

A study on knowledge and perception of primary wound care of dog bite in the rural community – Kanchipuram district, Tamil Nadu

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Abstract

Introduction: The incidence of animal bites is 17.4 per 1000 population in India. Most animal bites in India (91.5%) are by dogs and also high rabies death is being reported from India due to dog bites. Primary wound care and early Post exposure prophylaxis are pivotal for preventing rabies death, thus lack of knowledge, varied perceptions regarding primary wound care in dog bite may be the obstacles for effective implementation of the rabies prevention program.

Objectives: To assess the knowledge of primary wound care to prevent rabies. To assess the perception of primary wound care of dog bite. To identify the Incidence of dog bite among adult study population. To classify the types of bite according to the WHO category among dog bite victims. **Methodology:** A cross sectional study was conducted among adult age group in rural field practice area of our CHRI, Kanchipuram district, Tamil Nadu. 600 persons were interviewed with a pre structured questionnaire by household survey. **Results:** Among respondents, 38.7% were from 31-44 years of age and 57% were females while 43% were males. 24% responded positively for primary wound care to prevent rabies. 23.6% responded that dog bite wound should be washed with soap water while 23.8% said that wound should be cleaned with cloth and apply self bandage. 27.3% of study population preferred hospital for treatment where as 19.6 % of the subjects suggested using plant milk extract (calotropis) and 8.5% of participants were in favor of home based medicine for dog bites. **Conclusion:** This study showed only 24% of people were aware of primary wound care about dog bites and hence, intensified health education has to be focused on the importance of primary wound care of dog bite and it strongly recommends Anti rabies clinic in the rural community.

Key Words: Rabies, Post Exposure Prophylaxis. Anti Rabies Clinic, Rural Health centre

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INTRODUCTION

Zoonosis and human health are matters of particular concern in India. Rabies is an acute inflammation of the central nervous system, Once human

gets infected with rabies virus, the course is always fatal, though rare instances of recovery have been reported.¹ The incidence of animal bites is 17.4 per 1000 population and 36% percent of the global rabies deaths occur each year in India. Most animal bites in India (91.5%) are by dogs, unsuccessful control of dog population and inadequate post exposure prophylaxis of patients were the main factors leading to the high incidence of human rabies.² Pet dog population and their care are poor in rural India.³ Nearly 80% of India's population is rural and live in close contacts with domestic animals. Management of animal bite with post exposure prophylaxis is the only existent strategy to prevent rabies related deaths.⁴ Local wound treatment of dog bite is essential, which has maximal value when applied quickly after exposure.⁵ Studies revealed animal experimental have shown that

local wound treatment can be reduce the chance of developing rabies up to 80%.⁶ Primary wound care and early post-exposure vaccination are pivotal for preventing rabies death, thus lack of knowledge, varied perceptions regarding primary wound care in dog bite may be the obstacles for effective implementation of the rabies prevention program.

METHODOLOGY

A cross sectional study was conducted among adult age group in rural field practice area of Chettinad Hospital and Research Institute, Kanchipuram district, Tamil Nadu. The population of study area is 2263;

randomly selected 120 families with 600 persons were interviewed with a standardized, pre-validated questionnaire. The study was conducted during October 2013 to November 2013. knowledge about primary wound care to prevent rabies, to assess the perception of primary wound care of dog bite and identify the Incidence of dog bite among adult study population and classified the types of bite according to the WHO category among dog bite victims. Information was recorded only from co-operative persons along their consent. Sick patients, non-residential dwelling, non cooperative and not willing to participate in the study were excluded.

Categories of contact with suspect rabid animal (7)

Category I – Touching or feeding animals, licks on intact skin

Category II – Nibbling Of uncovered skin, minor Scratches Or abrasions Without bleeding

Category -III Single or multiple transversal bites or scratches, licks on broken skin; contamination of mucous membrane with saliva from licks, contacts with bats

RESULTS

Among respondents, socio demographic profile showed 38.7% were from 31-45 years of age group and 57% were females while 43% were males. Educational level revealed illiterate 64 (10.7%), primary 144(24%), higher primary 126(21%), secondary 106(17.7%), higher secondary 98(16.3%), graduate 46(7.7%) and post graduate 16(2.6%). Economic status showed 74.3% are above poverty line and 25.7% were below poverty line.(Table -1) 24% responded positively for primary wound care to prevent rabies. Regarding perception of primary wound care management 23.6% responded that dog bite wound should be washed with soap water while 23.8% said that wound should be cleaned with cloth and apply self bandage. 27.3% of study population preferred hospital for treatment where as 19.6 % of the subjects suggested using plant milk extract (calotropis) and 8.5% of participants were in favor of home based medicine for dog bites (Fig -1,2). Of the total study population 28 persons gave a history of dog bite in the past one year. Of

them 71.4% were males and 28.6% were female (Table-2). Regarding category of dog bite among victims 17.9% were category 1, 75% were category 2 and 7.1% responded for category 3. (Table – 3)

Table 1: Socio –demographic profile of study population

Characteristic feature	No	% (n = 600)
Age group (in years)	15- 30	206 34.3%
	31-45	232 38.7%
	46-60	126 21%
	>60	36 6%
Sex	Male	342 57%
	Female	258 43%
Educational status	Illiterate	64 10.7%
	Primary	144 24%
	High Primary	126 21%
	Secondary	106 17.7%
	Higher Secondary	98 16.3%
	Graduate	46 7.7%
Economic status according to APL and BPL	Post Graduate	16 2.6%
	APL	446 74.3%
	BPL	154 25.7%

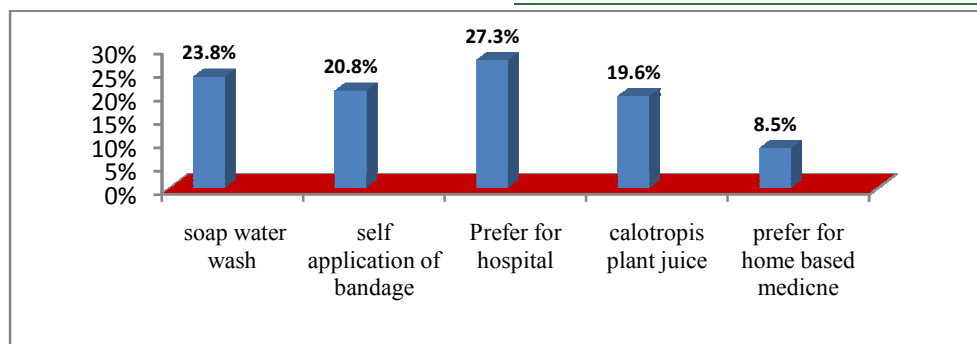


Figure 1: Various perceptions regarding primary wound care management among study population

Table 2: Profile of dog bite victims

Sex	Frequency	Percentage
Male	20	71.4%
Female	8	28.6%

Table 3: Category of dog bite

Type	Frequency	Percentage
Category- 1	5	17.9%
Category -2	21	75%
Category- 3	2	7.1%

DISCUSSION AND RECOMMENDATION

The present study, there were 24% of people having knowledge of primary wound care of dog bite to prevent rabies. In our study showed high proportion of males were victims of dog bite similar results were found with other study by TR Behera *et al* and Amit ganasava.⁸ The study results showed perceptions regarding primary wound care management among study population washing water and soap was lesser extent. A similar type of result found in the study of U.S Singh *et al* in the rural people of Gujarat.⁹ The current study findings showed 75 % dog bite victims were type 2 category, similar findings by Twart *et al*¹⁵ and modi *et al*²⁰ showed category 2 bites was 60.47% and 85.94% of the study population respectively,

- Implementation of National rabies control program in India.
- Strengthen the system of Surveillance, Health education and Public awareness regarding rabies
- Establish Anti Rabies clinic in more dog bite cases reporting areas.
- Action should intensify over Control of stray dog population, Mass dog vaccination and Animal birth control.

CONCLUSION

This study showed only 24% of people were aware of primary wound care about dog bites and hence,

intensified health education has to be focused on the importance of primary wound care of dog bite and it strongly recommends Anti rabies clinic in the rural community. Further reduce the burden of rabies in India need most logical and cost effective technique in anti rabies vaccination and elimination of stray dog population

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