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Research Article

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Domiciliary Practices and Health Seeking Behaviour Among Dog Bite Cases in Patients Attending a Rural Health Training Centre

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ABSTRACT

Background: Rabies is a viral zoonosis. Rabies is virtually 100% fatal once symptoms appear. is preventable with appropriate post-exposure prophylaxis. **Objectives**: This study aimed to study the socio-demographic profile of the study participants, domiciliary practices and health seeking behaviour among dog bite cases. **Materials & Methods:** A cross sectional study involving 141 participants (complete enumeration sampling method) in a Rural health Training Centre attached to a teaching institute using pretested, semi-structured questionnaire. **Results:** Out of 141 cases, Majority were males (%). Approximately 35% were in the age group of 26-45years, 5.6% were <5 years. 51% were employed. Mostly by stray dogs (61.7%), Category II bite approximately 54%, lower limb site (62.2%) seen commonly. 44 % study participants used domiciliary practices followed after dog bite (Taken first aid at home like application of antiseptic, washing with soap and water, home remedy, herbal remedy). Only 29% study participants reported to health care facility within ½ an hour. Majority of them approached directly to RHTC after dog bite incident. **Conclusion:** It was observed that a majority study participants approached healthcare facility (RHTC) for vaccination following dog bite, but did not practice proper wound care. A sizable proportion of study participants resorted to wrong non-allopathic practices e.g., application of garlic pastes, lime, mud etc. A rabies is preventable disease, increasing awareness relating to its prevention may prove to be beneficial in increasing the morbidity and mortality.

Key Words: *Dog bite, rabies, rural area, domiciliary practices, health seeking behaviour*

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INTRODUCTION

Rabies is a vaccine-preventable, zoonotic, viral disease. Once clinical symptoms appear, rabies is virtually 100% fatal.[1] Each year, rabies causes approximately 59,000 deaths worldwide, over 3.7. million disability-adjusted life years, and 8.6 billion USD economic losses annually. [2,3] Around 15 million animal bites requiring post exposure rabies prophylaxis, the majority by dogs, occur in India every year [4].

Rabies is one of the Neglected Tropical Diseases (NTD) that predominantly affects poor and vulnerable populations who live in remote rural locations. Approximately 80% of human cases occur in rural areas.[1]

Prompt post exposure use of the anti-rabies vaccine combined with proper wound management and simultaneous administration of rabies immunoglobulin in severe exposure is close to 100% effective in preventing rabies. However, delay in seeking treatment, improper wound care and unnoticed wound may contribute to treatment failure and death.

There is little data on the incidence of animal bites from India. A study carried out a decade earlier had reported that the national incidence of animal bite as 17.4/1000 population. [5]

Rabies elimination is feasible through vaccination of dogs, prevention of dog bites and ensuring universal access to post-exposure immunization, consistent community awareness on health-seeking behaviour post animal-bite incidents and proper wound management practices. This requires a whole-of-system approach with a multisectoral interventions and community engagement. [6]. WHO leads the collective "United Against Rabies" to drive progress toward "Zero human deaths from dog-mediated rabies by 2030".[1]

Data regarding community- based estimates of dog bites are required to track progress of such measures but are lacking in India, as they are the most common animal bites. The available studies on dog bites and rabies in India are mostly hospital based, and limited to disease management [7,8,9].

Methodology:

It was an observational study conducted among the dog bite patients attending the OPD of a Rural Health Training Centre.This study employed complete enumeration sampling method. Data was collected by semi structured questionnaire. It included sociodemographic information &domiciliary practices and health seeking behaviour of dog bite cases. Data was compiled and tabulated using Ms excel. Results were analysed using SPSS 26.0 and presented in tables and graphs.

Results:

Table 1. shows that socio-demographic profile of the study participants. Out of 141 cases, Majority were males (%). Approximately 35% were in the age group of 26-45years followed by 26.2% of age 46-65 and about 5.6% were <5 years. More than half of study subjects were employed. Literacy rates among study participants were around 75%.

Table 2. shows distribution of study participants according to characteristics of dog bite

Most of dog bite was due to the stray dogs (61.7%), Category II bite approximately 54%, lower limb site (62.2%) seen commonly.

Table 3. shows distribution of study participants according to the A first point of contact for healthcare. Only 29% study participants reported to health care facility within ½ hour. Majority of them approached to RHTC after incident of dog bite

Table 4. shows distribution of study participants according to the use of different domiciliary practices following animal bite. 44 % study participants used domiciliary practices followed after dog bite (Taken first aid at home like application of antiseptic, washing with soap and water, home remedy, herbal remedy)

Table 1. Demographic details of study participants (N=141)

Sociodemographic profile	**Frequency**	**Percentage %**
<5	8	5.6
5-25	35	24.8
26-45	49	34.7
46-65	37	26.2
>65	12	8.5
Gender		
Male	79	56.0
Female	62	43.9
Occupation		
Employed	72	51.0
Student	24	17.0
Housewife	27	19.1
Farmer	14	9.9
Unemployed	4	2.8
Literacy status		
Literate	107	75.8
Illiterate	34	24.1

Table 2. Distribution of study participants according to characteristics of dog bite

Category of biting dog	**Frequency**	**Percentage %**
Stray	87	61.7
Pet	54	38.2
Type of wound		
Category II	76	53.9
Category III	65	46.0
Site of bite		
Lower limb	92	65.2
Upper limb	27	19.1
Trunk	13	9.2
Multiple areas	6	4.2
Head and neck	3	2.1

Table 3. Distribution of study participants according to the A first point of contact for healthcare.

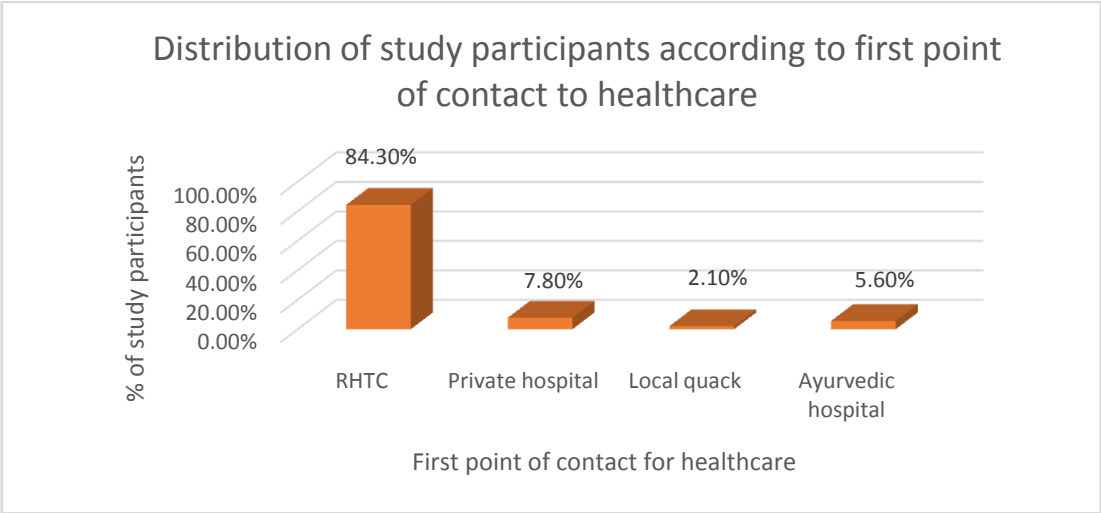

Table 4. Distribution of study participants according to the use of different domiciliary practices following animal bite

Domiciliary practice followed		**Frequency**	**Percentage %**
None, came directly to hospital	79	56	
Applied Dettol/savlon	14	9.9	
Applied other antiseptics	8	5.6	
Washing with soap and water	13	9.2	
Household remedies			
1Turmeric paste	9	6.3	
2.Garlic paste	2	1.4	
2.lime	3	2.1	
3.Badam oil	1	0.7	
Herbal remedies			
1.Latex of Calotropis	1	0.7	
2.Neem leaves	5	3.5	
3. Peepal leaves	2	1.4	
4.Bryophyllum leaves	1	0.7	
5.tree resin	1	0.7	
Applied mud over wound	2	1.4	

DISCUSSION

The age of the study participants varied between 5 and 65 years. In the study majority of the bites were caused due to stray dogs, with type of wound -category II. Majority (84%) study participants directly reported to RHTC. Similar study results found in Mansi panda et al[10] study. Similarly, a study done by Ghoshal et al. showed that only 73.2% of victims preferred visiting an allopathic doctor; however, the remaining preferred visiting some local practitioners/religious practices. In the present study 79(56 %) study subjects did not resort to any household remedy following dog bite, whereas the rest of 62 (44%) resorted to application of antiseptics, or natural homemade pastes as a method of pre-treatment practice before coming to the hospital. Out of 44% only 9.2 % washed wound with soap and water, whereas study done by Venkatesan et al[11,12] reported that only 18.7% and 24.1% of patients, respectively had washed the wound with soap and water and antiseptic were observed only in 12.5% of animal bite victims. Jain et al[13] study stated that 56.2% of the animal bite cases had applied indigenous products over wound before attending opd of RHTC. In present study 2(1.4%) and 3(2.1 %) study participants had applied irritants (garlic paste, lime) on the wound and 2(1.4%) participants had applied mud over the wound. Venkatesan et al[11,14] in their study reported 21% and 33.3% of study subjects, respectively to have applied irritants (e.g., onion, ash, lime, lime juice, chilli powder) on the wounds.

CONCLUSION

The study conclude that the lack of awareness, misconceptions, and improper practices followed by dog-bite patients in study setting. Despite the fact that the majority of the study's participants approached a health care facility to get vaccinated, they did not arrive immediately. A substantial majority of study participants resorted to using ineffective treatments, such as applying garlic pastes, lime, mud, etc. Since rabies is a disease that may be prevented, increasing public awareness of its prevention could help to increase morbidity and mortality. This indicates that despite the advancements in technology and healthcare, where information is freely available online and from other sources, people are still engaging in harmful domiciliary practises. As a result, primary care physicians must inform dog-bite patients about the importance of receiving prompt medical attention and correct wound management after dog bite.

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