by the bite of rabid dog and it is almost 100% fatal.

Objectives : To assess the knowledge, attitude and practice about animal bite & their care seeking behaviour after bite.

Methodology : This cross-sectional study was done at Amdanga (rural) block among 288 respondents covering 288 families. Equal number of families were selected from six villages by simple random sampling (SRS) technique and those six villages were chosen by multistage sampling.

Results : Almost 50% respondents had no idea of washing wound after bite .23.6% would seek care from traditional healer. Although majority (97.6%) would take injection within 24 hrs of bite but 48.6% had no knowledge of number of doses of anti-rabies vaccine (ARV). 48.3% were not in favour of taking any post exposure prophylaxis among pregnant and lactating women.

KEYWORDS

Knowledge and attitude, Animal bite, Rabies

INTRODUCTION :

Animal bites pose a major public health problem worldwide. Rabies is transmitted mostly by the bite of dogs¹. It is almost 100% fatal and poses a potential threat to over 3.3 billion people worldwide². Annual incidence of rabies was found to be 2/one lac population³. In India, rabies is a zoonotic problem of considerable magnitude. Rabies is prevalent mainly in Asia and Africa⁴. According to WHO India officially reported 30,000 human rabies deaths⁵. Ignorance about the urgency of obtaining proper post exposure treatment (PEP) in time, effort of travelling many times to a treatment centre and the easy availability of traditional remedies contribute to the relatively frequent occurrence of this lethal disease though it is almost completely preventable.

There are many myths and false beliefs associated with wound management like application of oil, herbs, red chilies etc. Misbelief of not washing the wound for fear of infection³.

Keeping these in mind, this study was done to know the socio demographic profile and also to assess the knowledge, attitude & practice about animal bite & its management for prevention of rabies among rural community.

Methodology:-

It was a community based observational descriptive study with cross-sectional design. It was conducted at Amdanga block of North 24 parganas district of West Bengal coming under field practice area of R.G. Kar Medical College, Kolkata. A total of 288 households from six villages of Amdanga block was surveyed. Six villages were chosen by multistage sampling technique. Interview was taken from each head of household or any other adult family member with his/her consent using a pretested semistructured proforma. Families were selected from each village by simple random sampling technique. At 1st stage 10% of total (25) subcentres i.e (3 sc) were taken by simple random sampling (SRS). At 2nd stage two villages were chosen from each subcentre by SRS and lastly equal no of households were chosen by SRS from six selected villages. Total 288 persons (one from each family) were interviewed regarding their knowledge, attitude and care seeking behaviour to be adopted after animal bite.

Statistical Analysis :

Data were analysed with the help of SPSS (Statistical Package for the Social Sciences) version 20. The results were expressed in percentage and relative frequencies. Chi-square test was done to test the association. (P-Value <0.05 was considered as statistically significant).

RESULTS:-

Total 288 houses were visited and interview was taken from 288 persons (one each from a family).

Socio demographic profile of study subjects was given in table 1.

Table 1. Socio demographic profile of study subjects (n=288)

Socio demographic profile		No.	%
Age(years)	<20	56	19.4
	20-40	110	38.2
	40-60	88	30.6
	>60	34	11.8
Sex	Male	146	50.7
	Female	142	49.3
Religion	Hindu	184	63.8
	Muslim	104	36.2
Family Type	Joint	201	69.7
	Nuclear	87	30.3
Education	Illiterate	61	21.2
	literate	227	78.8
*Socio economic status	Class II & III	46	16.0
	Class IV & V	242	84.0

*As per modified B.G Prasad's scale

Above table showed more than half (50.7%) of study subjects were male and most (38.2%) of them in age group 20-40 years.

Most of the respondents (63.8%) were Hindu and 69.7% were from Joint family. 78.8% were literate & 84% belonged to socio economic class IV & V.

Table 2. Relationship of different socio-demographic variables with knowledge regarding wound washing (n= 288)

Socio-demographic variable		Knowledge of wound washing		X2 value at df=1, P value
		Present(%)	Absent(%)	
Education	Illiterate	6(2.1)	55(19.1)	55.39, <0.05
	Literate	144(50.0)	83(28.8)	
Socio-economic status	Class II & III	26(9.0)	20(6.9)	0.43, >0.05
	Class IV & V	124(43.1)	118(41.0)	
Family Type	Joint	92(31.9)	109(37.8)	10.62, <0.05
	Nuclear	58(20.1)	29(10.1)	

N.B.- Figures in parenthesis indicate percentage.

The difference in knowledge regarding wound washing among illiterate & literate groups was statistically significant. Knowledge of wound washing among joint & nuclear family was also statistically significant.

Table 3:- Knowledge of respondents about animal bite (n=288)

Variables		No.	%
*Bites of animals cause diseases	Dog	288	100.0
	Cat	146	50.7
	Rat	141	49.0
	Jackal, fox, monkey	72	25.0
	others	18	6.3
Faith in traditional healer	yes	68	23.6
Perception of seeking treatment (source) after animal bite	Govt. health facility	273	94.8
	Private practitioner	15	5.2
Knowledge of urgent treatment following an animal bite	Agree	20	6.9
	Strongly agree	268	93.1
Perception of skipping one or more injections during treatment	Strongly disagree	190	66.0
	Disagree	67	23.2
	Neutral	31	10.8
Perception of use of post exposure prophylaxis (PEP) for pregnant & lactating women	Yes	149	51.7
	No	139	48.3

*Multiple response

All respondents believed that dog caused disease but 49.3% told specifically the name of the disease (i.e rabies) which is 100% fatal.

23.6% had faith in traditional healer but 94.8% would go to govt. health facility All were in favour of urgent treatment after animal bite but 48.3% were not in favour of taking any PEP injection in case of pregnant & lactating women.

Table 4.- Case seeking behavior to be adopted by respondents after animal bite (n= 288).

Variables		No	%
Wound to be washed after bite	Yes	150	52.1
	No	1	0.3
	Do not know	137	47.6
Duration of wound washing (n1=150)	<5 min	6	4.0
	5-10 min	8	5.3
	10-15 min	1	0.7
	Don't know	135	90.0
Materials to be used for wound washing (n1=150)	Soap & water	91	60.7
	Only water	17	11.3
	Antiseptic Solution	42	28.0
Home remedy to be applied after bite	Dettol & Savlon	16	5.6
	Mercurochrome	8	2.8
	Lime with turmeric paste	7	2.4
	Medicine by traditional healer	17	5.9
	None	240	83.3
Injection to be give after bite	Immediately	194	67.4
	Within 24 hours	87	30.2
	Within 24-72 hours	7	02.4
No. of injections to be given after bite	4	84	29.2
	12-14	61	21.2
	21	3	1.0
	No idea	140	48.6

All respondents would seek urgent treatment after bite as they knew that some injection would prevent disease.

Almost 50% respondents had no idea of washing wound after bite and 90% respondents had no idea of duration of washing wound.

More than 50% were in favour of washing wound after bite but only one person had correct knowledge of duration of wound washing which is 10-15 minutes¹¹. Majority (83.3%) had no idea of applying any antiseptic solution. Only 8.4% had correct knowledge of antiseptic solution application. Among 150 respondents only 91(60.7%) had correct knowledge of washing wound with soap & water. Majority (97.6%) would take some injection within 24 hours of animal bite.

But, 48.6% had no knowledge regarding no. of doses of injection (ARV) to be administered. 21.2% believed that 12-14 injections should be given at peri-umbilical region. 34 persons (11.8%) told that animal (dog) to be observed for ten days.

DISCUSSION:-

More than half (50.7%) of study subjects were male and 38.2% were in age group of 20-40 years. This finding was comparable with a study done by Agarwal N & Reddahiah V.P in New Delhi.⁸⁸ Majority (63.8%) were Hindu & 69.7% were from joint family. 78.8% were literate which was comparable to literacy rate (84.06%) 2011⁹ of North 24 Parganas District.

Knowledge of wound washing was significantly different between nuclear and joint family probably due to more chance of sharing of knowledge among Jt. family members.

Though all respondents were aware that dog bite caused disease but 47.3% knew that it caused rabies which was comparable with the study finding (46.8%) by Valekar S.S et al.¹⁰.

Majority (97.6%) would take some injection within 24 hours of bite but 48.6% had no knowledge regarding no. of doses of vaccine.

52.1% were in favour of wound washing. Among them 60.7% were in favour of using soap & water but almost all (except one) had no knowledge regarding duration of washing. Similar finding was found by Valekar S.S et al.¹⁰ Only 8.4% had correct knowledge of antiseptic solution application & 5.9% would prefer application of medicine by traditional healer. Singh U.S¹ found 19.2% respondents were in favour of religious treatment.

Majority (94.8%) would prefer treatment from govt. health facility as they knew that it was free of cost. Almost (90.5%) similar finding was found by Valekar S.S et al.¹⁰

Only 11.8% were in favour of observing dog for ten days, if possible. But, Agarwal N⁸ found that 73.5% would prefer to kill the dog.

CONCLUSION:-

There is lack of awareness regarding animal bite & its proper management specially among rural population. Knowledge of wound washing and treatment compliance with anti-rabies vaccine (ARV) are also a serious concern.

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